

Carbon TerraVault V Class VI Permit Application Narrative Report

9-12-2023

Submitted to:

U.S. Environmental Protection Agency Region 9
San Francisco, CA

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Document Version History

Version	Submission Date	File Name	Description of Change
1	7/12/2023	Att A – CTV V Narr_v1	Original Submission
2	9/12/2023	Att A – CTV V Narr_v2	Update Figure 2.2-11 and added references tables for Figure 2.2-11 in response to EPA comment letter dated 8/30/2023.

ATTACHMENT A: CLASS VI PERMIT APPLICATION NARRATIVE
40 CFR 146.82(a)
CTV V

1.0 Project Background and Contact Information

Carbon TerraVault Holdings LLC (CTV), a wholly owned subsidiary of California Resources Corporation (CRC), proposes to construct and operate six CO₂ geologic sequestration wells at the project area located in San Joaquin County, California. This application was prepared in accordance with the U.S. Environmental Protection Agency's (EPA's) Class VI regulations, in Title 40 of the Code of Federal Regulations (40 CFR 146.81). CTV is not requesting an injection depth waiver or aquifer exemption expansion.

CTV will obtain the required authorizations from applicable local and state agencies, including the associated environmental review process under the California Environmental Quality Act. **Appendix 1** outlines potential local, state, and federal permits and authorizations. The project wells and facilities will not be located on Indian Lands. Federal act considerations and additional consultation, which includes the Endangered Species Act, the National Historic Preservation Act and consultations with Tribes in the Area of Review (AoR), are presented in “**Appendix 2: Applicable Federal Acts and Consultation.**”

CTV forecasts the potential CO₂ stored in the Mokelumne River Formation (Upper Injection Zone) at 0.41 million metric tonnes (MMT) annually on average for 25 years for a total of 10.3 MMT, and in the Starkey Formation (Lower Injection Zone) at 0.43 MMT annually on average for 15 years for a total of 6.4 MMT. Taking both injection zones, the expected total storage for the site is up to 16.7 MMT at an average injection rate of up to 0.67 million metric tonnes per annum (MMTPA).

CTV is planning to construct a carbon capture and sequestration “hub” project (*i.e.*, a project that collects CO₂ from multiple sources over time and injects the CO₂ stream(s) via Class VI Underground Injection Control (UIC)-permitted injection well(s)). Therefore, CTV is currently considering multiple sources of anthropogenic CO₂ for the project. Potential sources include capture from existing and potential future industrial sources in the Sacramento Valley area, as well as Direct Air Capture (DAC).

The Carbon TerraVault V (CTV V) storage site is located in the Sacramento Valley, nine miles east of the Rio Vista Gas Field and four miles northwest of Stockton, California (**Figure 2.1-1**) within the southern Sacramento Basin. The project is comprised of six injectors (three into the Mokelumne and three into the Starkey Formation), surface facilities, and monitoring wells. This supporting documentation applies to the six injection wells.

CTV will actively communicate project details and submitted regulatory documents to County and State agencies:

1. California Geologic Energy Management Division (CalGEM)
Senior Oil and Gas Engineer – Erwin Sison
715 P Street, MS 1804
Sacramento, CA 95814
(916) 203-7734

2. CA Assembly District 13
Assemblyman Carlos Villapudua
31 East Channel Street, Suite 306
Stockton, CA 95202
(209) 948-7479

3. San Joaquin County
District 3 Supervisor –Tom Patti
(209) 468-3113
tpatti@sjgov.org

4. San Joaquin County Community Development
Director – David Kwong
1810 East Hazelton Avenue
Stockton, CA 95205
(209) 468-3121

5. San Joaquin Council of Governments
Executive Director – Diane Nguyen
555 East Weber Avenue
Stockton, CA 95202
(209) 235-0600

6. Region 9 Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105
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2.0 Site Characterization

2.1 Regional Geology, Hydrogeology, and Local Structural Geology [40 CFR 146.82(a)(3)(vi)]

2.1.1 Field History

The CTV V storage site is located nine miles east of major gas field Rio Vista in the depleted King Island gas field (“the Field”). Two smaller gas fields lie closer to the project area: East Islands Gas to the north and Rindge Tract Gas to the south (**Figure 2.1.1**). The Field produced 10.8 billion cubic feet (Bcf) of natural gas. Estimated ultimate recovery (EUR) for the field was envisioned to be 11.3 Bcf. The Field produced 95.6% of reserves and is currently shut-in and pressure-depleted. There are three operators of record at the Field: Princeton Natural Gas, LLC., Diversified Resources, LLC., and Pacific Gas and Electric (PG&E). The Field has three idle dry-gas wells.

East Islands is due north of the Field and produced from the Meganos Canyon and Mokelumne River Formation. There are two operators of record at East Islands: Gold Coast Holdings LLC., and Princeton Natural Gas, LLC. Gold Coast has one idle dry-gas well at East Islands. Rindge Tract Gas produced from the Mokelumne River Formation. Princeton Natural Gas is the operator of record and has one plugged well on the field. Since 2021, there has been no production from the Field, East Islands, or Rindge Tract Gas Fields.

In 2014, PG&E was issued a Class V Experimental Compressed Air Energy Storage (CAES) Test Injection/Withdrawal Well Permit (No. R9UIC-CA5-FY13-1). The project consisted of the injection of oxygen-depleted air into the depleted natural gas reservoir in the Mokelumne River Formation for the purpose of building an air bubble as part of a “Compression Test.” During and after the building of the air bubble, a series of injection, shut-in, and flow tests were conducted to investigate the reservoir’s performance for a CAES application. Performance of the reservoir was monitored by measuring specific parameters and observing formation behavior in two existing nearby wells that served as observation wells, in addition to the Test Well.

2.1.2 Geology Overview

The CTV V storage site lies within the Sacramento Basin in northern California (**Figure 2.1-2**). The Sacramento Basin is the northern, asymmetric sub-basin of the larger, Great Valley Forearc. This portion of the basin, which contains a steep western flank and a broad, shallow eastern flank, spans approximately 240 miles in length and is 60 miles wide (Magoon, 1995).

2.1.2.1 Basin Structure

The Great Valley was developed during mid- to late-Mesozoic time. The advent of this development occurred under convergent-margin conditions via eastward, Farallon Plate subduction of oceanic crust beneath the western edge of North America (Beyer, 1988). The convergent, continental margin that characterized central California during the Late Jurassic through Oligocene time was later replaced by a transform-margin tectonic system. This occurred as a result of the northward migration of the Mendocino Triple Junction (from Baja California to its present location off the coast of Oregon), located along California’s coast (**Figure 2.1-3**). Following this migration, the progressive cessation of both subduction and arc volcanism occurred

as the progradation of a transform fault system moved in as the primary tectonic environment (Graham, 1984). The major current-day fault, the San Andreas, intersects most of the Franciscan subduction complex, which consists of the exterior region of the extinct convergent-margin system (Graham, 1984).

2.1.2.2 Basin Stratigraphy

The structural trough that developed subsequent to these tectonic events was named the Great Valley, which became a depocenter for eroded sediment and thereby currently contains a thick infilled sequence of sedimentary rocks. These sedimentary formations range in age from Jurassic to Holocene. The first deposits occurred as an ancient seaway, and through time were built up by the erosion of the surrounding structures. The basin is constrained on the west by the Coast Range Thrust, on the north by the Klamath Mountains, on the east by the Cascade Range and Sierra Nevada, and on the south by the Stockton Arch Fault (**Figure 2.1-2**). To the west, the Coastal Range boundary was created by uplifted rocks of the Franciscan Assemblage (**Figure 2.1-4**). The Sierra Nevada Mountains that make up the eastern boundary are a result of a chain of ancient volcanoes fed by pre-transform fault subduction.

Basin development is broken out into evolutionary stages at the end of each time period of the arc-trench system, from Jurassic to Neogene, in **Figure 2.1-5**. As previously stated, sediment infill began as an ancient seaway and was later sourced from the erosion of the surrounding structures. Sedimentary infill consists of Cretaceous-Paleogene fluvial, deltaic, shelf, and slope sediments. Due to the southward tilt of the basin, sedimentation thickens towards the southern end near the Stockton Arch Fault, creating sequestration-quality sandstones.

In the southern Sacramento Basin, the Mokelumne River and Starkey formations are comprised of thick-bedded sandstones that create the principal reservoir facies in the project area. Structure in this area is characterized as a homocline that dips about 2 degrees to the southwest.

2.1.2.3 Submarine Canyons

Falling sea level and tectonics caused the Paleogene Markley, Martinez, and Meganos submarine canyons (Meganos Gorge) to form throughout the Sacramento Basin (**Figure 2.1-2**). The erosional events associated with these canyons played a large part in the current distribution and continuity of Upper Cretaceous and early Tertiary formations within the basin (Downey, 2010). The Late Paleocene/Early Eocene Meganos canyon reaches the AoR. Trending in a northeast-southwest direction and cutting deeply into sediments of the Mokelumne River Formation, this erosional event spans approximately 25-30 miles from southern Sacramento County through northwestern San Joaquin County, and then westward into Contra Costa County. This event caused erosional troughs that were later filled in with fine-grained submarine fan deposits and transgressive deep-water shale due to renewed rising sea levels. This infilled sequence can be seen outcropping on the flanks of Mount Diablo, where it has a minimum thickness of 2,200 feet and serves as the primary trapping mechanism for the Brentwood Oil Field (Downey, 2010). The Field is an erosional remnant surrounded by Meganos canyon fill.

2.1.3 Geological Sequence

Figure 2.1-6 is a schematic cross-section depicting the stratigraphy and major structural features in the region east of the Midland Fault, where the project area is located. The six injection wells for the project will inject CO₂ into the Cretaceous-aged Mokelumne River and Starkey formations, shown in light red fill. The average injection depth for the Mokelumne River Formation within the project area is approximately -6,100 feet true vertical depth sub sea (TVDSS). The average injection depth for the Starkey Formation within the project area is -7,200 feet TVDSS. The upper Starkey Formation is characterized by interbedded shale and sand. The main sandstone in the Starkey is the Peterson Sandstone Member.

Following its deposition, the Starkey Formation was buried by the H&T Shale which is found throughout the southern Sacramento Basin and serves as an internal barrier between the Upper and Lower Injection Zones (**Figure 2.1-6 and Figure 2.1-7a**). Next, the Mokelumne River Formation was deposited and subsequently overlain by the Capay Shale. The Capay Shale serves as the upper confining zone for the project due to its low permeability, thickness, and regional continuity that spans beyond the AoR (**Figure 2.1-7b**). Above the Capay Shale lies the Domengine Formation (dissipation zone) and the Nortonville Shale (an additional barrier between the upper injection zone and the lowermost USDW).

2.2 Maps and Cross-Sections of the AoR [40 CFR 146.82(a)(2), 146.82(a)(3)(i)]

2.2.1 Data

To date, 76 wells have been drilled to various depths within the project AoR (separate from shallow water wells discussed in Section 2.7 below). **Figure 2.2-1** shows the location of the proposed injector wells and the existing, production, abandoned or plugged wells. **Figure 2.2-2** shows the location of wells with well log data. In addition to well-log data, this project utilizes seismic coverage, core, and reservoir performance data such as production and pressure to give an adequate description of the reservoir. The storage site was the site of EPA-approved Class V injection of compressed air by PG&E into the Mokelumne River Formation. Information from that activity is available for the current Class VI permit application.

Well data are used in conjunction with two -dimensional (2D) and three -dimensional (3D) seismic to define the structure and stratigraphy of the injection zones and confining layers (**Figure 2.2-3**). **Figure 2.2-4** shows outlines of the seismic data used to build a structural framework for the area. The 3D surveys were mapped in their entirety, and an additional 2D seismic line was incorporated to the east to constrain the structural model in conjunction with well control. The 3D surveys were pre-stack merged as part of a larger regional effort in 2013 to incorporate advances in seismic processing and allow for a seamless interpretation. Also shown are the seismic well ties made to the 2D and 3D data. Available seismic data were mapped for the following surfaces:-

- A shallow marker to aid in controlling the structure of the velocity field
- Domengine
- Mokelumne River
- H&T Shale

- Winters
- Forbes

The Forbes Formation was chosen to be the base of the model due to its reliability as a seismic marker and its depth beneath the injection zones. A basement reflector could not be picked across the entirety of the mapped area due to the depth to basement increasing to the west. Interpretation of these layers began with a series of well ties at well locations shown in **Figure 2.2-4**. These well ties create an accurate relationship between wells, which are in depth, and the seismic, which is in time. The layers listed above were then mapped in time and gridded across the 3D surveys and 2D seismic line. Alongside this mapping was the interpretation of any faulting in the area, which is discussed further in Section 2.3 (Faults and Fractures) of this document.

The gridded time maps and a sub-set of the highest quality well ties and associated velocity data were then used to create a 3D velocity model. This model is guided between well control by the time horizons and is iterated to create an accurate and smooth function. The velocity model is used to convert both the gridded time horizons and any interpreted faults into the depth domain. The result is a series of depth grids of the layers listed above, which are then used in the next step of this process.

The depth horizons are the basis of a framework which uses conformance relationships to create a series of depth grids that are controlled by formation well tops picked on well logs. The grids are used as structural control between these well tops to incorporate the detailed mapping of the seismic data. These grids incorporate the thickness of zones from well control and the formation strike, dip, and any fault offset from the seismic interpretation. The framework is set up to aid in building the following depth grids for input in to the geologic and plume growth models:

- Upper Injection Zone Model:
 - Nortonville Shale
 - Domengine
 - Capay Shale Top
 - Mokelumne River Formation Top and Base
- Lower Injection Zone Model:
 - Mokelumne River Formation Base / H&T Shale Top
 - Base H&T Shale (Top Starkey)
 - Base Starkey (Top Winters)

2.2.2 Stratigraphy

Major stratigraphic intervals within the project area, from oldest to youngest, include the Sacramento Shale (L. Cretaceous), Winters Shale (L. Cretaceous), Starkey Formation (L. Cretaceous), H&T Shale (L. Cretaceous), Mokelumne River Formation (L. Cretaceous-E. Paleocene), Capay Shale (E. Eocene), Domengine Sandstone (L. Eocene), and Nortonville Shale (L. Eocene) (**Figure 2.2-5**). As shown in **Figure 2.2-5**, the Capay Shale is the sealing rock that separates the injection zones from the overlying formations and underground sources of drinking water (USDWs). An additional barrier is provided by the regionally extensive Nortonville Shale.

During Paleogene time, marine and deltaic sequences were deposited in the basin until the activity of the Stockton Arch began to separate Sacramento Basin from the San Joaquin Basin in late Paleogene time (Downey, 2010).

2.2.2.1 Sacramento Shale-Winters Shale (Below Lower Injection Zone)

Sacramento Shale

The Sacramento Shale is a regionally extensive marine shale that was deposited above the Forbes Formation and is the oldest in a series of transgressive Late Cretaceous shales in southern Sacramento Basin (Downey, 2006).

Winters Shale

The Winters Formation is an upward-fining sequence of Late Cretaceous sandstones and shale deposited as part of a deep-sea fan system sourced from the Sierra Nevada and fed into the system via submarine canyons and feeder channels (Williamson, 1981). Sandstones are present in the central portion of the Sacramento Basin but pinch out along the eastern side where the entire section is dominated by the Winters Shale.

2.2.2.2 Starkey Formation (Lower Injection Zone)

The Starkey Formation is comprised of several reservoir-quality sands deposited as multiple progradational deltaic complexes along the eastern margin of the basin (Downey, 2006). The formation occurs in northern San Joaquin Basin and throughout the southern Sacramento Basin where its limits are defined by truncation by a post-Cretaceous angular unconformity. Downcutting by the mud-filled Markley Submarine Canyon has locally eroded all or part of the Starkey in northwest Sacramento and southeast Yolo counties (Downey, 2010). Deposition of Starkey sands over the Sacramento Shale and Winters Shale in the southern Sacramento Basin was oriented in a northwest-southeast trend. The sands range from a few feet to a few hundred feet in thickness and thin towards the west. Within the project AoR, the thickness ranges from 760 to 2,660 feet and varies in depth from 5,399 to 7,286 feet true vertical depth (TVD) (**Figure 2.2-6**).

Three injectors will inject into the Starkey Formation sands as shown above in **Figure 2.2-6**. A total of six injectors are planned for the combined Starkey and Mokelumne River formations (**Figure 2.2-7**).

2.2.2.3 H&T Shale (Internal Barrier)

The H&T Shale is a regional seal that conformably overlies the Starkey Formation. West of the project area, the H&T shale progressively thickens and is eventually offset by the Midland fault (10 miles to the west). Due to its low permeability, this formation acts as an internal barrier between the Upper and Lower Injection Zones, thus preventing the upward migration of CO₂ from the Starkey Formation.

2.2.2.4 Mokelumne River Formation (Upper Injection Zone)

The Mokelumne River Formation contains reservoir-quality sands whose trap types include fault truncations, stratigraphic traps, and unconformity traps sealed by intervening shales as well as overlying Meganos submarine canyon mudstone infill (Downey, 2006). Deposited as a fluvial-deltaic sequence, this sandstone was sourced by the Sierra Nevada terrain to the east and prograded west-southwestward into the forearc basin. This formation truncates to the north by the post-Cretaceous angular unconformity until it pinches out in southern Yolo and Sutter counties (Downey, 2006). These thick sands can be locally eroded or completely absent due to the downcutting by the Meganos submarine canyons. In the northwestern portion of Sacramento County, the sandstone is as shallow as 2,000 feet and deepens to over 10,500 feet moving to south-central Solano County. Thickness in this area ranges from hundreds of feet thick, separated by thin shales, to 2,500 feet thick (Downey, 2010). Within the project AoR, the thickness ranges from 18 to 1,902 feet and varies in depth from 4,427 to 6,975 feet TVD (**Figure 2.2-8**).

Three injectors will inject into the Mokelumne River Formation sands as shown above in **Figure 2.2-8**. A total of six injectors are planned for the combined Starkey and Mokelumne River formations (**Figure 2.2-7**).

2.2.2.5 Capay Shale (Upper Confining Zone)

The Capay Shale is a regionally continuous sealing facies present throughout Sacramento Basin that acts as the upper confining zone for the storage project. This Eocene-aged formation was deposited as a transgressive surface blanketing the shelf with shales. East of the Midland fault zone, the Martinez Shale has been stripped away by erosion, and the Mokelumne River Formation is unconformably overlain by the Capay Shale. At the storage site, the lower Capay Shale was deposited in an outer neritic environment, and the upper Capay was deposited in an inner neritic to brackish-water environment, implying a partial shoaling of the basin during the Eocene. Due to its low permeability, the Capay Shale serves as the sealing facies above the Upper and Lower Injection Zones; it will prevent the upward migration of CO₂ from the storage reservoirs, thus protecting USDWs.

2.2.2.6 Domengine Sandstone (Dissipation Zone)

The Domengine Formation is approximately 800 to 1,200 feet thick on the north flank of Mt. Diablo (Nilsen, 1975). Prograding across the Capay Shelf in early-middle Eocene, this formation is characterized by interbedded sandstones, shales, and coals. This sand ranges from medium- to coarse-grain silty mudstone and fine sandstone and onlaps the Capay Shale. It is separated from the Capay by a regional unconformity which progressively truncates older units until the Domengine rests on Cretaceous rocks, moving west. The Domengine consists of an upper and lower portion. The lower member is made up of fluvial and estuarine sandstones. Regionally, the lower member is separated from the upper member by an extensive surface of transgression and change in depositional style. This formation serves as a monitoring zone above the Upper and Lower Injection Zones. At the storage site, the Domengine Sand consists of alternating layers of marine sand and shale with sand being the dominant lithology.

2.2.2.7 Nortonville Shale (Additional Barrier)

Above the Domengine Sandstone is the Nortonville Shale, which is separated by a widespread surface of transgression and acts as an additional barrier between the lowermost USDW and the Upper and Lower Injection Zones. The Nortonville Shale is a mudstone member of the Kreyenhagen Formation. It is approximately 500 feet thick on the north flank of Mt. Diablo and is considered the upper portion of the Domengine Sandstone (Nilsen 1975). Overlying the Domengine Sandstone, this shale acts as a seal throughout most of the southern Sacramento and northern San Joaquin Basins. At the storage site, the Markley Sand at the top of the Nortonville is a poorly consolidated deltaic deposit containing interbedded sand and shale.

2.2.2.8 Undifferentiated Sediments (Marine and Non-Marine)

The upper Paleogene and Neogene sequence begins with the Valley Springs Formation, which represents fluvial deposits that blanket the entire southern Sacramento Basin. The unconformity at the base of the Valley Springs marks a widespread Oligocene regression and separates the more-deformed Mesozoic and lower Paleogene strata below from the less-deformed uppermost Paleogene and Neogene strata above. Base USDWs within the undifferentiated sediments are discussed in Section 2.7 of this document.

2.2.3 Maps of the Area of Review

As required by 40 CFR 146.82(a)(2), **Figure 2.2-9** shows surface bodies of water, surface features, transportation infrastructure, political boundaries, and cities and the project AoR. AoR delineation is presented in **Attachment B** (AoR and Corrective Action Plan). Major surface water bodies located in the area include the San Joaquin River, Bear Creek River, and Calaveras River run through the AoR. More details concerning these and other surface water bodies are included in Section 2.7.1.

The project AoR is in San Joaquin County. **Figure 2.2-9** does not show the surface trace of known and suspected faults because there are no known surface faults in the AoR. Based on publicly available data from Conservation Division of Mine Reclamation (DMR) and the U.S. Geological Survey (USGS) there are also no known mines or quarries in the AoR.

Figure 2.2-10 indicates the locations of State- or EPA-approved subsurface cleanup sites. This cleanup site information was obtained from the State Water Resources Control Board's GeoTracker database, which contains records for sites that impact, or have the potential to impact, groundwater quality. Water wells within and adjacent to the AoR are discussed in Section 2.7.7 of this document.

40 CFR 146.82(a)(2) requires that the application includes a map showing the injection wells, the AoR, and the below list of items and these are shown on the indicated maps where present:

- Existing injection wells, producing wells, abandoned wells, plugged wells or dry holes, deep stratigraphic boreholes (**Figure 2.2-1**).
- Surface bodies of water, springs, mines (surface and subsurface), quarries, State, Tribal, and Territory boundaries, roads and other pertinent surface features (**Figure 2.2-9**).

- State- or EPA-approved subsurface cleanup sites (**Figure 2.2-10**).
- Water wells (Figure 2.7-7; see Section 2.7)
- **Figure 2.2-11** is a compilation of the above data including index numbers to well names. Referenced index number are listed in **Table 2.2-1** and **Table 2.2-2**.

2.3 Faults and Fractures [40 CFR 146.82(a)(3)(ii)]

A combination of 2D and 3D seismic and well control were used to define the structure and any faulting within the area (**Figure 2.2-3**). **Figure 2.3-1** shows the locations of faulting identified within proximity of the AoR. The green lines show the fault traces at the Mokelumne River level. None of the faulting identified intersects the combined plume boundary. Faulting in the area is characterized as normal in nature, with relatively small offset and bound within the sedimentary section. Dip directions of these faults vary, leading to down-thrown blocks on opposite sides in similarly striking features. **Figure 2.3-2** and **Figure 2.3-3** show generalized sections across the faults that intersect the AoR.

In addition to the reviewed sub-surface data, public data from the California Geologic Survey (CGS) supports a general absence of major faulting within the project AoR. **Figure 2.3-4** shows the Fault Activity Map generated by the Geologic Survey over a regional surrounding area. The CGS does not document a fault of any classification within the AoR.

2.4 Injection and Confining Zone Details [40 CFR 146.82(a)(3)(iii)]

2.4.1 Mineralogy

Some quantitative mineralogy information exists within the AoR boundary from the Citizen_Green_1 well. Mineralogy data will be acquired across all the zones of interest as part of pre-operational testing. Several wells outside the AoR have mineralogy over the formations of interest, and that data is presented below. The locations of wells used for mineralogy are shown in **Figure 2.2-2**, and the mineralogy data is posted in **Table 2.4-1**.

2.4.1.1 *Upper Confining Zone*

Mineralogy data is available for the upper confining zone from three wells in the Rio Vista Gas Field (RVGU_209, RVGU_248, and Wilcox_20). RVGU_209 has Fourier-transform infrared spectroscopy (FTIR) data, while the other two wells have x-ray diffraction (XRD) data. Nine samples show an average of 29% total clay, with mixed-layer illite/smectite being the dominant species, and kaolinite and chlorite still prevalent. They also contain 32% quartz, 39% plagioclase and potassium feldspar, minimal pyrite, and less than 1% calcite and dolomite.

2.4.1.2 *Upper Injection Zone*

Mineralogy data is available for the Upper Injection Zone in the form of XRD data from the Citizen_Green_1 well within the AoR. Reservoir sand from six samples within this well averages 32% quartz, 21% plagioclase and potassium feldspar, and 18% total clay. The primary clay minerals are kaolinite, chlorite and mixed layer illite/smectite. Calcite & dolomite were not detected in any of the samples.

2.4.1.3 Internal Barrier

Mineralogy data is available for the internal barrier zone from the Speckman_Decarli_1 well. A mix of XRD and FTIR data on nine samples show an average of 46% total clay, with mixed layer illite/smectite being the dominant species, and kaolinite and chlorite still prevalent. They also contain 23% quartz, 29% plagioclase and potassium feldspar, 2% pyrite, and 1% calcite and dolomite.

2.4.1.4 Lower Injection Zone

Mineralogy data is available for the Lower Injection Zone in the form of XRD data from the Citizen_Green_1 well within the AoR. Reservoir sand from three samples within this well averages 40% quartz, 9% plagioclase and potassium feldspar, and 14% total clay. The primary clay minerals are kaolinite, chlorite, and mixed-layer illite/smectite.

Mineralogy data is available from within the AoR for the Lower Injection Zone from XRD data in the Citizen_Green_1, and from the Peterson Zone (nomenclature used for Starkey Formation in Rio Vista Gas Field) in the Emigh_15 and JA_Serpa_4 well, while a mix of XRD and FTIR data is available in the Emigh_15 well. Reservoir sand from 29 samples within these wells averages 54% quartz, 26% plagioclase and potassium feldspar, and 11% total clay. The primary clay minerals are kaolinite, chlorite, and mixed-layer illite/smectite. Calcite and dolomite were detected in several samples, which are interpreted to be calcite-cemented sandstone and grain replacement based on thin-section analysis of samples from the Emigh_15 and the JA_Serpa_4 wells.

2.4.1.5 Winters Formation

Mineralogy data is available for the Winters Shale in the form of XRD data from the Lopes_Transamerica_1 well in the Thornton Gas Field. Twenty-two samples show an average of 41% total clay, with chlorite being the dominant species, with illite/mica and smectite common. They also contain 25% quartz, 26% plagioclase and potassium feldspar, 2% pyrite, and less than 1% calcite and dolomite. Two samples show calcite cementation.

2.4.1.6 Sacramento Shale

Mineralogy data is available for the Sacramento Shale in the form of XRD data from the Lopes_Transamerica_1 well in the Thornton Gas Field. Ten samples show an average of 47% total clay, with chlorite being the dominant species, with illite/mica and smectite common. They also contain 22% quartz, 27% plagioclase and potassium feldspar, 1% pyrite, and less than 1% calcite and dolomite.

2.4.2 Porosity and Permeability

Wireline log data was acquired with measurements that include but are not limited to spontaneous potential (SP), natural gamma ray, borehole caliper, compressional sonic, resistivity, as well as neutron porosity and bulk density. Whole core was also cut in the Upper Injection Zone and overlying Capay/Meganos canyon fill during the PG&E King Island CAES program.

Formation porosity is determined one of two ways: from bulk density using 2.65 grams per cubic centimeter (g/cc) matrix density as calibrated from core grain density and core porosity data, or from compressional sonic using 55.5 microseconds per foot ($\mu\text{sec}/\text{ft}$) matrix slowness and the Wyllie time-average equation. See **Table 2.4-2** for explanation of which equations were used in each zone.

Clay volume is determined by SP and is calibrated to core data. Log-derived permeability is determined by applying a core-based transform that utilizes capillary pressure porosity and permeability along with clay values from XRD or FTIR. Core data from two wells with 13 data points was used to develop a permeability transform. An example of the transform from core data is illustrated in **Figure 2.4-1**.

Comparison of the permeability transform to log-generated permeability (Timur-Coates method) from a nuclear magnetic resonance (NMR) log in the Citizen_Green_1 well in the storage area is almost 1:1 and matches rotary sidewall core permeability (**Figure 2.4-2**).

2.4.2.1 Upper Confining Zone

The average porosity of the upper confining zone is 28.5%, based on 10 wells with porosity logs and 3,155 individual logging data points. See **Figure 2.4-3** for location of wells used for porosity and permeability averaging. The geometric average permeability of the upper confining zone is 0.33 millidarcies (mD), based on the Citizen_Green_1 well NMR permeability from the Timur-Coates method.

Core data is available for the upper confining zone from the DOE report DOE-PGE-00194-4 (Medeiros, et al., 2018). The cited report states that the vertical permeability for the upper confining zone is between 0.04-0.06 mD based on two different analysis methods for samples from the Piacentine_2-27 well. This is lower than the permeability from the NMR log in Citizen_Green_1, and confirms that the upper confining zone has good sealing potential

2.4.2.2 Upper Injection Zone

The average porosity for the Upper Injection Zone is 32.2%, based on 38 wells with porosity logs and 33,891 individual logging data points. The geometric average permeability for the Upper Injection Zone is 216 mD, based on 38 wells with porosity logs and 33,768 individual logging data points. This is in agreement with the NMR permeability in the Citizen_Green-1 well, which had a geometric mean of 225 mD for the upper injection zone. Twenty-one core data points from Citizen_Green_1 and Wiskey_Slough_1A-E wells (see **Figure 2.2-2** for well location) are from the upper injection zone. Permeability was measured and is in agreement with the log averages (see **Table 2.4-3**).

Core data is available for the upper injection zone from the DOE Report DOE-PGE-00194-4 in the PG&E Piacentine 2-27 well (Medeiros, et al., 2018). The cited report states that the upper injection zone has an average porosity of 25% and a horizontal permeability of 807 mD based on 162 samples in the Piacentine_2-27 well. The horizontal permeability is very similar to the average of the core data in **Table 2.4-3**, which has an average of 780 mD. Vertical permeability

measurements from that well showed an average Kv/Kh ratio of 0.8, which is similar to data from Whiskey_Slough_1A-E (**Table 2.4-3**), which shows an average Kv/Kh ratio of 0.74.

2.4.2.3 Internal Barrier

The average porosity of the internal barrier zone is 25.5%, based on 23 wells with porosity logs and 9,854 individual logging data points. The geometric average permeability of the internal barrier zone is 1.3 mD, based on the Citizen_Green_1 well NMR permeability from the Timur-Coates method.

2.4.2.4 Lower Injection Zone

The average porosity of the Lower Injection Zone is 25.5%, based on 21 wells with porosity logs and 12,798 individual logging data points. The geometric average permeability of the Lower Injection Zone is 52 mD, based on 20 wells with porosity logs and 11,602 individual logging data points. This is in agreement with the NMR permeability in the Citizen_Green-1 well, which had a geometric mean of 53 mD for the lower injection zone. Five core data points from Citizen_Green_1 well are from the lower injection zone. Permeability was measured and is in agreement with the log averages (see **Table 2.4-4**).

2.4.3 Injection and Confining Zone Capillary Pressure

Capillary pressure is the difference across the interface of two immiscible fluids. Capillary entry pressure is the minimum pressure required for an injected phase to overcome capillary and interfacial forces and enter the pore space containing the wetting phase.

Capillary pressure data within the project area is available from four sidewall core samples taken from well Citizen_Green_1. Two samples were collected from the Upper Injection Zone and two samples were collected from the Lower Injection Zone using mercury-injection capillary pressure (MICP). The capillary pressure was determined by applying CO₂-brine corrections to air-mercury test data. An interfacial tension of 480 dynes per centimeter (dynes/cm) was used for air-mercury and 30 dynes/cm was used to convert to CO₂-brine. The cosine of contact angles of 0.766 and 0.875 degrees were also used for air-mercury and CO₂-brine, respectively, based on published studies.

The report DOE-PGE-00194-4 cites caprock threshold pressure tests that were performed on samples from the upper confining zone. A delta pressure was held across three separate core samples, none of which showed any brine production at the highest delta pressure of 2,000 psi. As stated in the report, “These results support a conclusion that the upper confining zone is an impermeable seal at reservoir conditions” (Medeiros, et al., 2018).

2.4.4 Depth and Thickness

Depth and thickness of the Upper Confining Zone, Upper Injection Zone, barrier, and Lower Injection Zone (**Table 2.4-5**) are determined by structural and isopach maps (**Figure 2.4-4** and

Figure 2.4-5) based on well data (wireline logs). Variability of thickness and depth measurements within the project AoR is caused by the following factors.

1. Structural variability within the Capay Shale is caused by the Meganos submarine canyon erosional event.
2. Structural and thickness variability within the Mokelumne River Formation is due to erosion associated with the Meganos submarine canyon.
3. Structural and thickness variability across the Starkey Formation is due to deposition on the east flank of the Sacramento Basin, where structure dips west-southwest and thickness increases towards the basin axis.

2.4.5 Structure Maps

Structure maps (**Figure 2.4-4** and **Figure 2.4-5**) are provided to indicate a depth to formation adequate for supercritical-state injection.

2.4.6 Isopach Maps

SP logs from surrounding gas wells were used to identify sandstones. Negative millivolt (mV) deflections on these logs, relative to a baseline response in the enclosing shales, define the sandstones. These logs were baseline-shifted to 0 mV. Due to the log vintage variability, there is an effect on quality which creates a degree of subjectivity within the gross sand, however this will not have a material impact on the maps.

Variability in the thickness and depth of the Capay Shale, Mokelumne River Formation sandstones, and Starkey Formation sandstones will not impact confinement. CTV will utilize the thicknesses and depths shown when determining operating parameters and assessing project geomechanics.

2.5 **Geomechanical and Petrophysical Information [40 CFR 146.82(a)(3)(iv)]**

2.5.1 Caprock Ductility

Ductility and the unconfined compressive strength (*UCS*) of shale are two properties used to describe geomechanical behavior. Ductility refers to how much a rock can be distorted before it fractures, while the *UCS* is a reference to the resistance of a rock to distortion or fracture. Ductility generally decreases as compressive strength increases.

Ductility and rock strength calculations were performed based on the methodology and equations from Ingram & Urai (1999) and Ingram, et al. (1997). Brittleness is determined by comparing the log-derived *UCS* to an empirically derived *UCS* for a normally consolidated rock (*UCS_{NC}*).

$$\log UCS = -6.36 + 2.45 \log(0.86V_p - 1172) \quad (1)$$

$$\sigma' = OB_{pres} - P_p \quad (2)$$

$$UCS_{NC} = 0.5\sigma' \quad (3)$$

$$BRI = \frac{UCS}{UCS_{NC}} \quad (4)$$

Units for the UCS equation are UCS in megapascals (MPa) and V_p (compressional velocity) in meters per second (m/s). OB_{pres} is overburden pressure, P_p is pore pressure, σ' is effective overburden stress, and BRI is brittleness index.

If the value of BRI is less than 2, empirical observation shows that the risk of embrittlement is lessened, and the confining zone is sufficiently ductile to accommodate large amounts of strain without undergoing brittle failure. However, if BRI is greater than 2, the “risk of development of an open fracture network cutting the whole seal depends on more factors than local seal strength, and therefore the BRI criterion is likely to be conservative, so that a seal classified as brittle may still retain hydrocarbons” (Ingram & Urai, 1999).

2.5.1.1 Upper Confining Zone

Within the project area, 16 wells had compressional sonic data over the upper confining zone to calculate ductility, comprising 8,863 individual logging data points (pink circles in **Figure 2.2--2**). The same 16 wells were used to calculate UCS , comprising 8,863 individual logging data points. The average ductility of the upper confining zone based on the mean value is 1.34. The average rock strength of the confining zone, as determined by the log-derived UCS equation above, is 1,589 psi.

PG&E performed an EPA-approved Class V compressed air injection test within the Upper Injection Zone. The test was successful in pressurizing and depressurizing the reservoir without impacting the Upper Confining Zone or bounding Meganos canyon fill.

2.5.1.2 Additional Barrier between Upper Injection Zone and Lowermost USDW

Additionally, ductility and rock strength were calculated over the additional barrier between the Upper Injection Zone and the lowermost USDW (see Section 2.2.2.7) and the internal barrier zone. Fifteen wells had sufficient data for the additional barrier, comprising 6,288 individual logging data points. The average ductility of the additional barrier based on the mean value is 1.43. The average rock strength of the additional barrier, as determined by the log-derived UCS equation above, is 1,125 psi.

2.5.1.3 Internal Barrier

Nine wells had sufficient data to calculate ductility and rock strength over the internal barrier zone, comprising 3,974 individual logging data points. The average ductility of the internal barrier zone based on the mean value is 2.0. The average rock strength of the internal barrier zone, as determined by the log-derived UCS equation above, is 3,088 psi.

An example calculation for the well “1_Chevron” is shown in **Figure 2.5-1**. UCS_{CCS_VP} is the UCS based on the compressional velocity, UCS_{NC} is the UCS for a normally consolidated rock,

and *BRI* is the calculated brittleness using this method. Brittleness less than 2 (representing ductile rock) is shaded red.

Within the upper confining layer, the brittleness calculation drops to a value less than 2. Additionally, the additional barrier has a brittleness value less than 2. The barrier zone also has a brittleness value less than 2. As a result of the confining layer ductility, there are no fractures that will act as conduits for fluid migration from the injection zones. This conclusion is supported by the fact that prior to discovery, the upper confining zone provided a seal to the underlying gas reservoirs of the Mokelumne River Formation for millions of years in several gas fields surrounding and within the project AoR.

2.5.2 Stress Field

The stress of a rock can be expressed as three principal stresses. Formation fracturing will occur when the pore pressure exceeds the least of the stresses. In this circumstance, fractures will propagate in the direction perpendicular to the least principal stress (**Figure 2.5-2**).

Stress orientations in the Sacramento Basin have been studied using both earthquake focal mechanisms and borehole breakouts (Snee and Zoback, 2020; Mount and Suppe, 1992). The azimuth of maximum principal horizontal stress (S_{Hmax}) was estimated at $N40^{\circ}E \pm 10^{\circ}$ by Mount and Suppe (1992). Data from the World Stress Map 2016 release (Heidbach et al., 2016) shows an average S_{Hmax} azimuth of $N37.4^{\circ}E$ once several far-field earthquakes with radically different S_{Hmax} orientations are removed (**Figure 2.5-3**), which is consistent with Mount and Suppe (1992). The earthquakes in the area indicate a strike-slip/reverse-faulting regime.

Within the project AoR, there is a site-specific fracture gradient for the Upper Injection Zone, but not for the Lower Injection Zone or any of the confining zones. A step-rate test will be conducted as per the pre-operational testing plan (**Attachment I**) in the injection zones. A step-rate test (SRT) was performed in the PG&E TEST_INJECTION_WITHDRAWAL_WELL_1 with a resultant fracture gradient of 0.822 psi/ft in the Upper Injection Zone. Several additional wells in the Sacramento Basin have formation integrity tests (FIT) or leak-off tests (LOT) performed at similar depth ranges to the project injection and confining zones. Tests from seven wells average 0.82 psi/ft from tests in the depth range of 4,800 to 11,050 feet TVD. See **Figure 2.5-4** for the location of the wells. For the computational simulation modeling and well-performance modeling, a frac gradient of 0.76 psi/ft was assumed for now as a safety factor.

The overburden stress gradient in the injection and confining zones is 0.87 to 0.94 psi/ft. No data currently exists for the pore pressure of the confining zone. This will be determined as part of the preoperational testing.

2.6 Seismic History [40 CFR 146.82(a)(3)(v)]

2.6.1 Recent Seismicity

As discussed in prior sections, 2D and 3D seismic along with well data were used to create depth surfaces within the AoR. Two normal faults are identified as intersecting the AoR. These faults are classified as typical normal faults as seen in the extended area beyond the AoR. These faults

are interpreted to be bound within the sedimentary section of the Sacramento Basin. The California Geologic Survey (CGS) has produced a Fault Activity Map which captures a compilation of mapped faults within the state. This map is shown for the project area in **Figure 2.3-4** and indicates there are no mapped faults within the greater proximity of the project area.

USGS provides an earthquake catalog tool (<https://earthquake.usgs.gov/earthquakes/search/>) which can be used to search for recent seismicity that could be associated with faults for movement. A search was made for earthquakes in the greater vicinity of the project area from 1900 to modern day with events of a magnitude greater than 2.5. **Figure 2.6-1** shows the results of this search. **Table 2.6-1** summarizes data taken from these events. The events were confirmed to be the same as those in the Northern California Earthquake Data Center catalog (NCEDC, 2014).

There are seventeen events within a 15-mile radius of the project area. The events occur between 1909 and 2021, at 4 to 15 kilometers (km) depth. The injection zones are between 1.25 and 2.5 km deep. There are no earthquakes within the AoR or in the injection/containment layers. Given the typical nature of the faults identified on the seismic data, the lack of major faults mapped by the CGS, and the absence of historical earthquakes within or close to the AoR, the faults identified are not considered to be active or high-risk sources of seismicity.

Lund-Snee and Zoback (2020) published updated maps for crustal-stress estimates across North America. **Figure 2.6-2** shows a modified image from that work highlighting the project area. This work agrees with previous estimates of maximum horizontal stress in the region of approximately N40°E in a strike-slip to reverse-stress regime (Mount and Suppe, 1992) and is consistent with World Stress map data for the area (Heidbach et al., 2016). **Attachment C** of this application (Testing and Monitoring Plan) discusses the seismicity monitoring plan for this injection site.

2.6.2 Seismic Hazard Mitigation

CTV V is in an area of little historical seismicity, and no active faults have been documented by the California Geologic Survey for the area. This document defines the confining zones that separate the injection intervals from USDWs.

The following is a summary of CTVs seismic hazard mitigation for CTV V:

The project has a geologic system capable of receiving and containing the volumes of CO₂ proposed to be injected.

- Extensive historical operations in the Sacramento Basin across multiple geologic formations, such as those at Rio Vista and Union Island in the southern portion of the Basin, provide valuable experience to understand operating conditions such as injection volumes and reservoir containment.
- There are no faults or fractures identified in the AoR that will impact the confinement of CO₂ injectate. The faults identified within the AoR are at a minimum over one mile away from the combined injectate plume boundary for both injection zones.

Will be operated and monitored in a manner that will limit risk of endangerment to USDWs, including risks associated with induced seismic events.

- Injection pressure will be lower than the fracture gradient of the sequestration reservoir with a safety factor (90% of the fracture gradient).
- Injection and monitoring well pressure monitoring will ensure that pressures are beneath the fracture pressure of the sequestration reservoir and confining zone.
- A seismic monitoring program will be designed to detect events lower than seismic events that can be felt. This will ensure that operations can be modified with early warning events, before a felt seismic event.

Will be operated and monitored in a way that in the unlikely event of an induced event, risks will be quickly addressed and mitigated.

- Via monitoring and surveillance practices (pressure and seismic monitoring program), CTV personnel will be notified of events that are considered an early warning sign. Early warning signs will be addressed to ensure that more significant events do not occur.
- CTV will establish a central control center to ensure that personnel have access to the continuous data being acquired during operations.

Minimizing potential for induced seismicity and separating any events from natural to induced.

- Pressure will be monitored in each injector and sequestration-monitoring well to ensure that pressure does not exceed the fracture pressure of the reservoir or confining zone.
- Seismic monitoring program will be installed pre-injection for a period to monitor for any baseline seismicity that is not being resolved by current monitoring programs.
- Average depth of prior seismic hazard in the region based on reviewed historical seismicity has been approximately 5.0 km, which is significantly deeper than the proposed injection zones.

2.7 Hydrologic and Hydrogeologic Information [40 CFR 146.82(a)(3)(vi), 146.82(a)(5)]

The California Department of Water Resources (DWR) has defined 515 groundwater basins and subbasins within the state. The project AoR is within the San Joaquin Valley Groundwater Basin. The majority of the AoR is in the Eastern San Joaquin Subbasin (ESJS; DWR Basin No. 5-022.01). A small southwest portion (approximately 1%) of the AoR is in the Tracy Subbasin (DWR Basin No. 5-022.15) (DWR, 2020). **Figure 2.7-1** illustrates the project AoR, subbasins, and the surrounding areas.

The ESJS is generally bounded on the north and northwest by the Mokelumne River, on the west by the San Joaquin River, on the south by the Stanislaus River, and on the east by consolidated bedrock (DWR, 2006a). The Tracy Subbasin is bounded by the Diablo Range on the west, the

Mokelumne and San Joaquin Rivers on the north, the San Joaquin River to the east, and the San Joaquin-Stanislaus County line on the south (DWR, 2006b).

Portions of the text below regarding hydrologic features of the area are adopted from ESJGA (2019).

2.7.1 Hydrologic Information

The major surface water bodies located in the ESJS include San Joaquin River, Bear Creek River, and Calaveras River, and sloughs and the perennial stream tributaries (**Figure 2.7-1**). The surface water bodies are shown in more detail on **Figure 2.2-9**. The San Joaquin River, Bear Creek, sloughs, and cuts connecting sloughs run through the project AoR.

With a watershed of approximately 1,195 square miles, the San Joaquin River begins at Thousand Island Lake high in the south-central Sierra Nevada at an elevation of nearly 10,000 feet above sea level (Strelzoff, 2022). The San Joaquin River travels over 300 miles, making it the longest river in central California. The mainstem of the San Joaquin River is divided into three sections: the upper, middle, and lower sections. The upper San Joaquin River is defined as the mainstem upstream (south) of Friant Dam (Millerton Reservoir) and includes the north, middle, and south forks. The upper watershed includes approximately 1,675 square miles (sq. mi.) (approximately 1.1 million acres), and the river flows 66 miles from the south fork to Friant Dam. The lower San Joaquin River is defined as the mainstem north (downstream) of the confluence with the Merced River to Vernalis. The watershed comprises 12,250 square miles (approximately 7.8 million acres), and the lower portion of the river is approximately 115 miles long (NOAA, 2022). The San Joaquin river provides irrigation water and drinking water to the San Joaquin Valley.

The Calaveras River, also with headwaters in the Sierra Nevada, drains a watershed of about 530 sq. mi. and flows into and across the Subbasin to its confluence with the San Joaquin River on the northwest side of Stockton. Flow in the Calaveras River below the New Hogan Reservoir varies seasonally from 608 acre-feet per day (AF/day) to 19,800 AF/day and is dependent on discharges from the on-stream reservoir. These flows correlate to discharges from 223 to over 10,000 cubic feet per second (cfs) reported by the USGS below the New Hogan Reservoir (ESJGA, 2019).

The Mokelumne River drains a watershed of about 2,140 sq. mi. and flows through the dissected uplands between Jackson and San Andreas into Pardee Reservoir, where it is released to flow downstream into Camanche Reservoir and out along the alluvial plains and fans toward its confluence with the San Joaquin River near Isleton. On the north boundary of the ESJS is Dry Creek and the Lower Dry Creek Watershed, the majority of which is within Cosumnes Subbasin. Dry Creek is mapped as an ephemeral drainage and is tributary to the Mokelumne River with its confluence near Thornton. Flow in the Mokelumne River below the Camanche Reservoir varies seasonally and is dependent on discharges from the on-stream reservoir, from less than 200 AF/day during the dry season to 9,900 AF/day during the wet season. These flows correlate to discharges from as low as 100 to no more than 5,000 cfs reported by the USGS below the Camanche Dam. Major watersheds of the river are the Upper Mokelumne River (most of which is outside of the Subbasin to the east with a small portion overlapping with Cosumnes Subbasin) and the Lower Mokelumne River (mostly contained in the Subbasin with a small portion intersecting the South American and Solano Subbasins) (ESJGA, 2019).

2.7.2 Base of Fresh Water and Base of USDWs

The owner or operator of a proposed Class VI injection must define the general vertical and lateral limits of all USDWs and their positions relative to the injection zone and confining zones. The intent of this information is to demonstrate the relationship between the proposed injection formation and any USDWs, and it will support an understanding of the water resources near the proposed injection well. A USDW is defined as an aquifer or its portion which supplies any public water system; or which contains a sufficient quantity of ground water to supply a public water system and currently supplies drinking water for human consumption; or contains fewer than 10,000 mg/L TDS; and which is not an exempted aquifer. The freshwater aquifer zone is defined by California State Water Resources Control Board Resolution 88-63 as containing less than 3,000 mg/L TDS. For the California Sustainable Groundwater Management Act (SGMA), the bottom of the groundwater basin is defined as the approximated bottom of the Mehrten Formation (ESJGA, 2019).

2.7.2.1 *Base of Fresh Water*

The base of fresh water helps define the aquifers that are used for public water supply. Local water agencies in the subbasins have participated in various studies to comply with SGMA. There is a significant thickness of sedimentary strata overlying basement bedrock. Therefore, it is appropriate to consider water quality when delineating the basin bottom (DWR, 2016a).

USGS mapped the base of fresh groundwater based on measured specific conductance of less than 3,000 micromhos per centimeter, which is approximately 2,000 mg/L TDS (Kang et al., 2020). The base of fresh groundwater is deepest in the southwestern portion of the AoR (**Figure 2.7-2**). The base of fresh water within the AoR as estimated by the Eastern San Joaquin Groundwater Authority (ESJGA) groundwater sustainability plan shown in **Figure 2.7-3** (ESJGA, 2019). The base of freshwater for the southernmost portion of the AoR is also shown in cross-section in **Figure 2.7-4** (ESJGA, 2019).

2.7.2.2 *Calculation of Base of Fresh Water and USDW*

CTV has used geophysical logs to investigate the USDWs and the base of the USDWs. The calculation of salinity from logs used by CTV is a four-step process:

- (1) converting measured density or sonic to formation porosity

The equation to convert measured density to porosity is:

$$POR = \frac{(R_{\text{hom}} - R_{\text{HOB}})}{(R_{\text{hom}} - R_{\text{hof}})} \quad (5)$$

Parameter definitions for the equation are:

POR is formation porosity

R_{hom} is formation matrix density g/cc; 2.65 g/cc is used for sandstones

R_{HOB} is calibrated bulk density taken from well-log measurements (g/cc)

R_{hof} is fluid density (g/cc); 1.00 g/cc is used for water-filled porosity

The equation to convert measured sonic slowness to porosity is done one of two ways.

The Raymer equation:

$$POR = -1 \left(\frac{\Delta t_{ma}}{2\Delta t_f} - 1 \right) - \sqrt{\left(\frac{\Delta t_{ma}}{2\Delta t_f} - 1 \right)^2 + \frac{\Delta t_{ma}}{\Delta t_{log}} - 1} \quad (6)$$

Or the Wyllie time-average equation:

$$POR = \left(\frac{\Delta t_{log} - \Delta t_{ma}}{\Delta t_f - \Delta t_{ma}} \right) \frac{1}{C_p} \quad (7)$$

Parameter definitions for the equations are:

POR is formation porosity

Δt_{ma} is formation matrix slowness ($\mu\text{s}/\text{ft}$); 55.5 $\mu\text{s}/\text{ft}$ is used for sandstones

Δt_f is fluid slowness ($\mu\text{s}/\text{ft}$); 189 $\mu\text{s}/\text{ft}$ is used for water-filled porosity

Δt_{log} is formation compressional slowness from well-log measurements ($\mu\text{s}/\text{ft}$)

C_p is an empirical compaction factor which is calibrated to make sonic porosity equal to density porosity in wells that have both compressional sonic and bulk density logs

(2) calculation of apparent water resistivity using the Archie equation,

The Archie equation calculates apparent water resistivity. The equation is:

$$R_{wah} = \frac{POR^m R_t}{a} \quad (8)$$

Parameter definitions for the equation are:

R_{wah} is apparent water resistivity (ohmm)

POR is formation porosity

m is the cementation factor; 2 is the standard value

R_t is deep reading resistivity taken from well-log measurements (ohmm)

a is the Archie constant; 1 is the standard value

(3) correcting apparent water resistivity to a standard temperature

Apparent water resistivity is corrected from formation temperature to a surface temperature standard of 75 degrees Fahrenheit:

$$R_{wahc} = R_{wah} \frac{TEMP + 6.77}{75 + 6.77} \quad (9)$$

Parameter definitions for the equation are:

R_{wahc} is apparent water resistivity (ohmm), corrected to surface temperature

TEMP is down hole temperature based on temperature gradient (DegF)

(4) converting temperature corrected apparent water resistivity to salinity.

The following formula was used (Davis, 1988):

$$SAL_a_EPA = \frac{5500}{Rwahc} \quad (10)$$

Parameter definitions for the equation are:

SAL_a_EPA is salinity from corrected Rwahc (ppm)

The evaluation of electrical logs from gas exploration and production wells located in and near the King Island Gas Field indicates that the base of the USDW occurs at about 750 feet below the ground surface and is separated from the target injection reservoir by about 800 feet of sedimentary rocks, including two competent shale formations (the Nortonville Shale and the Capay Shale). A map of the depth to base of the USDW is shown on **Figure 2.7-5** and the base USDW is also shown on the geologic cross section in **Figure 2.2-5**.

2.7.3 Formations with USDWs

The groundwater basin is composed of six hydraulically connected formations that store and transmit water: (1) Younger Alluvium and Modesto/Riverbank Fms., (2) Turlock Lake Fm., (3) Laguna Fm., (4) Mehrten Fm., (5) Valley Springs Fm., and (6) Ione Fm. These formations comprise the principal aquifer. **Table 2.7-1** provides the relationships between formation name and geologic age.

2.7.3.1 *Younger Alluvium and Modesto/Riverbank*

The Younger Alluvium includes recent sediments that have been deposited by streams including the Cosumnes River and Mokelumne River. The maximum thickness of Younger Alluvium, where it exists, is 50 feet and is comprised of continental unconsolidated gravel and coarse to medium sand deposited along present stream channels (ESJGA, 2019). The sand and gravel deposits are highly permeable and comprise a significant avenue for percolation to underlying formations (ESJGA, 2019).

The maximum thickness of the Modesto Formation is 65 to 130 feet and is composed of mainstream arkosic sediments and associated deposits of local derivation laid down during the last major series of aggradation events in the eastern San Joaquin Valley (Marchand & Allwardt, 1981). Gravel, sand, and silt were deposited as a series of coalescing alluvial fans extending continuously from the Kern River drainage on the south to the Sacramento River tributaries in the north (ESJGA, 2019).

Riverbank Formations materials are similar in character to the Modesto Formation. The Riverbank Formation shows a variable thickness that tends to increase toward the major river channels, with a maximum thickness ranging from 150 to 250 feet (ESJGA, 2019). Together the Modesto and Riverbank formations make up an unconfined aquifer with moderate permeability (ESJGA, 2019).

2.7.3.2 Turlock Lake

The Turlock Lake Formation consists primarily of arkosic alluvium, mostly fine sand, silt, and in places clay, at the base grading upward into coarse sand and occasional coarse pebbly sand or gravel (Marchand & Allwardt, 1981). The Turlock Lake commonly stands topographically above the younger fans and terraces throughout the northeastern San Joaquin Valley in a broad band between the Merhten, Laguna, and the younger Riverbank and Modesto alluvial fans to the west. A buried soil separates the Turlock Lake Formation into two units (Upper and Lower) in the northeastern San Joaquin Valley. The thickness of the Turlock Lake is variable and appears to increase toward the east. The maximum thickness is 1,000 feet, and the formation has generally low permeability and is confined to an unconfined aquifer (ESJGA, 2019).

2.7.3.3 Laguna Formation

The Pliocene to Pleistocene Laguna Formation is composed of discontinuous lenses of unconsolidated to semiconsolidated alluvial sands, gravels, and silts and is typically light brown. These poorly exposed stream-laid alluvial deposits form high terraces and are associated with the last major uplift in the Sierra Nevada. A transition zone occurs between the Laguna Formation and underlying Mehrten Formation, where non-volcanic sediments of the Laguna Formation are interbedded with the volcanic sediments of the Mehrten Formation (DWR, 1974). The Laguna Formation outcrops in the northeastern part of San Joaquin County and dips at 90 feet per mile (ft/mi) and reaches a maximum thickness of 1,000 feet, with the thickest areas (400 to 1,000 feet) observed near the Mokelumne River in the Stockton Area (DWR, 1967). The Laguna Formation is moderately permeable with some reportedly highly permeable coarse-grained fresh water-bearing zones (ESJGA, 2019).

2.7.3.4 Mehrten Formation

Overlying the Valley Springs Formation is the Miocene Age Mehrten Formation, described as being stream channel, alluvial, and mudflow deposits derived mainly from andesitic volcanic rocks. The Mehrten Formation consists of two elements: (1) black volcanic sand, silt, and clay layers called “Black Sands”; and (2) dense tuff breccia (DWR, 1974). The Black Sands range between five to 20 feet thick and are highly permeable, which yield moderate to high quantities of groundwater to wells. The tuff breccia beds act as local confining layers (DWR, 1974). The base of the Mehrten Formation is a thick bed of hard gray sandstone (DWR, 1974).

The Mehrten thickens in the northeastern part of the San Joaquin Valley can be more than 700 to 1,200 feet thick at depths ranging from more than 300 feet below ground on the east side of the valley to depths exceeding 1,400 feet along the central portion of the valley. The contact between the Mehrten Formation and underlying Valley Springs Formation is a non-distinct unconformity (ESJGA, 2019).

2.7.3.5 Valley Springs Formation

The Oligocene-age Valley Springs Formation is a stream channel and alluvial deposits derived mainly from rhyolitic volcanic rocks including some white, welded tuffs, and ash flows. The basal contact of the Valley Springs Formation is characterized, locally, by the presence of rhyolitic

conglomerate. These tuffs may display alteration to clays, and, in extreme cases, only a claystone bed with relict tuffaceous texture remains. Pure deposits of rhyolitic ash exist in areas, while many sand and ash beds are present. In general, the clay beds of the Valley Springs Formation are greenish in color, may contain silt, sand, and large pumice fragments. The sandstones range in grain size from fine to coarse and are typically well-cemented. Predominantly composed of quartz and pre-Cretaceous material, the relatively sparse conglomerate lenses within the tuff, clay, and sandstone may also contain pumice fragments. The Valley Springs Formation has a maximum thickness of approximately 500 feet and is predominantly fine-grained, containing less coarse-grained deposits. In the Central Valley, the Valley Springs Formation is considered to be largely non-water-bearing due to its low permeability (ESJGA, 2019).

2.7.3.6 Ione Formation

The Eocene-age Ione Formation has been mapped along the eastern margin of the ESJS and, as described by Loyd (1983), contains interbedded kaolinitic clay, quartz sand, sandy clay, and lignite. The Ione Formation is characteristically light in color, with color influenced by iron oxide, lignite, and carbonaceous mud rocks and shale (Creely & Force, 2007). The Ione Formation contains saline waters except where flushed in outcrop areas (ESJGA, 2019). Ione sand has a white color with a pearly luster and appears massive; however, closer examination usually reveals cross-stratification, heavy mineral laminae, and burrows (Creely & Force, 2007). Quartz is abundant with varying feldspar content in both members.

2.7.4 Geologic Cross-Sections Illustrating Formations with Base of Fresh Water

Hydrogeologic cross-section B-B' along the southern edge of the AoR (**Figures 2.7-3 and 2.7-4**) illustrates the vertical distribution of geologic formations and aquifer material that comprise the sediments that could reasonably be tapped for groundwater supply (ESJGA, 2019). Cross-Section B-B' extends for approximately 28 miles. The cross-section was reproduced from ESJGA (2019) based on the 330 well logs in the Subbasin. From this data, well depths for municipal and irrigation wells range from 75 to over 800 feet bgs, with an average depth of 350 feet bgs. Well logs were reviewed for the following information used in putting together the cross-section:

- Depth of water table
- Depth and thickness of saturated fine to coarse-grained sand and gravel layers
- Depth and thickness of discrete layers of sands
- Depth and thickness of discrete clay or silt layers that locally confine groundwater
- Depth of water-bearing aquifer materials (e.g., sands and gravels) down to the base of fresh water and deeper, where available

Analysis identified significant permeable zones with high production rates and good water quality at relatively shallow depths (less than 700 feet bgs) due to the following conditions:

- The relatively shallow depths of production wells had high specific capacity that met the water supply demand and reduced the cost associated with drilling deeper.
- The base of fresh groundwater throughout the ESJB ranges from depths of 700 to 1,900 feet bgs.

- Deeper water is saline and not considered suitable for potable or agricultural use.

2.7.5 Principal Aquifer

In the SGMA regulations, principal aquifers are defined as aquifers or aquifer systems that store, transmit, and yield significant or economic quantities of groundwater to wells, springs, or surface water systems. There is one principal aquifer in the project area, which is primarily composed of post-Eocene sedimentary deposits. The principal aquifer is divided into the shallow zone, intermediate zone, and the deep zone. The zones have favorable aquifer characteristics that deliver a reliable water resource because of their basin location and sand thickness (ESJGA, 2019).

The zones are as follows:

- Shallow Aquifer Zone that consists of the alluvial sands and gravels of the Modesto, Riverbank, and Upper Turlock Lake Formations
- Intermediate Aquifer Zone that consists of the Lower Turlock Lake and Laguna Formations
- Deep Aquifer Zone that consists of the consolidated sands and gravels of the Mehrten Formation

Details on the formations are provided in Section 2.7-3

2.7.5.1 Shallow Aquifer Zone

The shallow, water-bearing zone is composed of permeable sediments from recent alluvium, Modesto/Riverbank Formations, and the upper unit of the Turlock Lake Formation that are present west of the older geologic formations and extend across the majority of the ESJS. This zone is generally unconfined above the aquitards (clays/silts, including Corcoran clay, and old soil horizons/hardpan layers; ESJGA, 2019).

The depositional structure on the eastern side of the valley trough is depicted on the hydrogeologic cross-sections A-A' and B-B' (**Figure 2.7-4**). This structure results in the groundwater flow that follows both the dip of the beds and hydraulic head differentials. Erosional and depositional features dominate aquifer characteristics. The cross-sections also depict the aquifer thickness from 30 feet to greater than 300 feet (ESJGA, 2019).

2.7.5.2 Intermediate Aquifer Zone

As depicted on the hydrogeologic cross-sections A-A' and B-B' (**Figure 2.7-4**), sands, typically from 10 to over 60 feet thick, are found below the low permeability clay layers. The sands and gravels are developed with one relatively continuous sand unit at 350 feet bgs, within the top of the lower unit of the Turlock Lake Formation and Laguna Formation, thinning out at topographic highs to the east. Eastern basin depositional structure shows pinching, wedging, and combination water-bearing zones with the surficial alluvium (ESJGA, 2019).

The aquifer characteristics are supported by the sand thickness information detailed herein for the principal aquifer. The eastern distribution of this water-bearing zone near the surface suggests

unconfined groundwater conditions. Typically, this zone is found semi-confined with high-yielding wells and is considered the current primary production zone (ESJGA, 2019).

2.7.5.3 Deep Aquifer Zone

The water-bearing black sands of the semi-consolidated Mehrten Formation are considered a significant source of water for ESJS production wells. The formation is thick in the west, with a limited number of deep wells that penetrate the entire depth of this unit. This water-bearing zone is confined due to the thick overlying clay units, consolidation, and basin location. Semi-confined conditions are more likely to the east because of the dipping of beds and stratigraphic layer thinning and erosion of clay/silt beds. Consolidated sediments of the Mehrten and Valley Springs Formations are at valley bottom depth and exposed on the eastern foothills. Recharge to these aquifer formations occurs because of the high topographic setting with increased rainfall and exposure of weathered surface and runoff from the adjacent fractured Sierran bedrock (ESJGA, 2019).

2.7.6 Groundwater Levels and Flow

Figure 2.7-6 shows a groundwater contour map reproduced from the ESJS Groundwater Sustainability Plan for the fourth quarter 2017 (ESJGA, 2019). The horizontal groundwater flow direction for the ESJS is typically towards areas of lower groundwater near the center of the Subbasin. The flow generally mirrors topography and is relatively consistent over time. The flow direction follows the overall east dipping gradient of the geologic formations in the eastern portions of the Subbasin. Higher groundwater elevations are in the foothills on the east side of the Subbasin, and the elevations decrease following the topography. In the western portion of the Subbasin, groundwater flows east toward areas with relatively lower groundwater elevation. Groundwater elevation is typically lower in monitoring wells with deeper screen placement, suggesting downward flow of groundwater (ESJGA, 2019).

2.7.7 Water Supply and Groundwater Monitoring Wells

The California State Water Resources Control Board Groundwater Ambient Monitoring Assessment Program (GAMA), the DWR, California Statewide Groundwater Elevation Monitoring (CASGEM), and other public databases were searched to identify any water supply and groundwater monitoring wells within a one-mile radius of the AoR. DWR's Water Data Library reports groundwater data collected from a variety of well types including irrigation, stock, domestic, and public supply wells. The State Water Board's GAMA Program was established in 2000 to create a comprehensive groundwater monitoring program throughout California and to increase public availability and access to groundwater quality and contamination information (State Water Board, 2018).

Over 2,000 water wells were identified within one mile of the AoR, 1,539 of which are production wells. Data provided from public databases indicate that the wells identified are completed much shallower than the proposed injection zone. A map of well locations and table of information are found in **Figure 2.7-7** (Water Well Map) and **Table 2.7-2** (Water Well Information), respectively.

The primary uses for groundwater obtained from the principal aquifer are irrigated agriculture, public supply, and rural domestic. Well-screen depth is provided for 575 of the 1,539 production wells from **Table 2.7-2**. Depths of the bottom perforated interval range from 16 to 880 feet with an average depth of 143 feet.

2.8 Geochemistry [40 CFR 146.82(a)(6)]

2.8.1 Formation Geochemistry

All formation geochemistry information is presented in the mineralogy section (section 2.4.1).

2.8.2 Fluid Geochemistry

Three water samples from the storage zones exist within the AoR and from surrounding gas fields in close proximity to the AoR(see **Figure 2.8-1** for well locations).

2.8.2.1 Upper Injection Zone

For the Upper Injection Zone, the well Piacentine_2-27 was sampled in 2013 from within the AoR. The measurement of TDS for the sample is 14,000 mg/L. The complete water chemistry is shown in **Figure 2.8-2**.

The well Midland_Fee_Water_Injection_1 was sampled in 1980 in the Rio Vista Gas Field. The measurement of TDS for the sample is 13,889.4 mg/L. The complete water chemistry is shown in **Figure 2.8-3**.

Salinity calculations were also performed on logs from wells within the AoR, and these showed TDS in the Upper Injection Zone being approximately 13,000 to 18,000 ppm. A conservative TDS of 14,000 ppm was used for the computational model.

Historically, King Island was a gas producing field from the Mokelumne River Formation. Analytical results from natural gas sample collected within the Upper Injection Zone within the boundaries of the AoR from Piacentine 1-27 indicates that the gas comprises nearly 92 percent methane and 8 percent nitrogen with trace amounts of ethane, propane and carbon dioxide (Medeiros, M., et al., 2018).

2.8.2.2 Lower Injection Zone

For the Lower Injection Zone, the well Trigueiro_4 was sampled in 1990 in the Rio Vista Gas Field. The measurement of TDS for the sample is 14,415 mg/L. The complete water chemistry is shown in **Figure 2.8-4**.

Salinity calculations were also performed on logs from wells within the AoR, and these showed TDS in the Lower Injection Zone being approximately 13,000 to 18,000 ppm. A conservative TDS of 14,000 ppm was used for the computational model.

No gas production is present within the Lower Injection Zone within the boundaries of the AoR, so no hydrocarbon analysis is available.

2.8.3 Fluid-Rock Reactions

2.8.3.1 *Upper Confining Zone*

There is no fluid geochemistry analysis for the upper confining zone. The shale will only provide fluid for analysis if stimulated. However, given the low permeability of the rock and the low carbonate content, the upper confining zone is not expected to be impacted by the CO₂ injectate.

2.8.3.2 *Upper Injection Zone*

Mineralogy and formation fluid interactions have been assessed for the Upper Injection Zone. The following applies to potential reactions associated with the CO₂ injectate:

1. The Upper Injection Zone has a negligible quantity of carbonate minerals and is instead dominated by quartz and feldspar. These minerals are stable in the presence of CO₂ and carbonic acid, and any dissolution or changes that occur will be on grain surfaces.
2. The water within the Upper Injection Zone contains minimal calcium and magnesium cations, which would be expected to react with the CO₂ to form calcium-bearing minerals in the pore space. Also, the salinity being less than 30,000 ppm will reduce the “salting out” effect seen in higher salinity brine under the presence of CO₂.

2.8.3.3 *Internal Barrier*

There is no fluid geochemistry analysis for the internal barrier zone. The shale will only provide fluid for analysis if stimulated. However, given the low permeability of the rock and the low carbonate content, the internal barrier is not expected to be impacted by the CO₂ injectate.

2.8.3.4 *Lower Injection Zone*

Mineralogy and formation fluid interactions have been assessed for the Lower Injection Zone. The following applies to potential reactions associated with the CO₂ injectate:

1. The Lower Injection Zone generally has a negligible quantity of carbonate minerals and is instead dominated by quartz and feldspar. These minerals are stable in the presence of CO₂ and carbonic acid, and any dissolution or changes that occur will be on grain surfaces. The few intervals that do have higher concentrations of carbonate minerals are very thin, tight streaks caused by calcite cementing of sands. Dissolution of these will only result in the reduction of vertical permeability barriers within the formation.
2. The water within the Lower Injection Zone contains minimal calcium and magnesium cations, which would be expected to react with the CO₂ to form calcium-bearing minerals in the pore space. Also, the salinity being less than 30,000 ppm will reduce the “salting out” effect seen in higher salinity brine under the presence of CO₂.

2.8.3.5 Geochemical Modeling

Using fluid geochemistry data for the injection zones, and the available mineralogy data for the injection zones and confining zones, geochemical modeling was conducted using PHREEQC (pH-REdox- Equilibrium), the USGS geochemical modeling software, to evaluate the compatibility of the injectates being considered for the project with formation rocks and fluid.

The PHREEQC software was used to evaluate the behavior of minerals and changes in aqueous chemistry and mineralogy over the life of the project, and to identify major potential reactions that may affect injection or containment.

Based on the geochemical modeling, the injection of CO₂ at the CTV V site does not cause significant reactions that will affect injection or containment. Detailed methodology and results can be found in **Appendix 3** submitted with this application.

2.9 Other Information (Including Surface Air and/or Soil Gas Data, if Applicable)

No additional information necessary.

2.10 Site Suitability [40 CFR 146.83]

Sufficient data from both wells and seismic demonstrate the integrity through lateral continuity of the storage reservoirs as well as the confining zone. Regional mapping completed by West Coast Regional Carbon Sequestration Partnership (WESTCARB), CGS, and the National Energy and Technology Lab (NETL) support the local stratigraphy, both indicating lateral continuity and regional thickness across the project AoR (Downey, 2010). This study covers formations with sequestration and seal potential from southern Sutter County down to the Stockton Arch Fault-San Joaquin County, encompassing an area far beyond the project AoR. WESTCARB (Burton et al., 2016) evaluated CO₂ storage potential in the California Central Valley at four sites including King Island and determined that King Island met scientific criteria objectives best among all the sites.

The vertical confinement and laterally continuous geologic formations described in this report will make the site ideal for CO₂ sequestration. The Capay Shale (upper confining zone) is a regionally continuous shale that will guide the lateral dispersion of CO₂ across the AoR (**Figure 2.10-1**). Oil and gas fields adjacent to the project AoR demonstrate adequate seal capacity in the upper confining zone. Corrosion-resistant alloy (CRA) will be used for completion of the injection and monitoring wells, inhibiting any reaction between CO₂ and wellbores.

Due to the regional continuity, thickness, and low permeability of the upper confining zone, no secondary confinement is necessary; however, another shale barrier, the Nortonville Shale, exists above the Domengine Formation monitoring sand. This additional shale unit creates another impermeable barrier that separates the injection zones from the lowermost USDW.

CTV's estimated storage for the project is 16.7 MMT of CO₂. This was arrived at through computational modeling presented in **Attachment B**.

3.0 AoR and Corrective Action

CTV's AoR and Corrective Action Plan (**Attachment B**) pursuant to 40 CFR 146.82(a)(4), 40 CFR 146.82(a)(13) and 146.84(b), and 40 CFR 146.84(c) describes the process, software, and results to establish the AoR, and the wells that require corrective action.

AoR and Corrective Action GSDT Submissions

GSDT Module: AoR and Corrective Action

Tab(s): All applicable tabs

Please use the checkbox(es) to verify the following information was submitted to the GSDT:

- ☒ Tabulation of all wells within AoR that penetrate confining zone [**40 CFR 146.82(a)(4)**]
- ☒ AoR and Corrective Action Plan [**40 CFR 146.82(a)(13) and 146.84(b)**]
- ☒ Computational modeling details [**40 CFR 146.84(c)**]

4.0 Financial Responsibility

CTV's Financial Responsibility demonstration pursuant to 140 CFR 146.82(a)(14) and 40 CFR 146.85 (**Attachment H**) is met with a line of credit for Injection Well Plugging and Post-Injection Site Care and Site Closure and insurance to cover Emergency and Remedial Responses.

Financial Responsibility GSDT Submissions

GSDT Module: Financial Responsibility Demonstration

Tab(s): Cost Estimate tab and all applicable financial instrument tabs

Please use the checkbox(es) to verify the following information was submitted to the GSDT:

- ☒ Demonstration of financial responsibility [**40 CFR 146.82(a)(14) and 146.85**]

5.0 Injection and Monitoring Well Construction

CTV plans to drill six new injectors for the CTV V storage project. New injection wells are planned and designed specifically for CO₂ sequestration purposes. These wells will target selective intervals within the injection zone to optimize plume development and injection conformance. Additionally, nine new monitoring wells will be constructed to support the storage project. Four injection-zone monitoring wells, one above-zone monitoring well, and four USDW monitoring wells will be constructed prior to injection (**Figure 5.0-1**).

All planned new wells will be constructed with components that are compatible with the injectate and formation fluids encountered such that corrosion rates and cumulative corrosion over the duration of the project are acceptable. The proposed well materials will be confirmed based on actual CO₂ composition such that material strength is sufficient to withstand all loads encountered throughout the life of the well with an acceptable safety factor incorporated into the design. Casing

points will be verified by trained geologists using real-time drilling data such as logging while drilling (LWD) and mud logs to ensure non-endangerment of USDW. Due to the depth of the base of the lowermost USDW, an intermediate casing string will be utilized to isolate the USDW. Cementing design, additives, and placement procedures will be sufficient to ensure isolation of the injection zone and protection of the USDW using cementing materials that are compatible with injectate, formation fluids, and subsurface pressure and temperature conditions.

The pressure within the Upper Injection Zone is approximately 2,383 psi, and the temperature is approximately 136 degrees Fahrenheit. The pressure within the Lower Injection Zone is approximately 2,994 psi, and the temperature is approximately 152 degrees Fahrenheit.

These conditions are not extreme, and CTV has extensive experience successfully constructing, operating, working over, and plugging wells in depleted reservoirs.

Appendix 5: Injection and Monitoring Well Schematics provides casing diagram figures for all injection and monitoring wells, with construction specifications and anticipated completion details in graphical and/or tabular format.

5.1 Proposed Stimulation Program [40 CFR 146.82(a)(9)]

There are no proposed stimulation programs currently.

5.2 Construction Procedures [40 CFR 146.82(a)(12)]

CTV has created Construction and Plugging documents for each project well pursuant to 40 CFR 146.82(a)(8). Each **Attachment G: Well Construction and Plugging Plan** document includes well construction information based on requirements defined within 40 CFR 146.82. The relevant attachments are:

- Attachment G1: KI-I-S1 Construction and Plugging Plan
- Attachment G2: KI-I-S2 Construction and Plugging Plan
- Attachment G3: KI-I-S3 Construction and Plugging Plan
- Attachment G4: KI-I-M1 Construction and Plugging Plan
- Attachment G5: KI-I-M2 Construction and Plugging Plan
- Attachment G6: KI-I-M3 Construction and Plugging Plan

6.0 Pre-Operational Logging and Testing

CTV has indicated a proposed pre-operational logging and testing plan throughout the application documentation pursuant to 40 CFR 146.82(a)(8). Each **Attachment G: Well Construction and Plugging Plan** document (listed in Section 5.2) includes logging and testing plans for each individual project well based on requirements defined within 40 CFR 146.87.

Pre-Operational Logging and Testing GSDT Submissions

GSDT Module: Pre-Operational Testing

Tab(s): Welcome tab

Please use the checkbox(es) to verify the following information was submitted to the GSDT:

☒ Proposed pre-operational testing program [40 CFR 146.82(a)(8) and 146.87]

7.0 Well Operation

7.1 Operational Procedures [40 CFR 146.82(a)(10)]

The Operational Procedures for all injectors associated with the project are detailed in **Appendix 4** (Operational Procedures) document attached with this application.

7.2 Proposed Carbon Dioxide Stream [40 CFR 146.82(a)(7)(iii) and (iv)]

CTV is planning to construct a carbon capture and sequestration “hub” project (*i.e.*, a project that collects CO₂ from multiple sources over time and injects the CO₂ stream(s) via Class VI UIC permitted injection well(s)). Therefore, CTV is currently considering multiple sources of anthropogenic CO₂ for the project. Potential sources include capture from existing and potential future industrial sources in the Sacramento Valley area, as well as Direct Air Capture (DAC). CTV would expect the CO₂ stream to be sampled at the transfer point from the source and between the final compression stage and the wellhead. Samples will be analyzed according to the analytical methods described in the “**Appendix 10: QASP**” (Table 4) document and the Testing and Monitoring Plan (**Attachment C**, see Table 1).

For the purposes of geochemical modeling, CO₂ plume modeling, AoR determination, and well design, two major types of injectate compositions were considered based on the source.

- Injectate 1: a potential injectate stream composition from DAC or a pre-combustion source (such as a blue hydrogen facility that produces hydrogen using steam methane reforming process) or a post-combustion source (such as a natural gas-fired power plant or steam generator). The primary impurity in the injectate is nitrogen.
- Injectate 2: a potential injectate stream composition from a biofuel capture source (such as a biodiesel plant that produces biodiesel from a biologic source feedstock) or from an oil and gas refinery. The primary impurity in the injectate is light end hydrocarbons (methane and ethane).

The compositions for these two injectates are shown in **Table 7.2-1**, and are based on engineering design studies and literature.

For geochemical and plume modeling scenarios, these injectate compositions were simplified to a 4-component system, shown in **Table 7.2-2** and then normalized for use in the modeling. The 4-component simplified compositions cover 99.9% by mass of Injectate 1 and 2 and cover

particular impurities of concern (H₂S and SO₂). The estimated properties of the injectates at downhole conditions are specified in **Table 7.2-3**.

The anticipated injection temperature at the wellhead is 90 to 130° F.

No corrosion is expected in the absence of free-phase water provided that the entrained water is kept in solution with the CO₂. This is ensured by maintaining a <25 pounds per million cubic feet (lb/mmcf) injectate specification limit, and this specification will be a condition of custody transfer at the capture facility. For transport through pipelines, which typically use standard alloy pipeline materials, this specification is critical to the mechanical integrity of the pipeline network, and out of specification product will be immediately rejected. Therefore, all product transported through pipeline to the injection wellhead is expected to be dry-phase CO₂ with no free-phase water present.

Injectate water solubility will vary with depth and time as temperature and pressures change. The water specification is conservative to ensure water solubility across super-critical operating ranges. CRA tubing will be used in the injection wells to mitigate any potential corrosion impact should free-phase water from the reservoir become present in the wellbore, such as during shut-in events when formation liquids, if present, could backflow into the wellbore. CTV may further optimize the maximum water content specification prior to injection based on technical analysis.

8.0 Testing and Monitoring

CTV's Testing and Monitoring plan (**Attachment C**) pursuant to 40 CFR 146.82 (a) (15) and 40 CFR 146.90 describes the strategies for testing and monitoring to ensure protection of the USDW, injection well mechanical integrity, and plume monitoring.

Testing and Monitoring GSDT Submissions

GSDT Module: Project Plan Submissions

Tab(s): Testing and Monitoring tab

Please use the checkbox(es) to verify the following information was submitted to the GSDT:

☒ Testing and Monitoring Plan [40 CFR 146.82(a)(15) and 146.90]

9.0 Injection Well Plugging

CTV's Injection Well Plugging Plan pursuant to 40 CFR 146.92 (**Attachment G**) describes the process, materials, and methodology for injection well plugging.

Injection Well Plugging GSDT Submissions

GSDT Module: Project Plan Submissions

Tab(s): Injection Well Plugging tab

Please use the checkbox(es) to verify the following information was submitted to the GSDT:

☒ Injection Well Plugging Plan [40 CFR 146.82(a)(16) and 146.92(b)]

10.0 Post-Injection Site Care (PISC) and Site Closure

CTV has developed a Post-Injection Site Care and Site Closure Plan (**Attachment E**) pursuant to 40 CFR 146.93 (a) to define post-injection testing and monitoring.

CTV is proposing an alternative PISC timeframe as described in **Attachment E**.

PISC and Site Closure GSDT Submissions

GSDT Module: Project Plan Submissions

Tab(s): PISC and Site Closure tab

Please use the checkbox(es) to verify the following information was submitted to the GSDT:

☒ PISC and Site Closure Plan [40 CFR 146.82(a)(17) and 146.93(a)]

GSDT Module: Alternative PISC Timeframe Demonstration

Tab(s): All tabs (only if an alternative PISC timeframe is requested)

Please use the checkbox(es) to verify the following information was submitted to the GSDT:

☒ Alternative PISC timeframe demonstration [**40 CFR 146.82(a)(18) and 146.93(c)**]

11.0 Emergency and Remedial Response

CTV's Emergency and Remedial Response Plan (**Attachment F**) pursuant to 40 CFR 164.94 describes the process and response to emergencies to ensure USDW protection.

Emergency and Remedial Response GSDT Submissions

GSDT Module: Project Plan Submissions

Tab(s): Emergency and Remedial Response tab

Please use the checkbox(es) to verify the following information was submitted to the GSDT:

☒ Emergency and Remedial Response Plan [**40 CFR 146.82(a)(19) and 146.94(a)**]

12.0 Injection Depth Waiver and Aquifer Exemption Expansion

No depth waiver or Aquifer Exemption expansion is being requested as part of this application

Injection Depth Waiver and Aquifer Exemption Expansion GSDT Submissions

GSDT Module: Injection Depth Waivers and Aquifer Exemption Expansions

Tab(s): All applicable tabs

Please use the checkbox(es) to verify the following information was submitted to the GSDT:

☐ Injection Depth Waiver supplemental report [40 CFR 146.82(d) and 146.95(a)]

☐ Aquifer exemption expansion request and data [40 CFR 146.4(d) and 144.7(d)]

13.0 References

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FIGURES

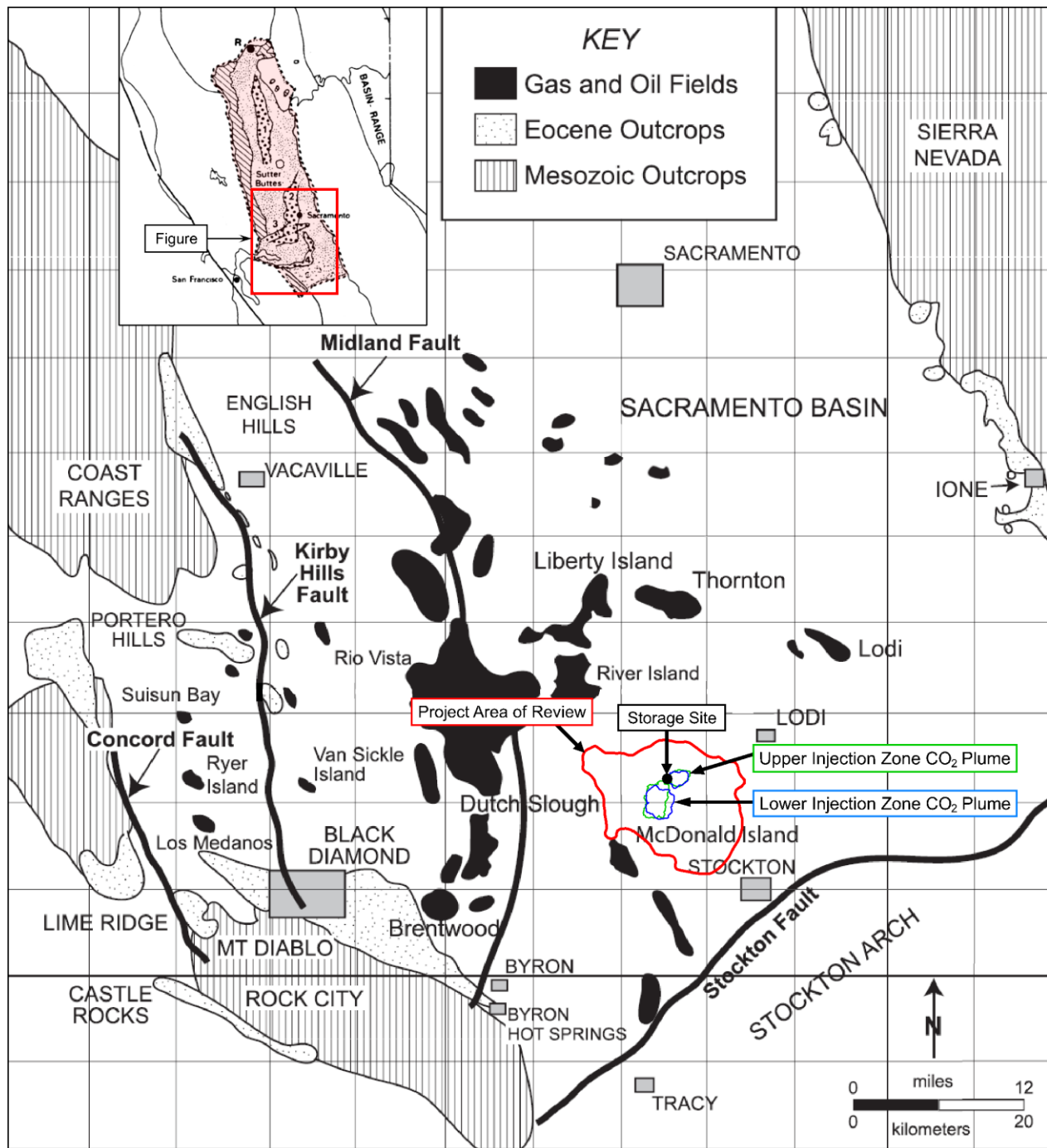


Figure 2.1-1. Location map of the project AoR (red) in relation to the Sacramento Basin. CO₂ plume boundaries shown for the Upper Injection Zone (green) and Lower Injection Zone (blue).

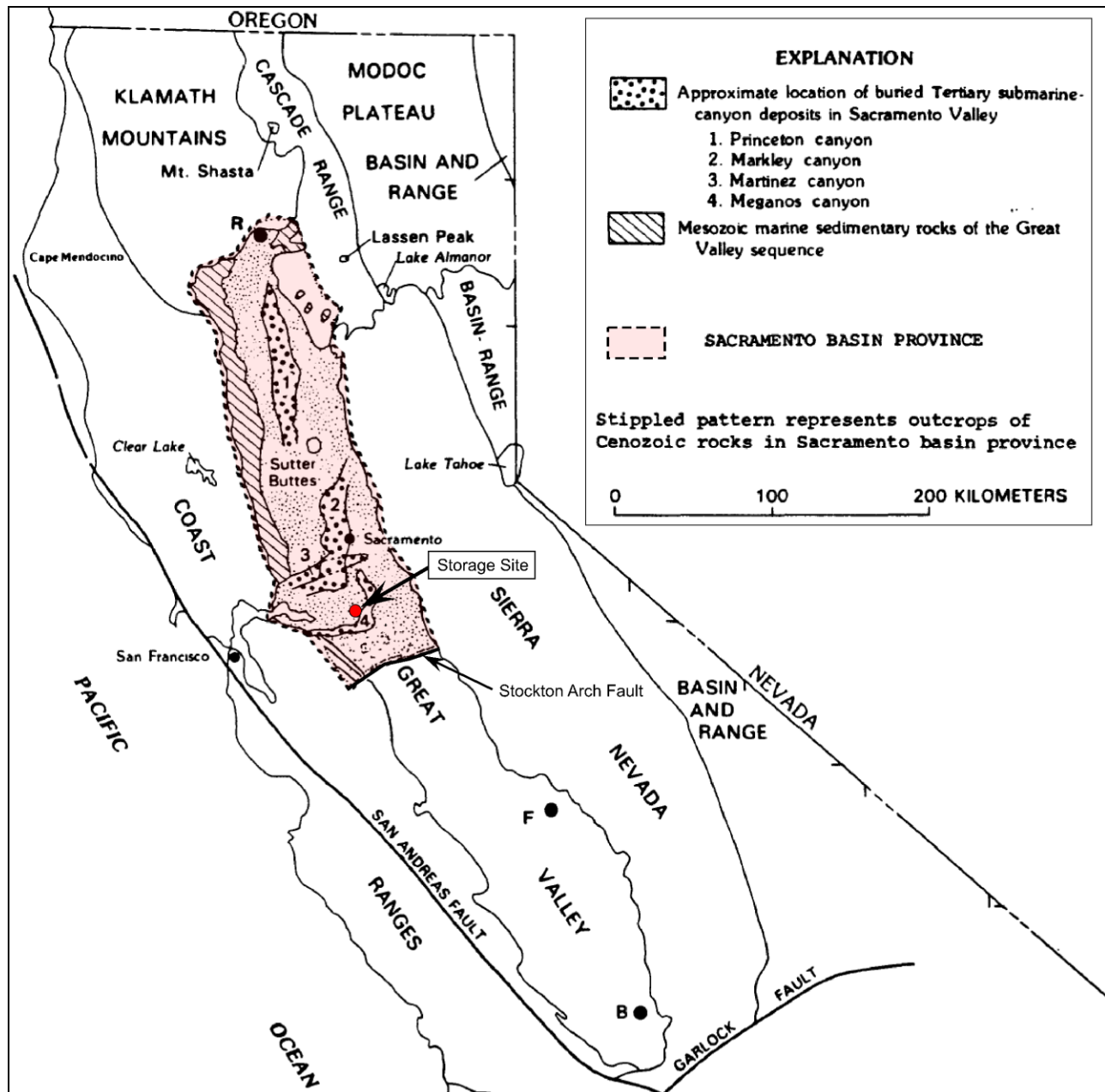


Figure 2.1-2. Location map of California modified from (Beyer, 1988) & (Sullivan, 2012). The Sacramento Basin regional study area is outlined by a dashed black line. B – Bakersfield; F – Fresno; R – Redding.

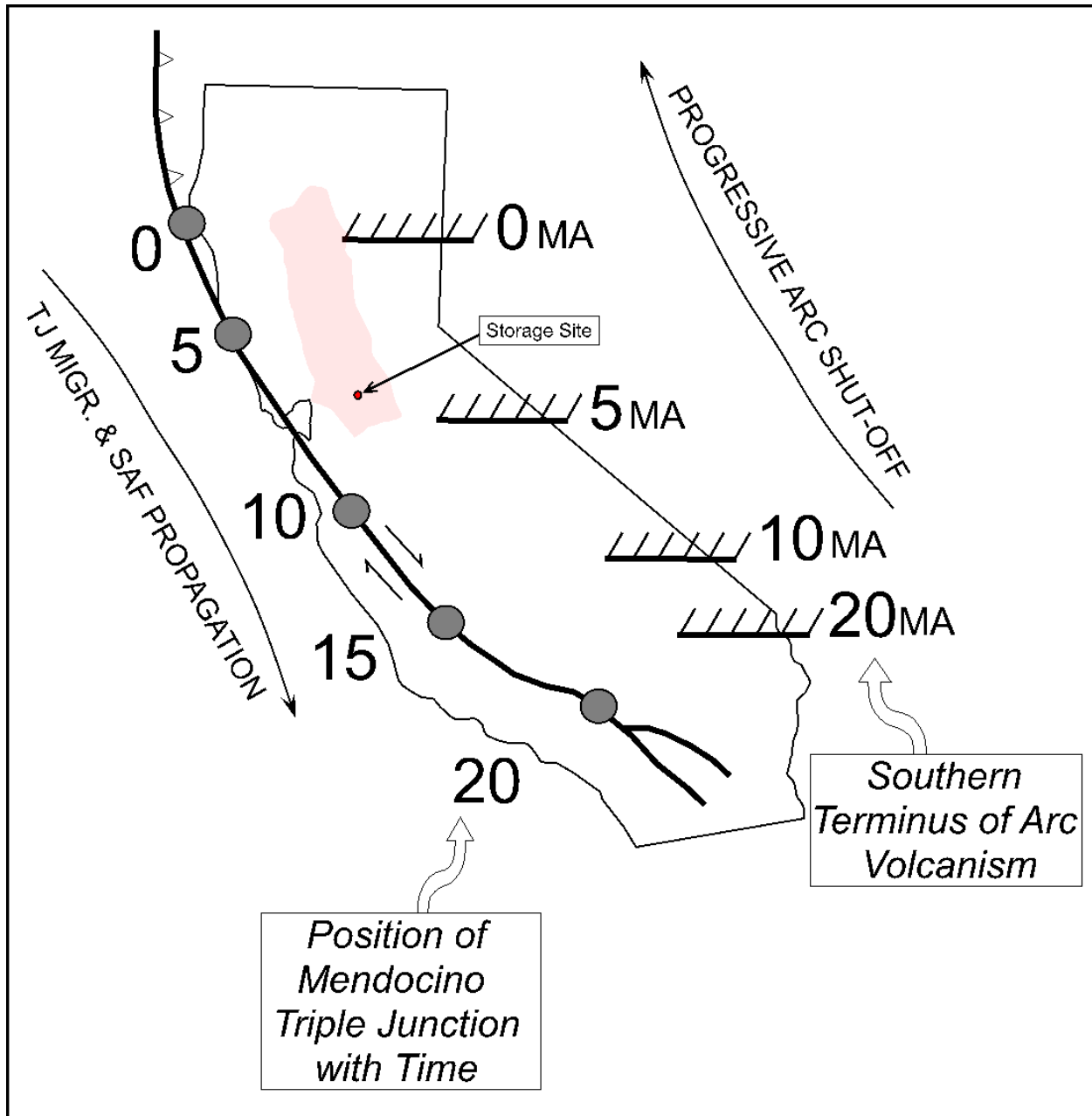


Figure 2.1-3. Migrational position of the Mendocino triple junction (Connection point of the Gorda, North American and Pacific plates) on the west and migrational position of Sierran arc volcanism in the east (Graham, 1984). The figure indicates space-time relations of major continental-margin tectonic events in California during the Miocene.

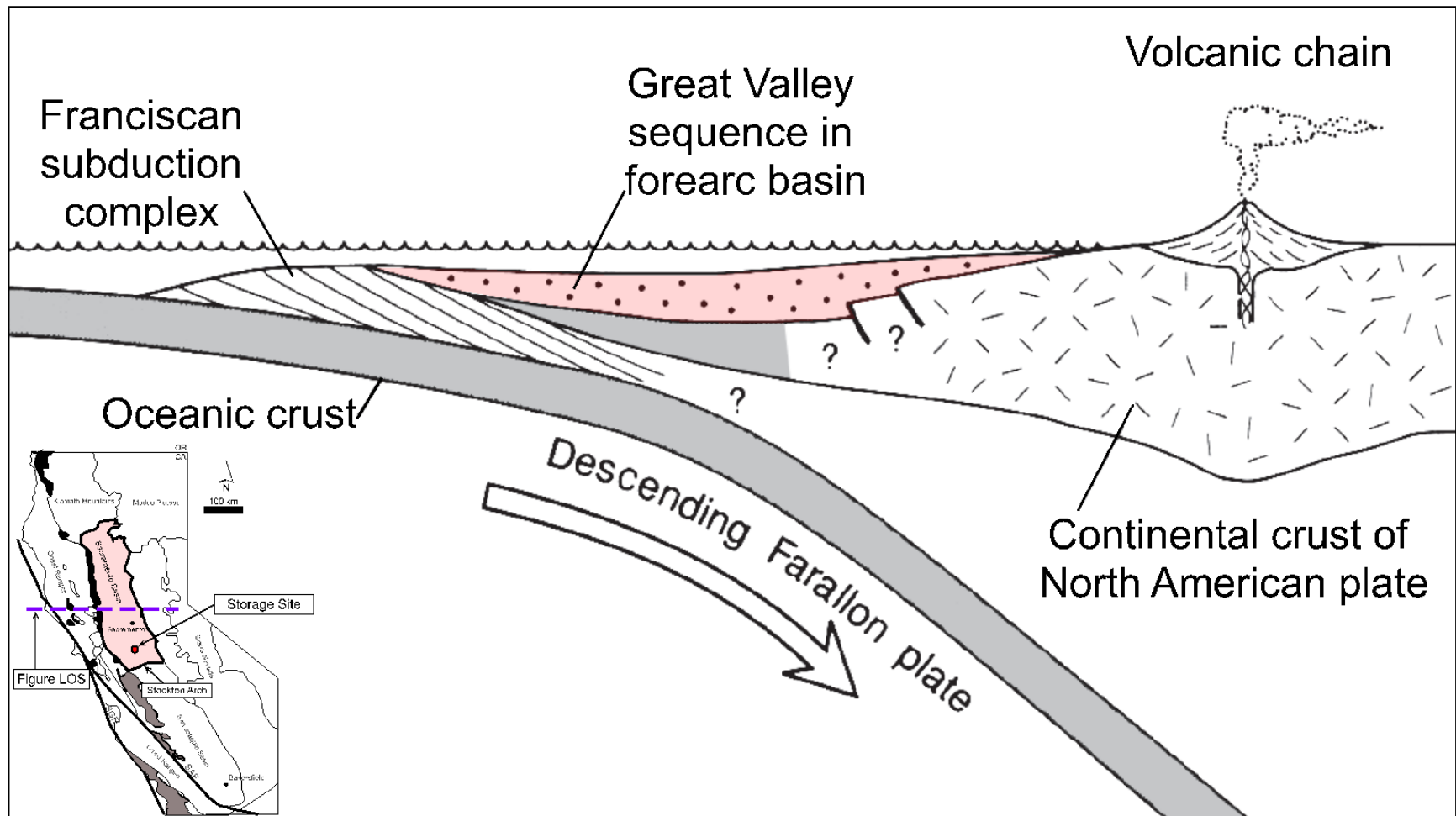


Figure 2.1-4. Schematic W-E cross-section of California, highlighting the Sacramento Basin, as a continental margin during late Mesozoic. The oceanic Farallon plate was forced below the west coast of the North American continental plate.

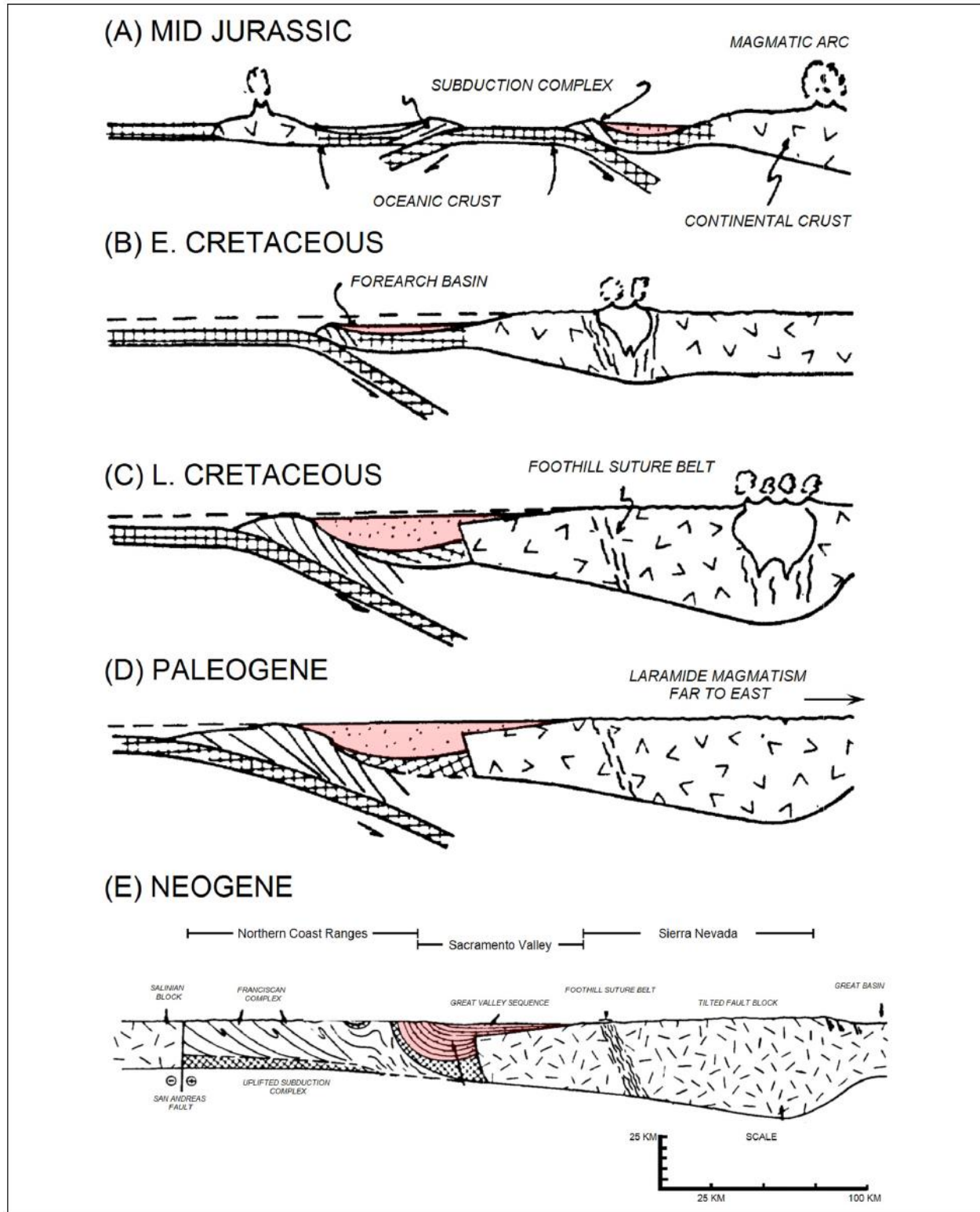


Figure 2.1-5. Evolutionary stages showing the history of the arc-trench system of California from Jurassic (A) to Neogene (E) (modified from Beyer, 1988).

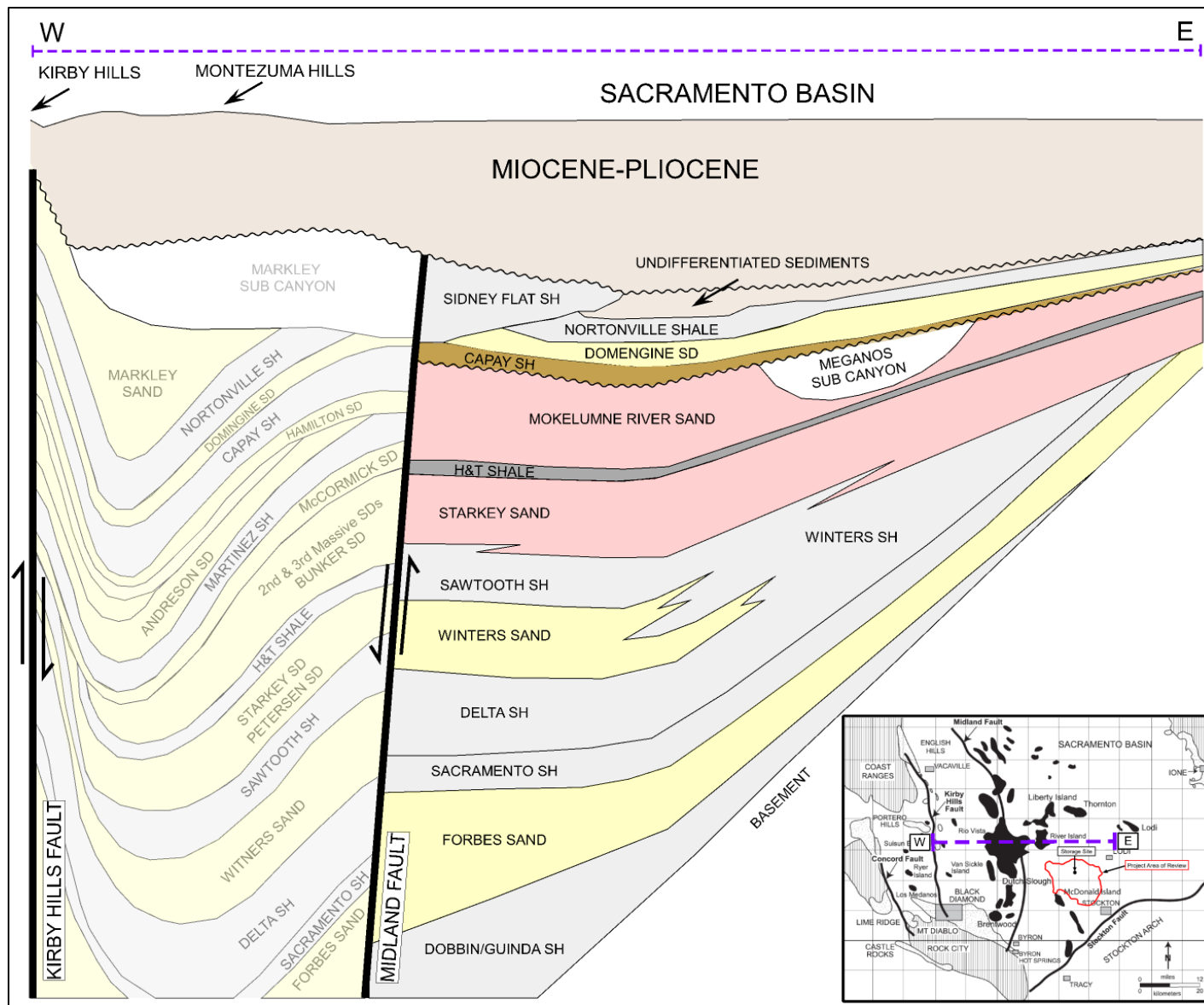


Figure 2.1-6. Schematic west to east cross section in the Sacramento basin.

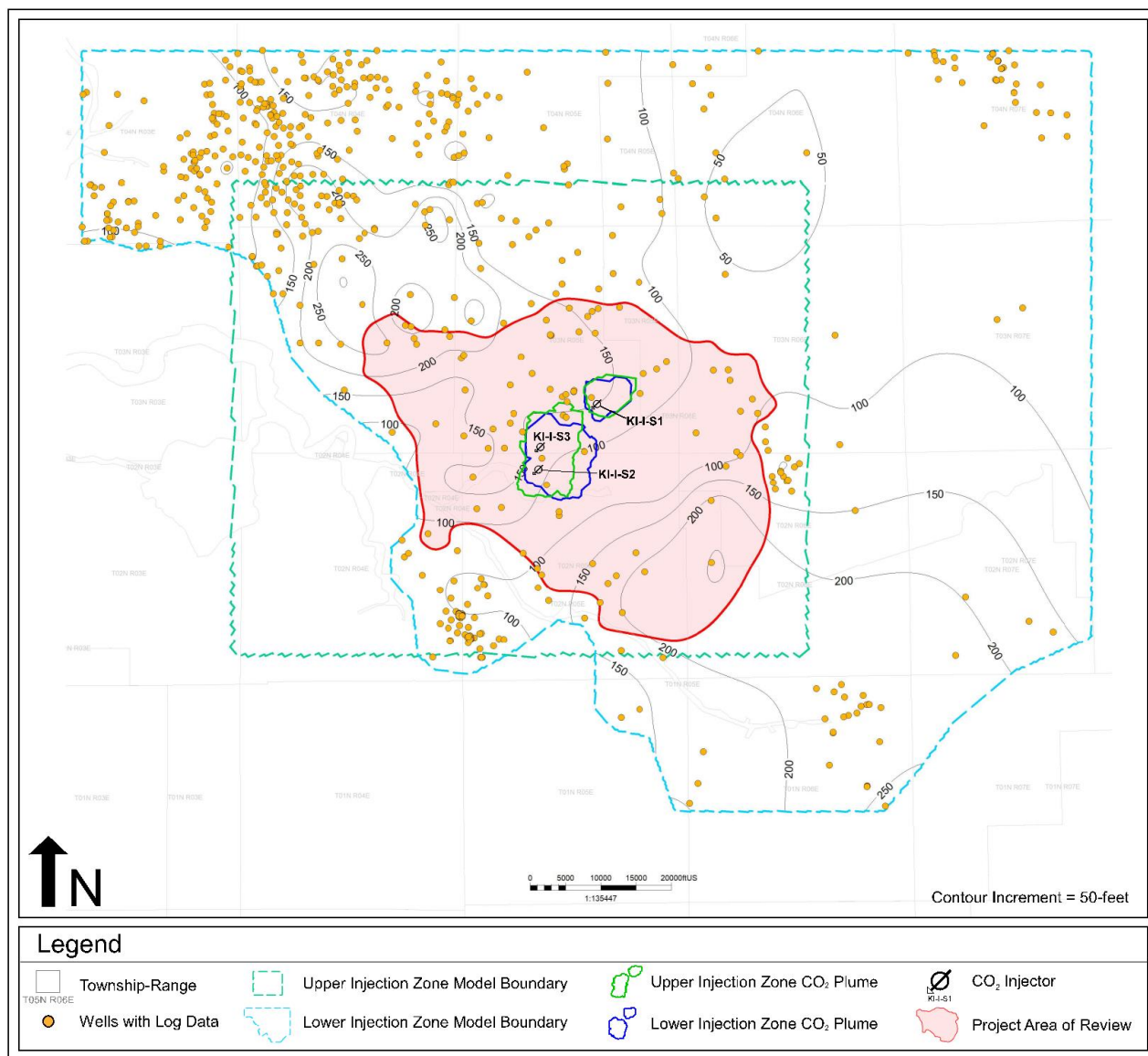


Figure 2.1-7a. H&T Shale isopach map for the greater Lower Injection Zone project area. Wells shown as orange dots on the map have open-hole logs.

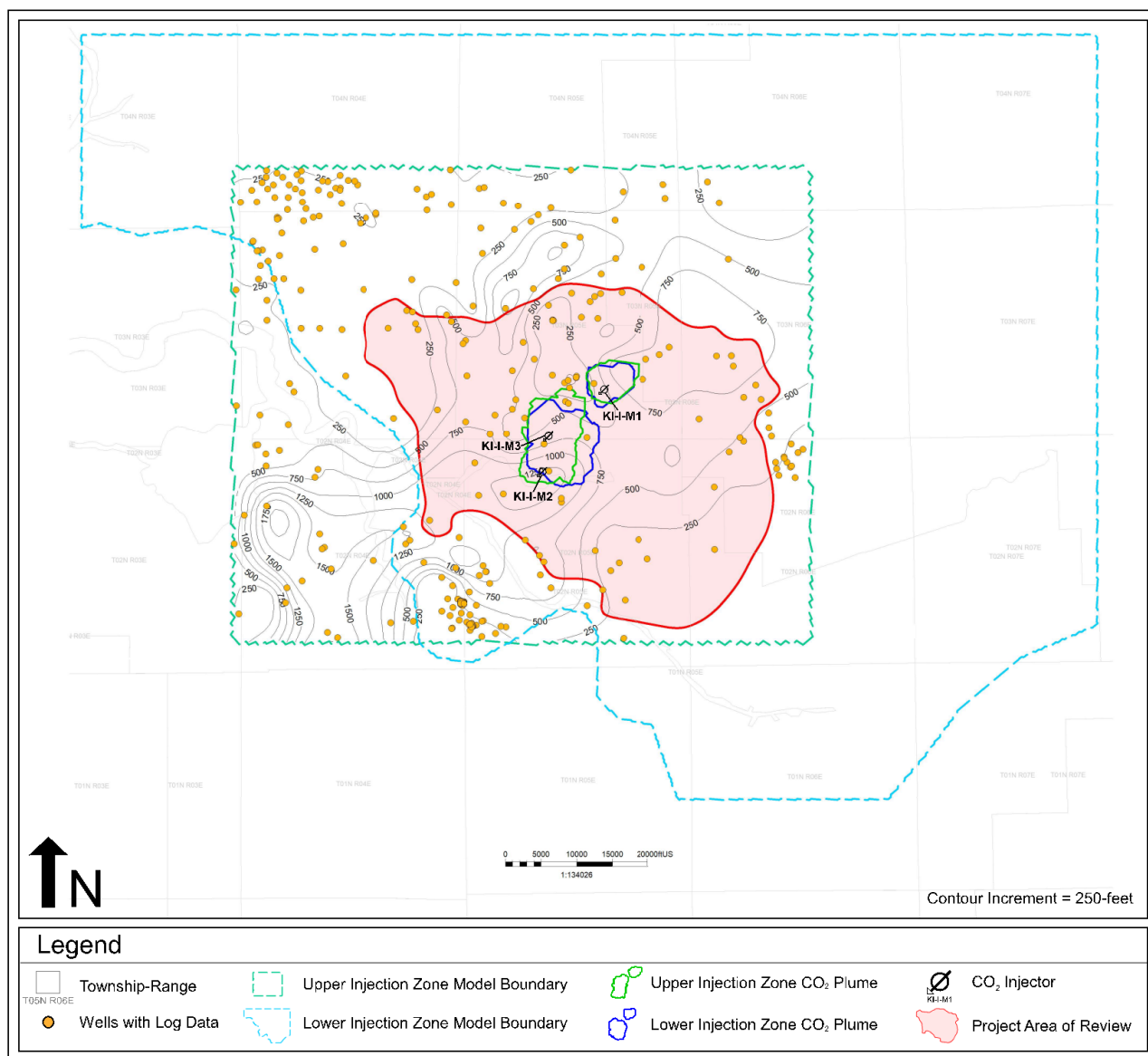


Figure 2.1-7b. Capay Shale isopach map for the greater Upper Injection Zone project area. Wells shown as orange dots on the map have open-hole logs.

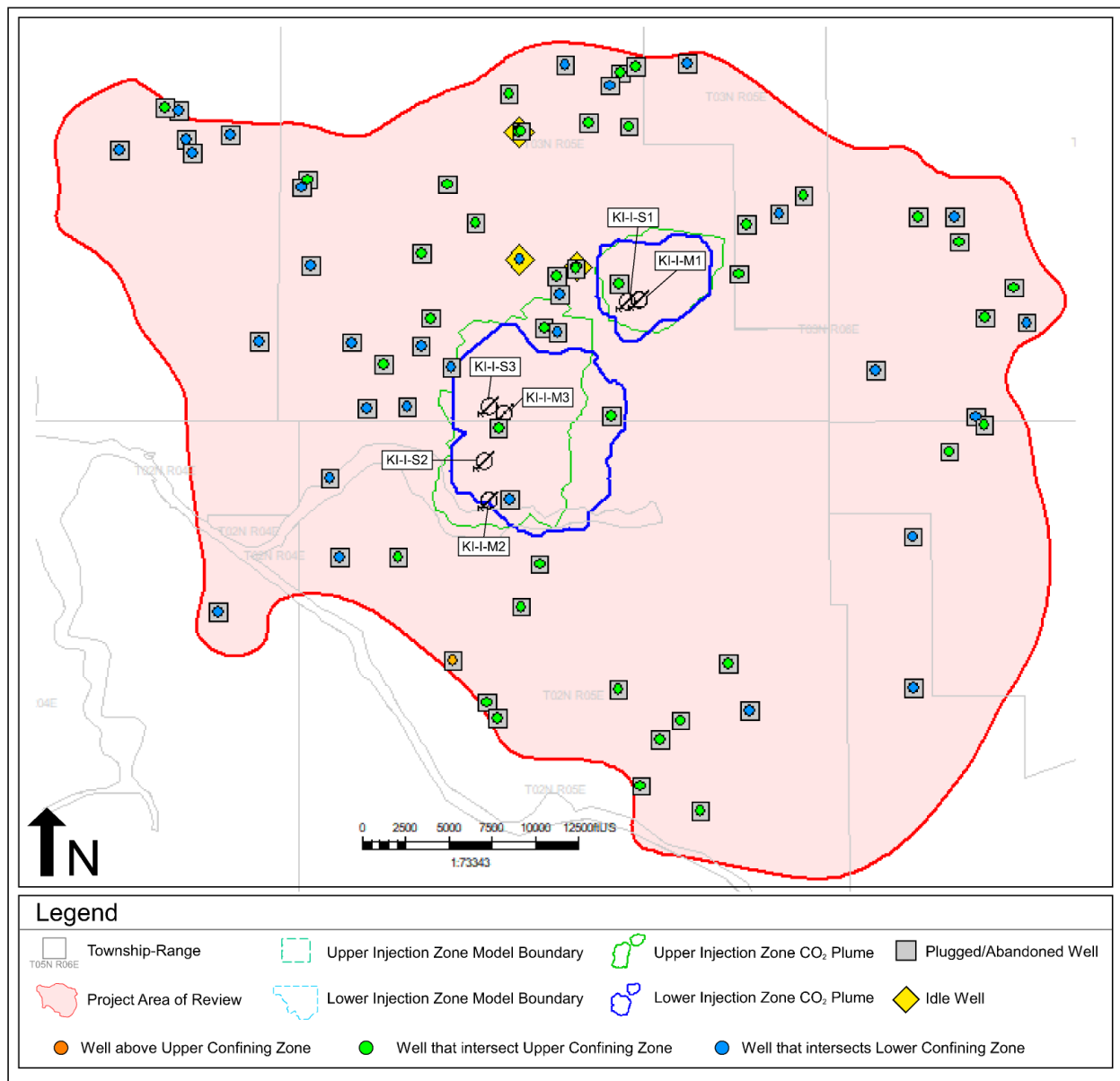


Figure 2.2-1. Existing oil/gas wells and injector well locations in the AoR.

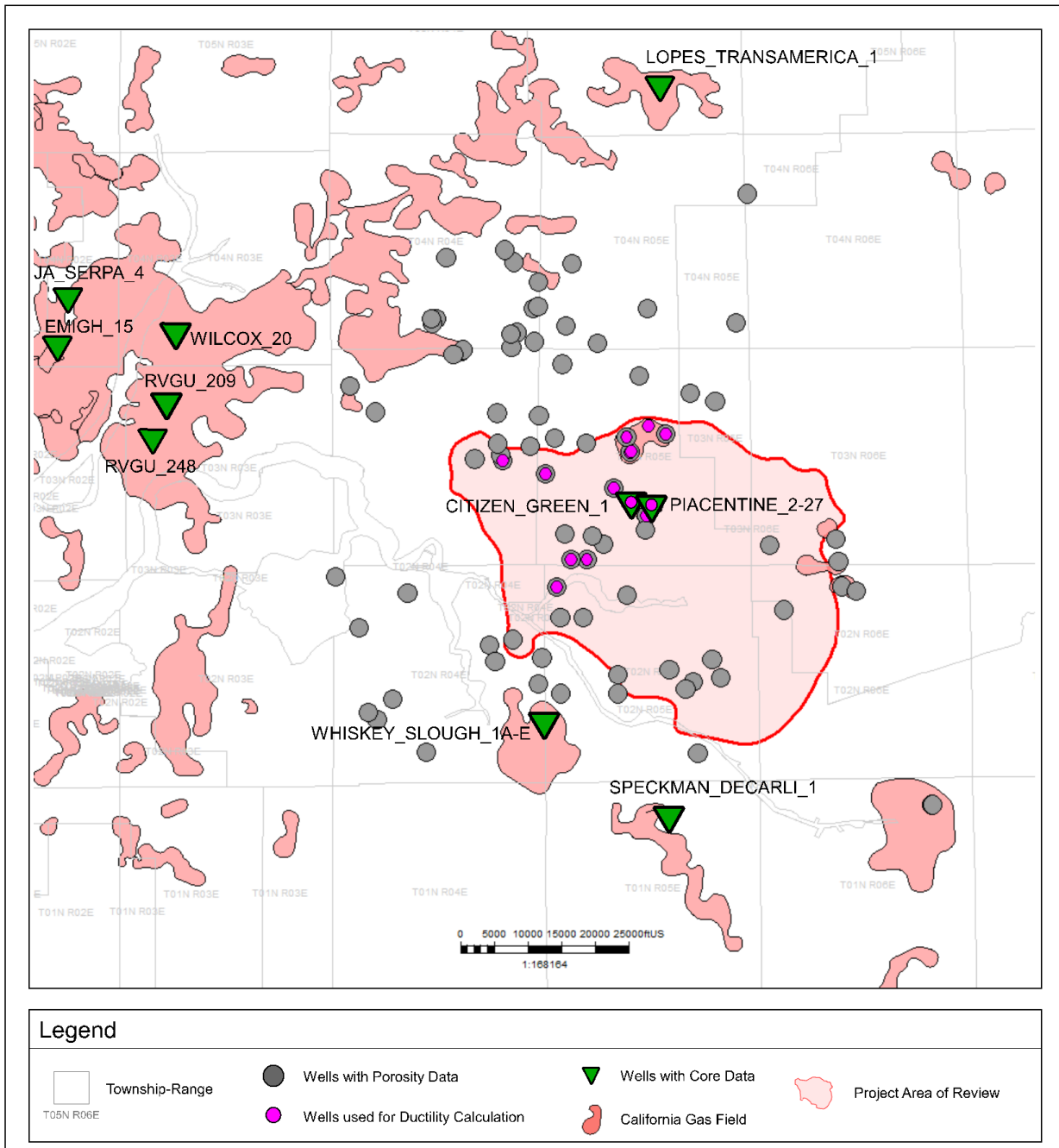


Figure 2.2-2. Wells drilled in the project area with porosity data are shown in gray, wells with core are shown in green and wells used for ductility calculation are shown in pink.

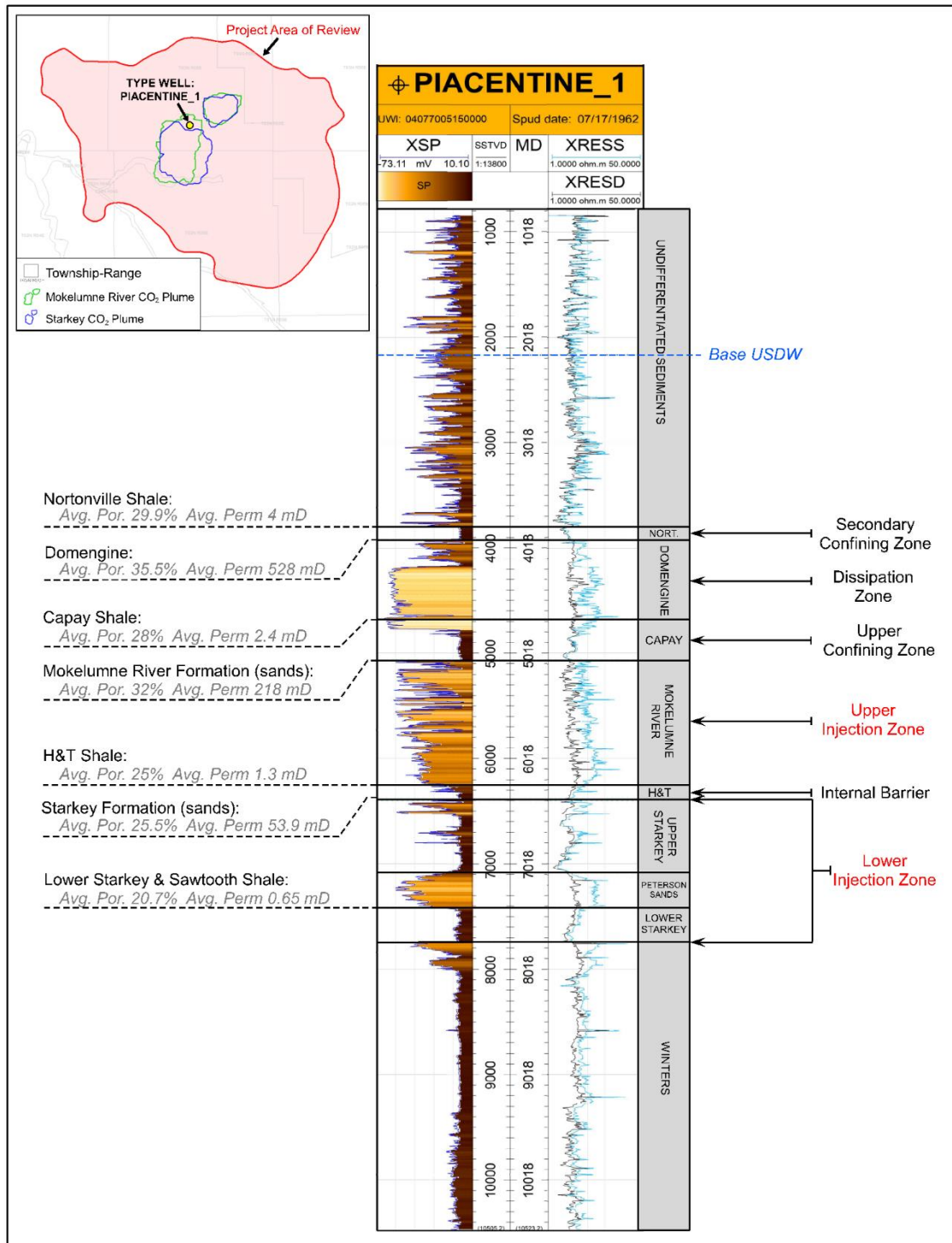


Figure 2.2-3. Type well showing average rock properties for the confining zones and injection zones within the project AoR.

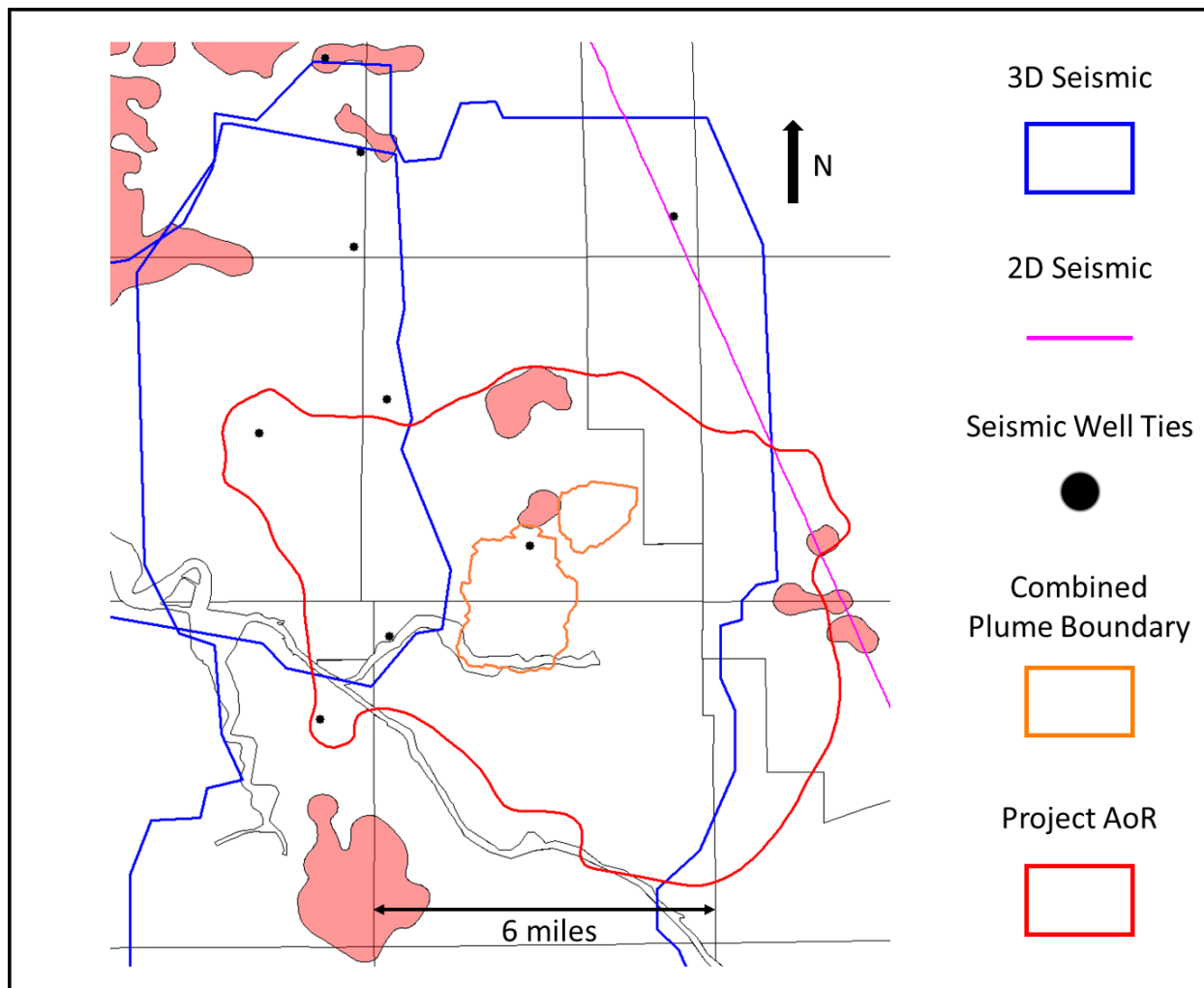


Figure 2.2-4. Summary map and area of seismic data used to build the structural model. The overlapping 3D seismic surveys used to build the structural model were acquired between 1997 and 1999. The single 2D seismic line used was acquired in 1981. California gas fields are shown in red for reference.

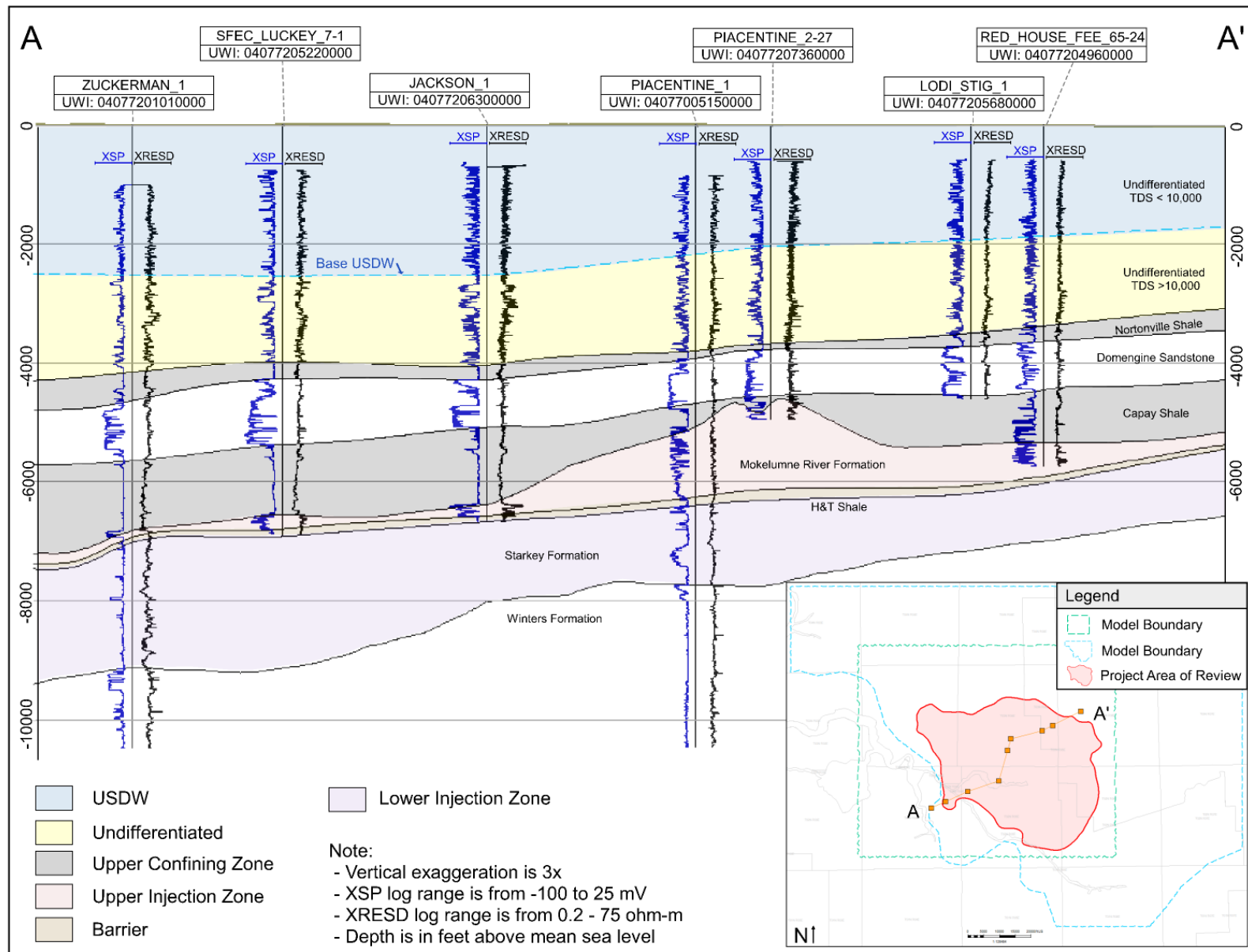


Figure 2.2-5. Cross section showing stratigraphy and lateral continuity of major formations across the AoR.

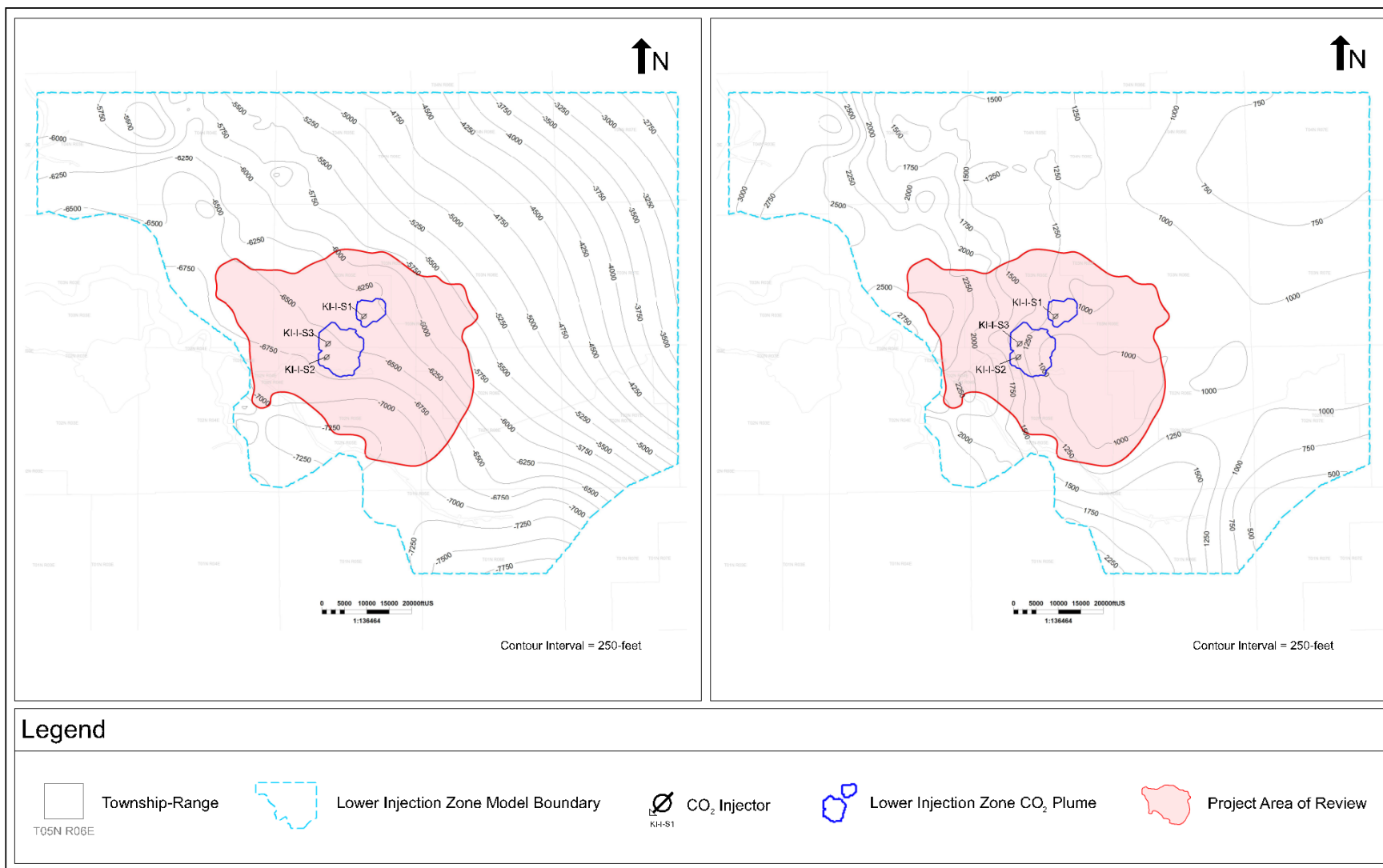


Figure 2.2-6. Lower Injection Zone structure and thickness maps.

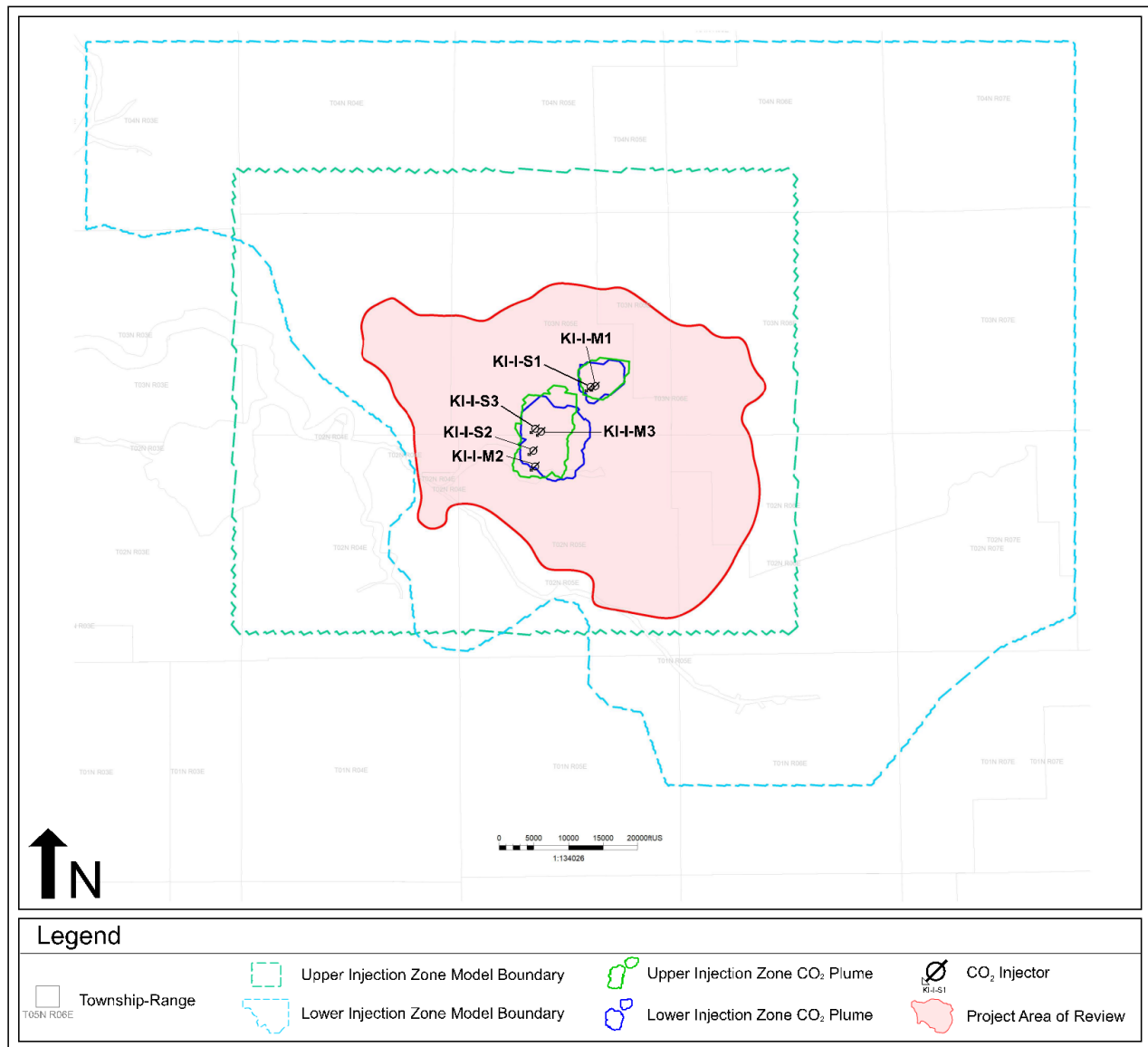


Figure 2.2-7. Injection well location map for the project area. The injection wells can be separated into two groups: Lower Injection Zone: (KI-I-S1, KI-I-S2, KI-I-S3), and Upper Injection Zone: (KI-I-M1, KI-I-M2, KI-I-M3).

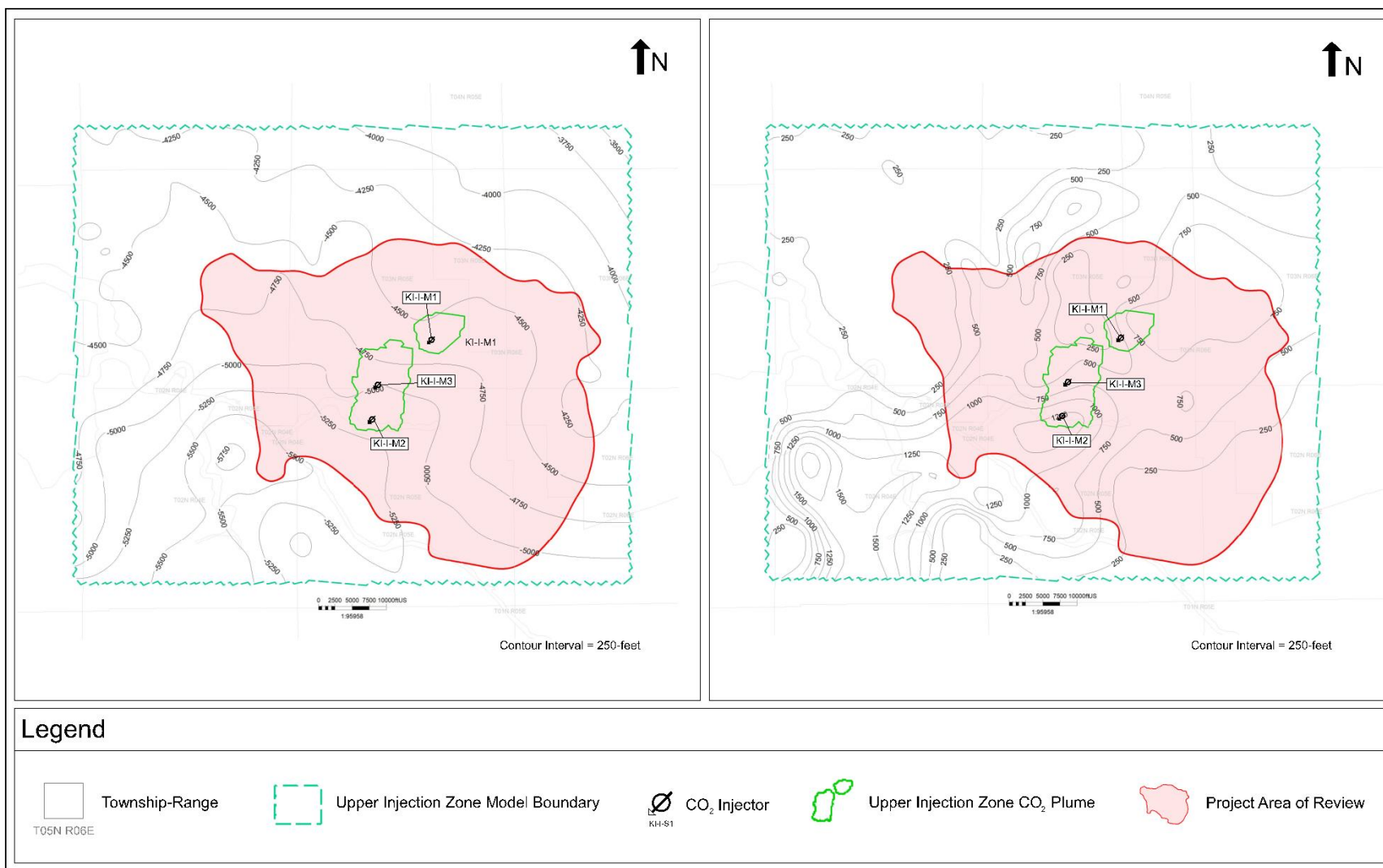


Figure 2.2-8. Upper Injection Zone structure and thickness maps.

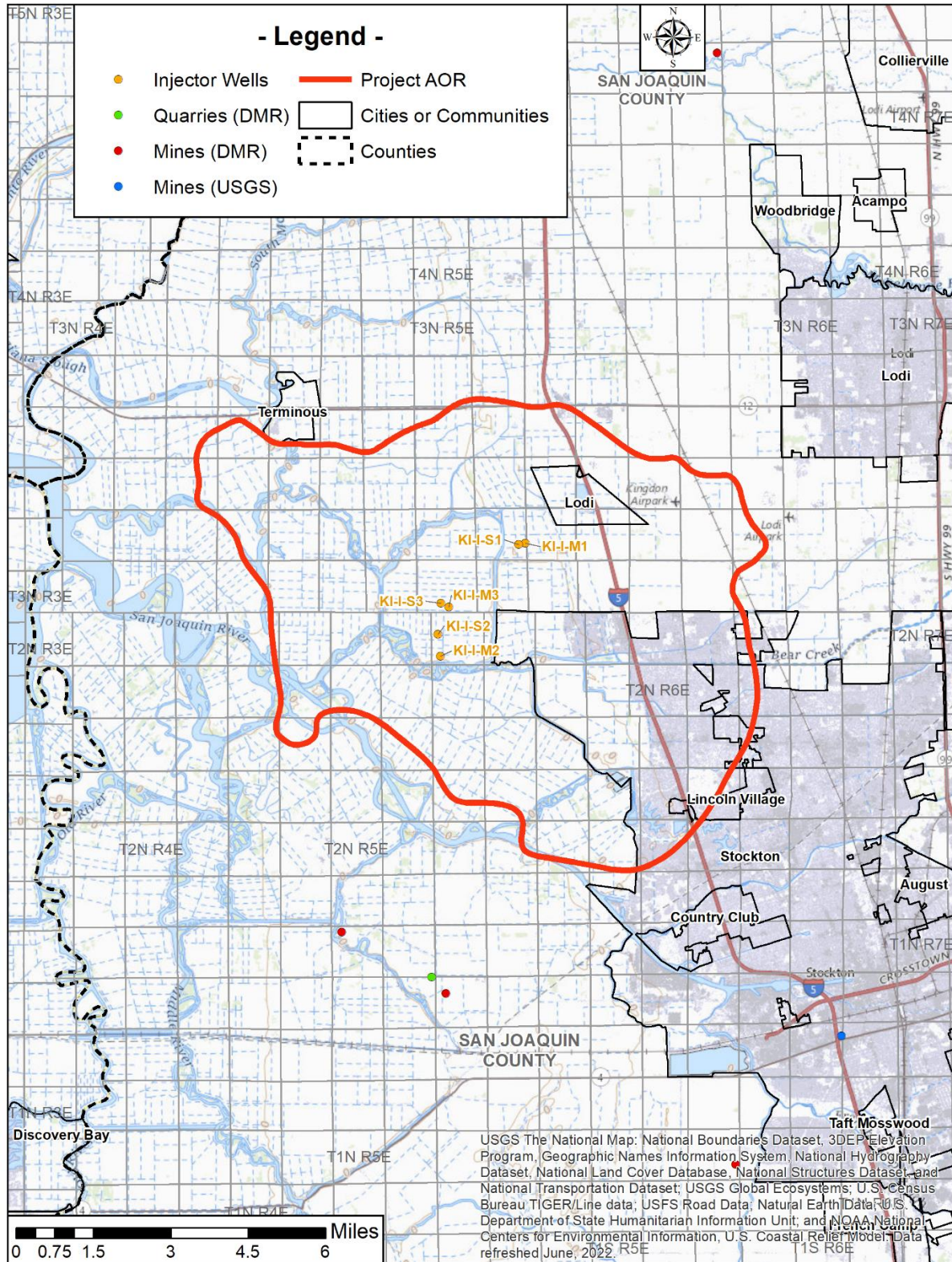


Figure 2.2-9. Map of the AoR and surface features in the project area. Mine and quarries from Conservation Division of Mine Reclamation (DMR) & U.S. Geological Survey (USGS). No springs or tribal lands are identified near AoR.

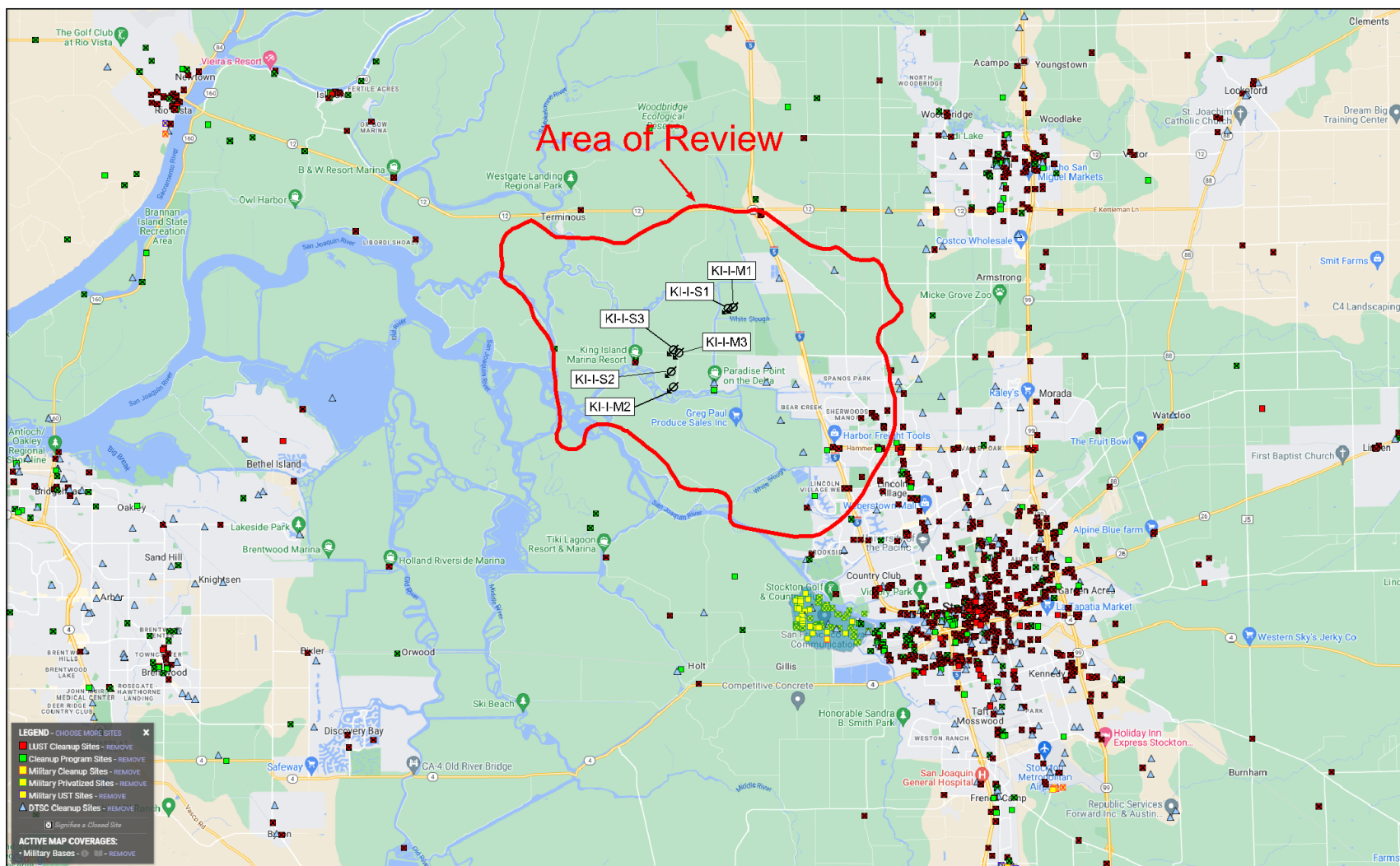


Figure 2.2-10. State- or EPA-approved subsurface cleanup sites (source: State Water Resources Control Board GeoTracker online database).

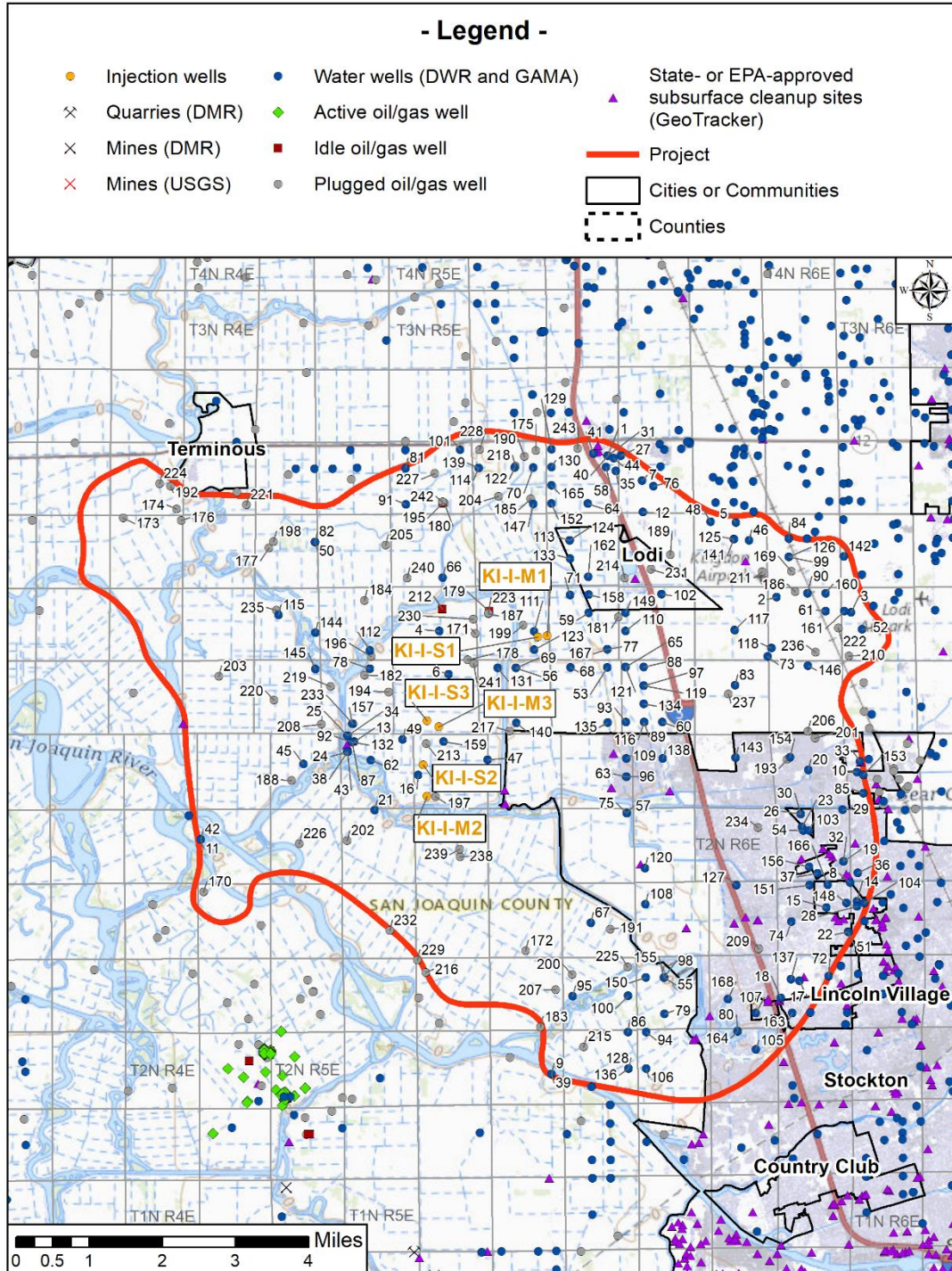


Figure 2.2-11. Summary map of the AoR, oil or gas wells, water wells, State- or EPA-approved subsurface cleanup sites, and surface features in the project area. Mine and quarries from Conservation Division of Mine Reclamation (DMR) & U.S. Geological Survey (USGS). Water wells from California Division of Drinking Water (DWR) and Groundwater Ambient Monitoring and Assessment (GAMA) program. No springs or tribal lands are identified near AoR. Active wells include: Gas Storage and Observation wells. Plugged wells include: Core holes, Dry Gas, Down Hole, Gas, and Gas Storage wells. Idle wells include: Dry Gas, Gas Storage, and Observation wells

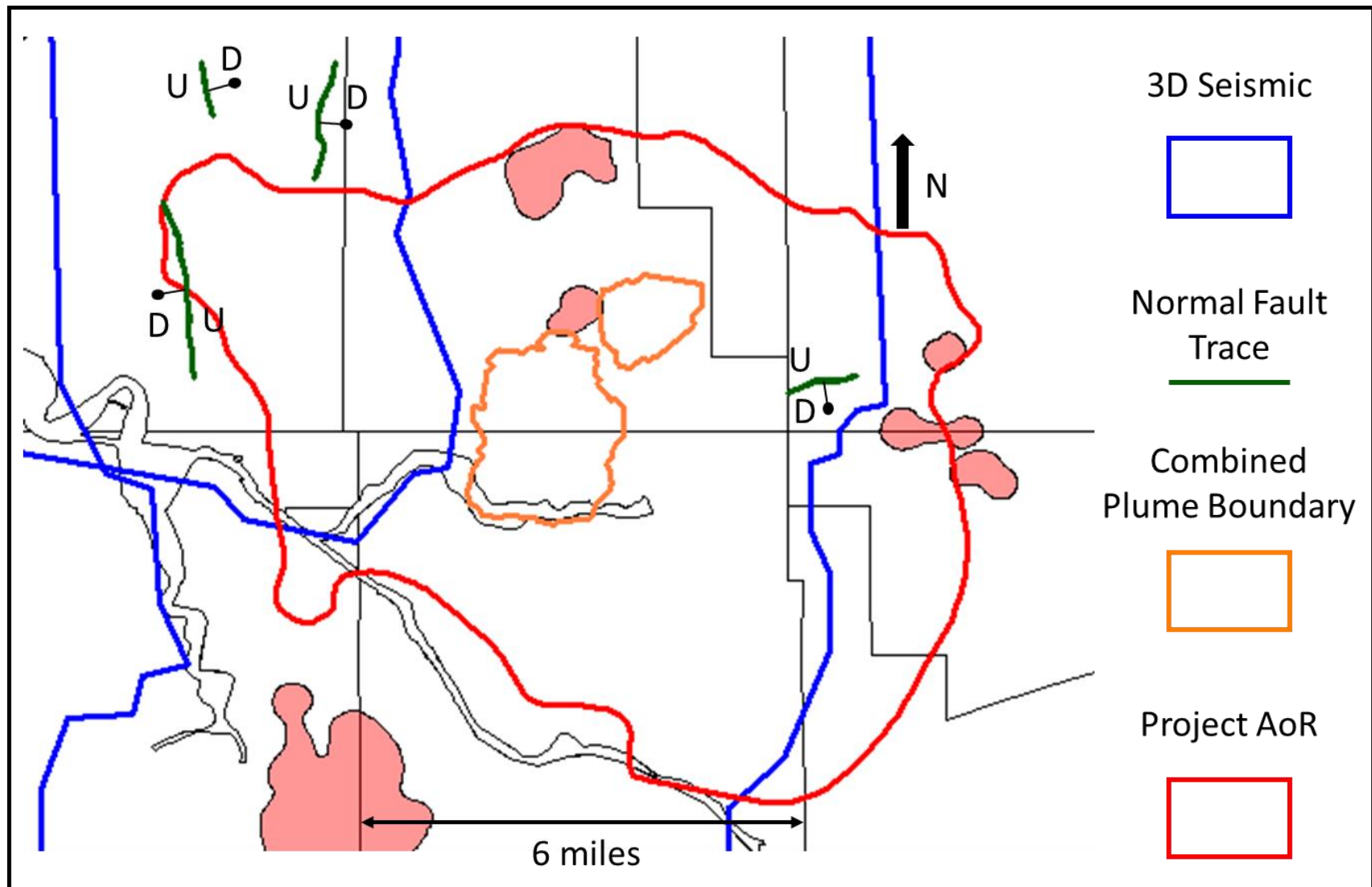


Figure 2.3-1: Reference map for normal fault traces within proximity of the AoR. The traces are shown at the Mokelumne River level and highlight the up and down thrown sides of the faults.

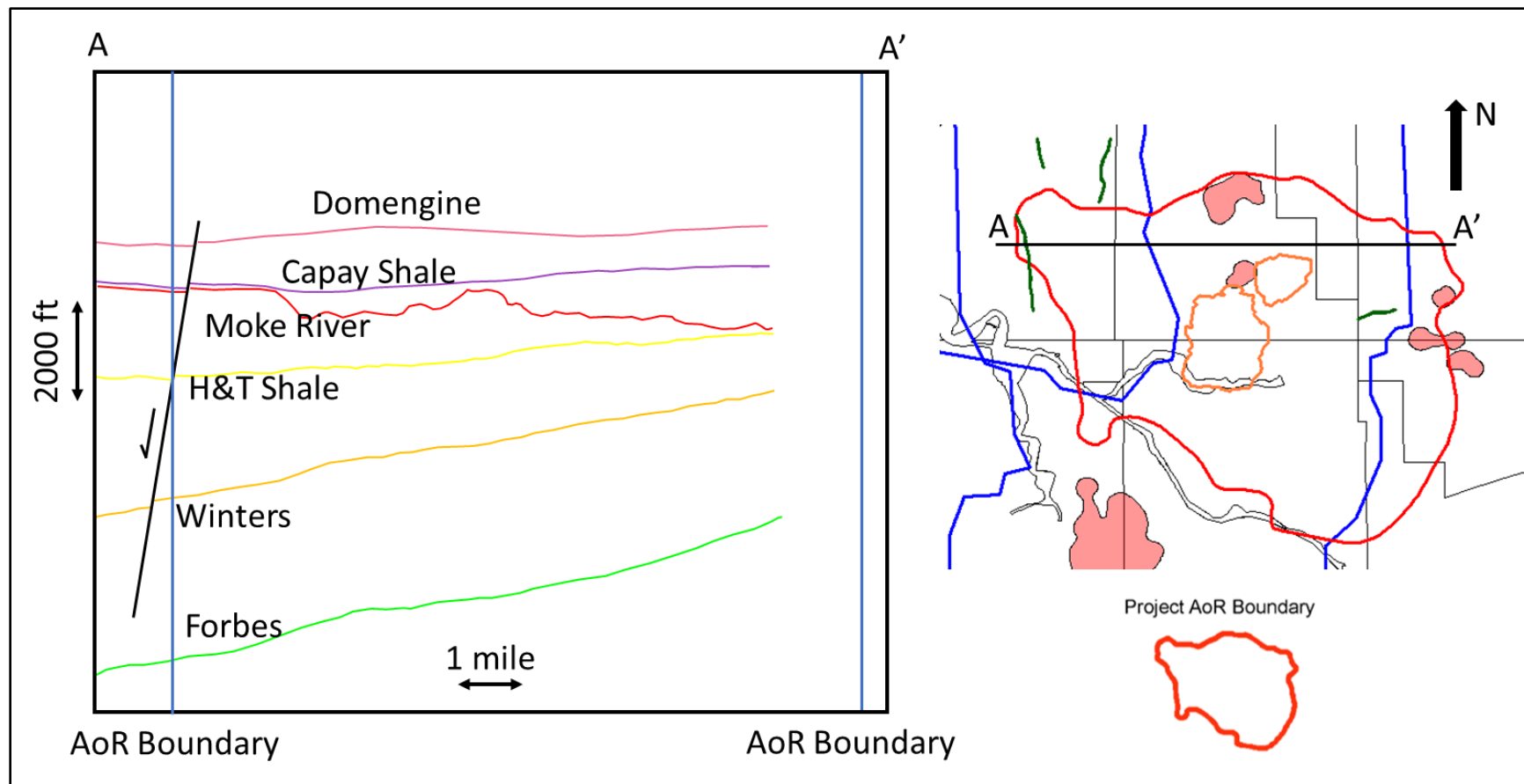


Figure 2.3-2. Generalized structural section through the interpreted normal fault identified on 3D seismic data that intersects the western edge of the AoR. This style of faulting is typical for the area with a throw of approximately 100 feet at the H&T Shale interval.

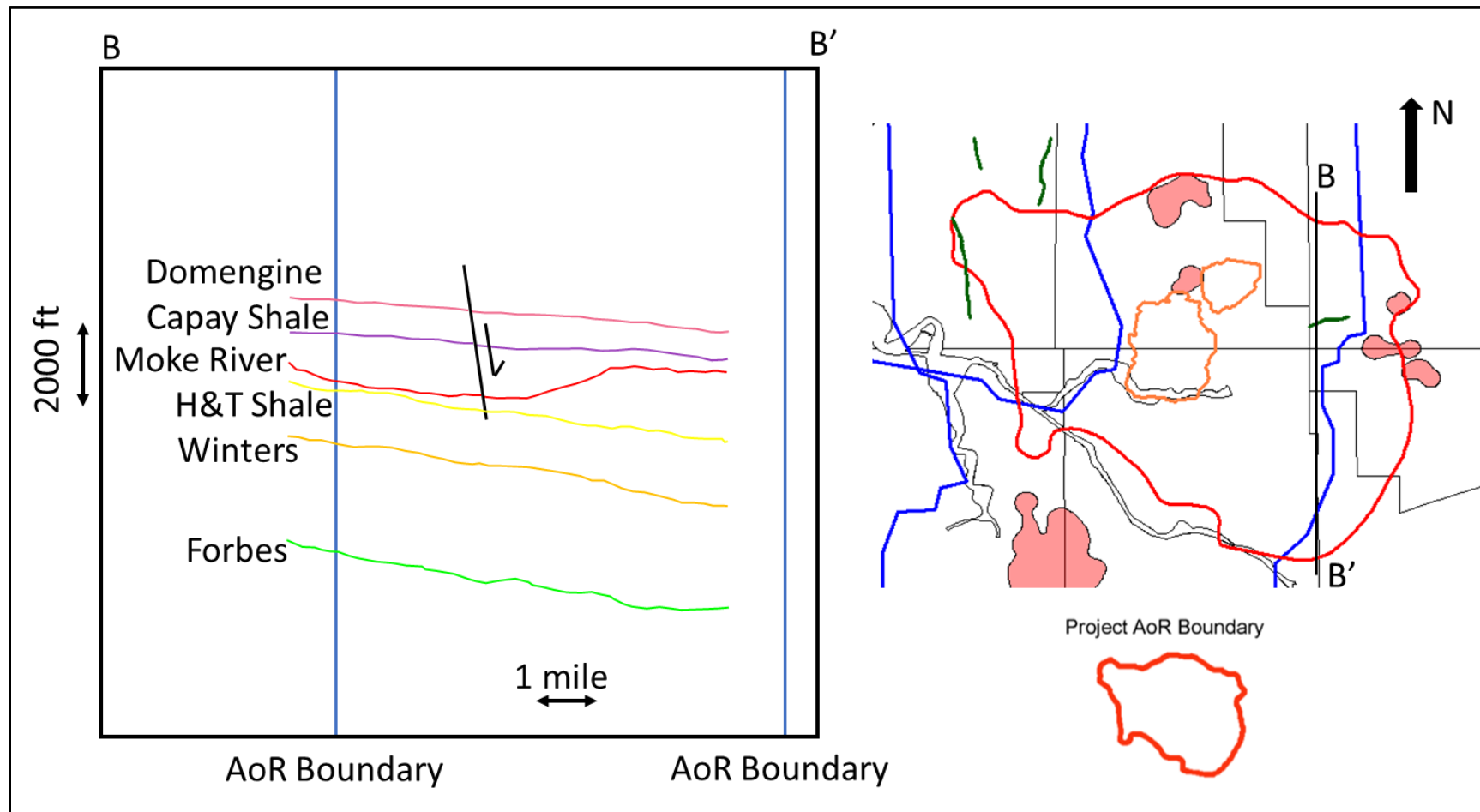


Figure 2.3-3. Generalized structural section through the interpreted normal fault identified on 3D seismic data within the eastern portion of the AoR. This style of faulting is typical for the area with a throw of approximately 50 feet at the Capay Shale interval.

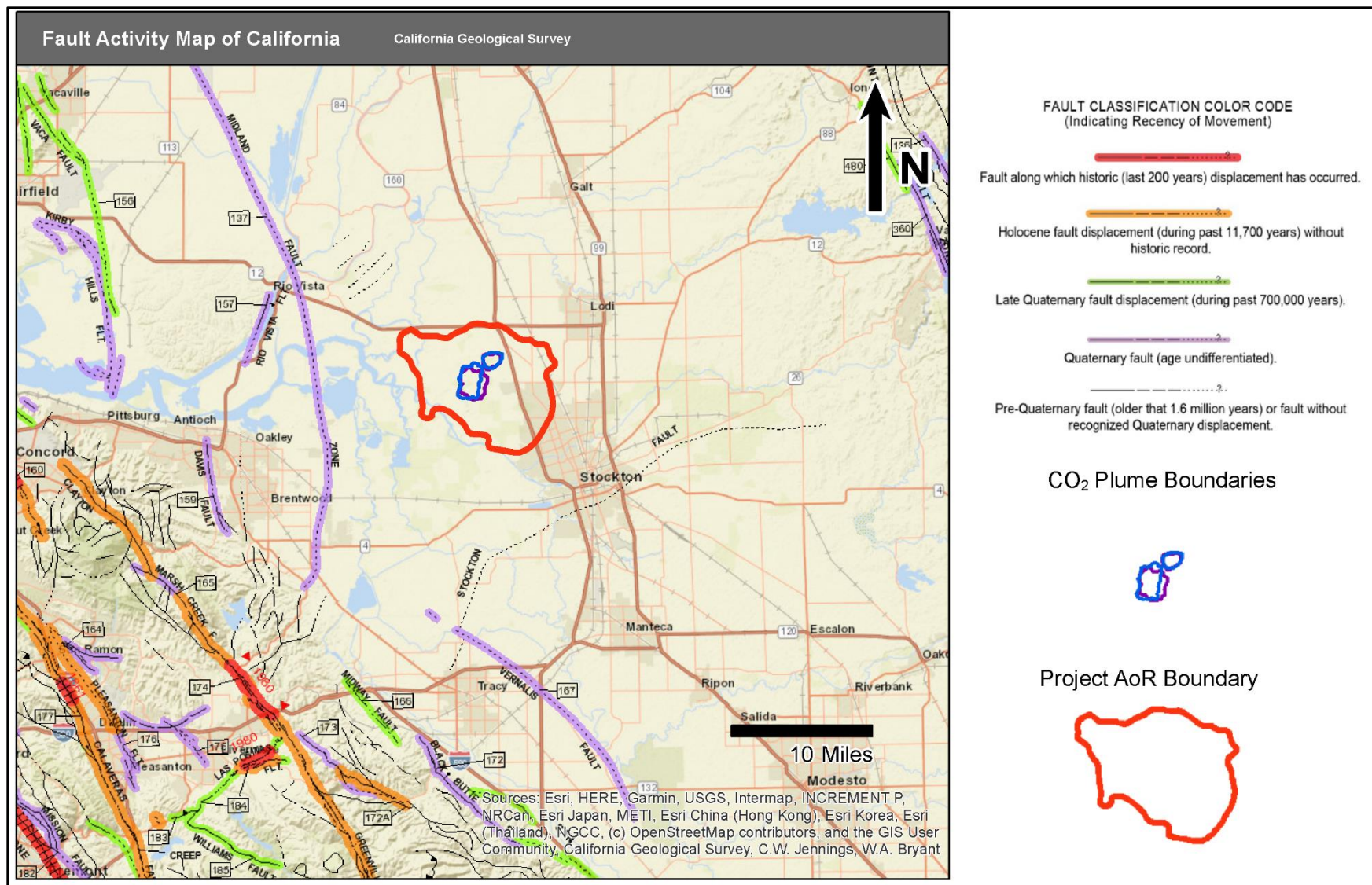


Figure 2.3-4. Fault activity map from the California Geologic Survey which shows no mapped faults within and beyond the project AoR.
(<https://maps.conservation.ca.gov/cgs/fam/>)

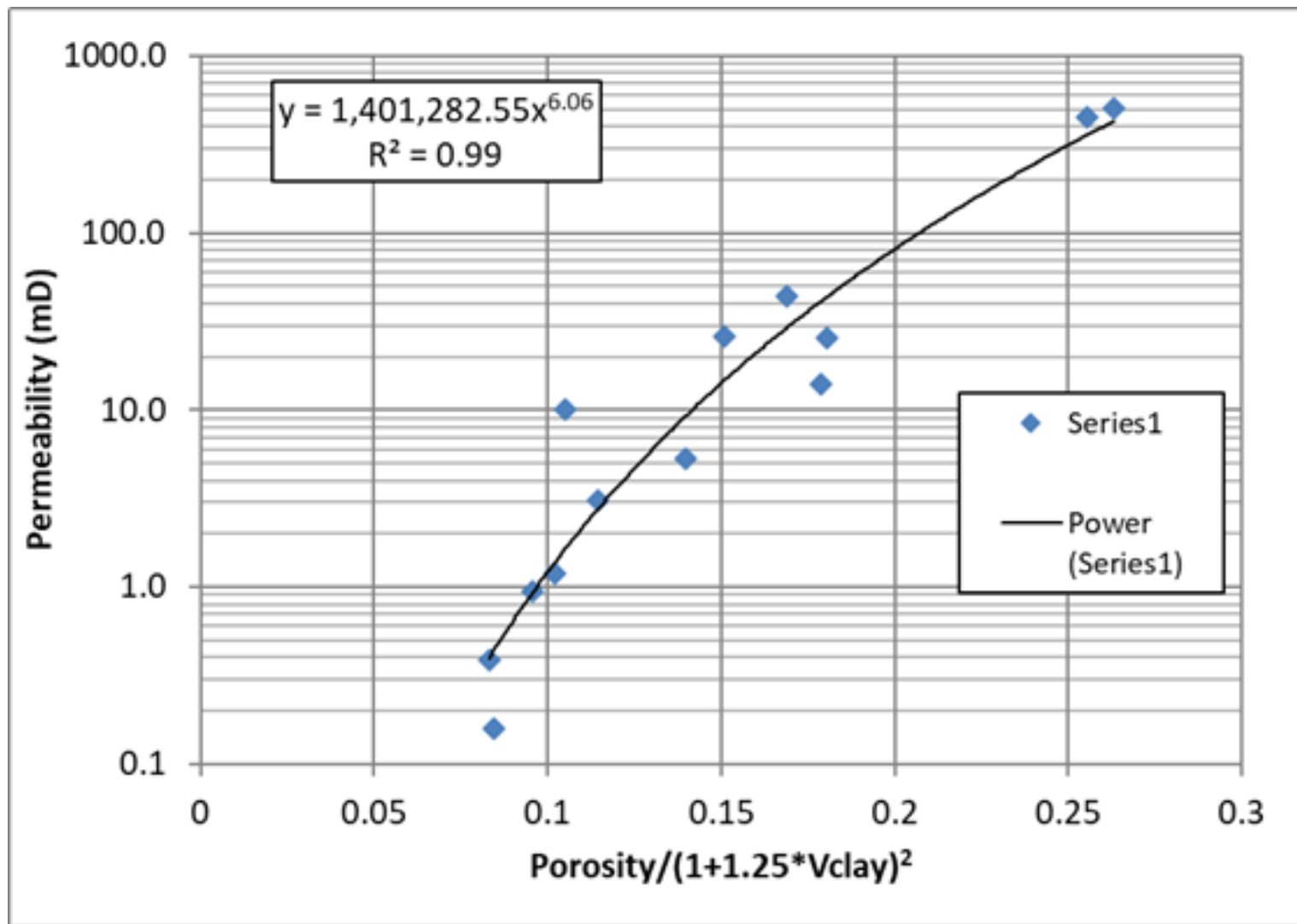


Figure 2.4-1. Permeability transform for Sacramento basin zones.

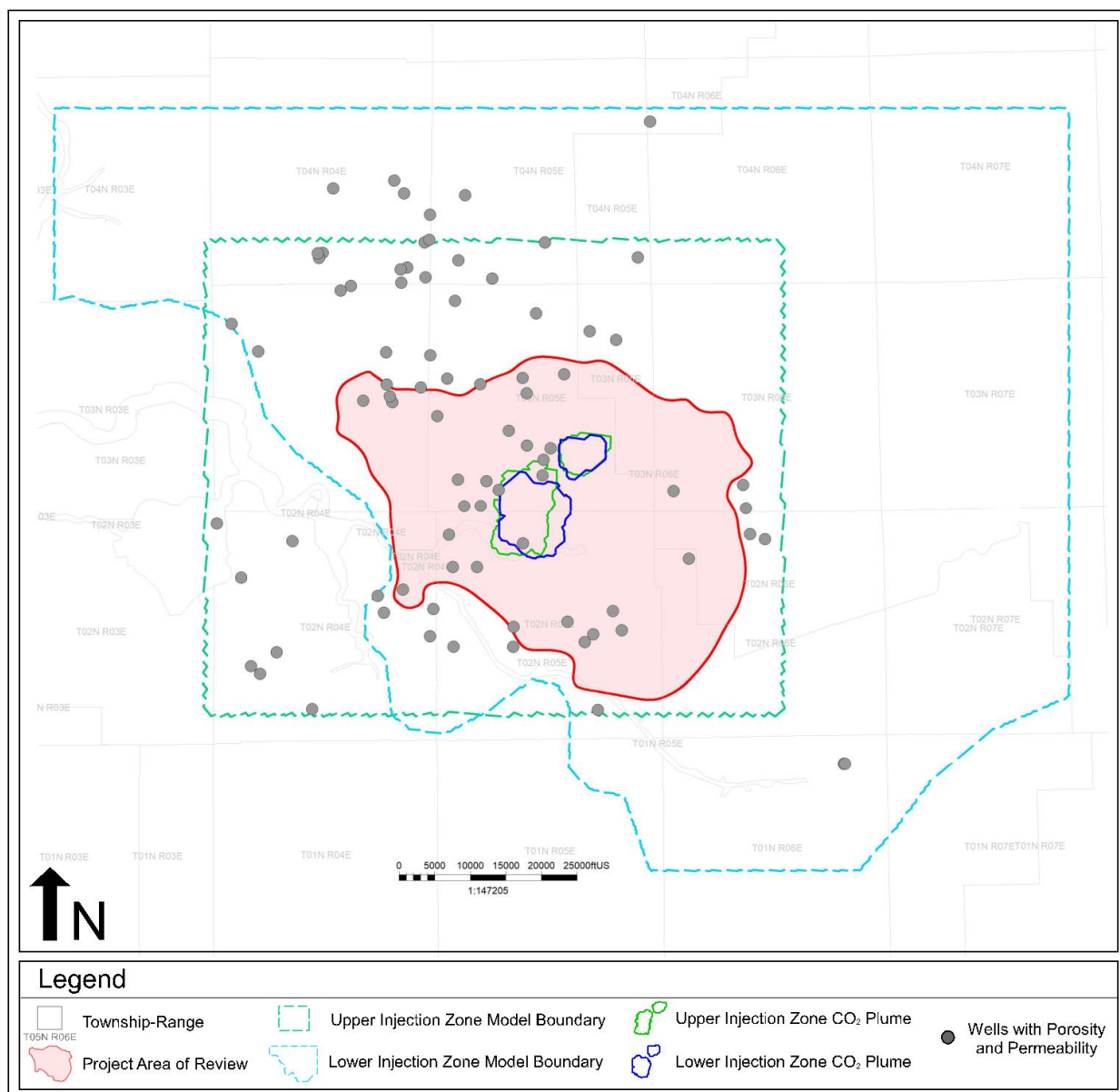


Figure 2.4-3. Map of wells with porosity and permeability data.

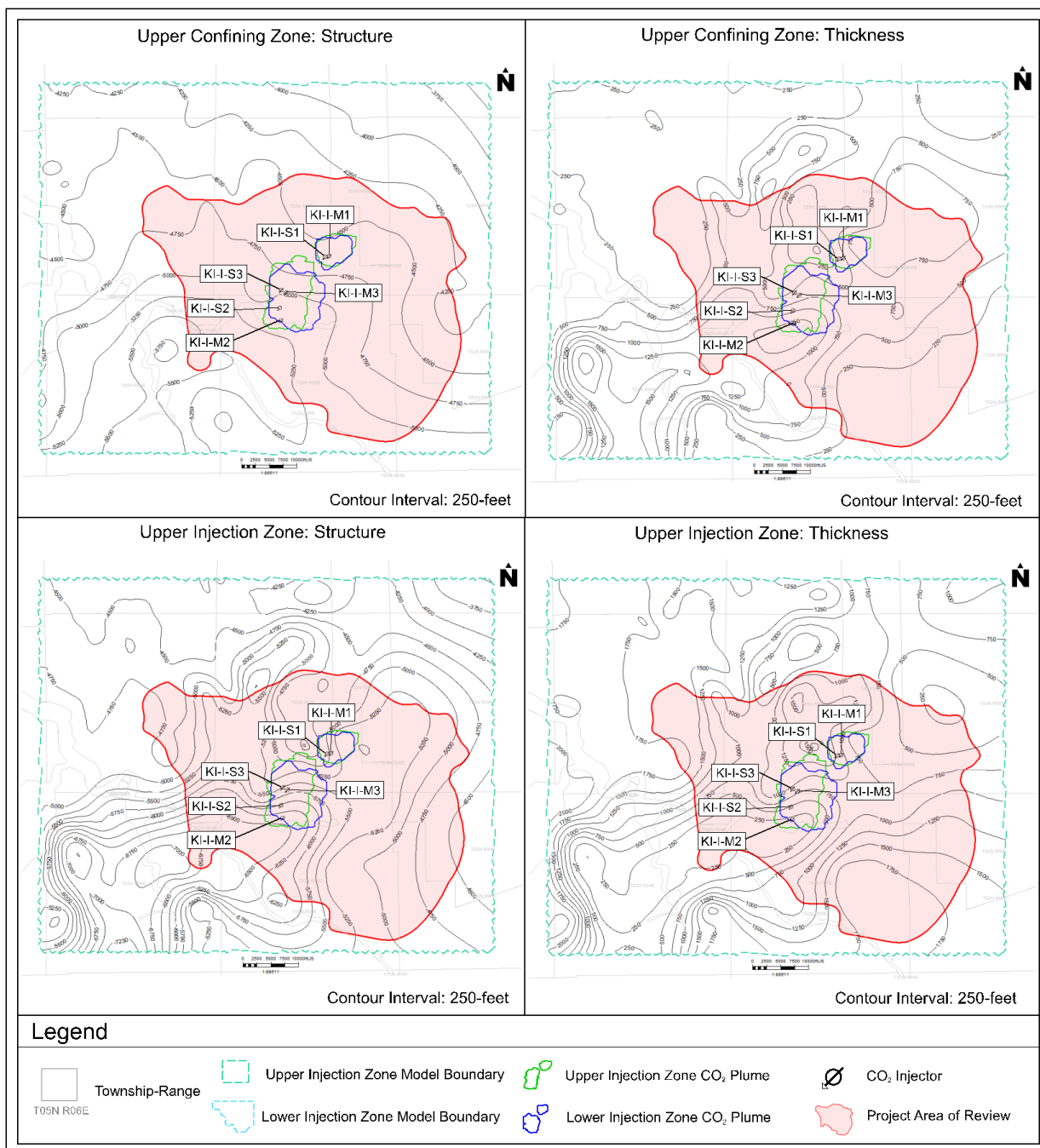


Figure 2.4-4. Thickness and structure maps for Upper Confining Zone, Upper Injection Zone

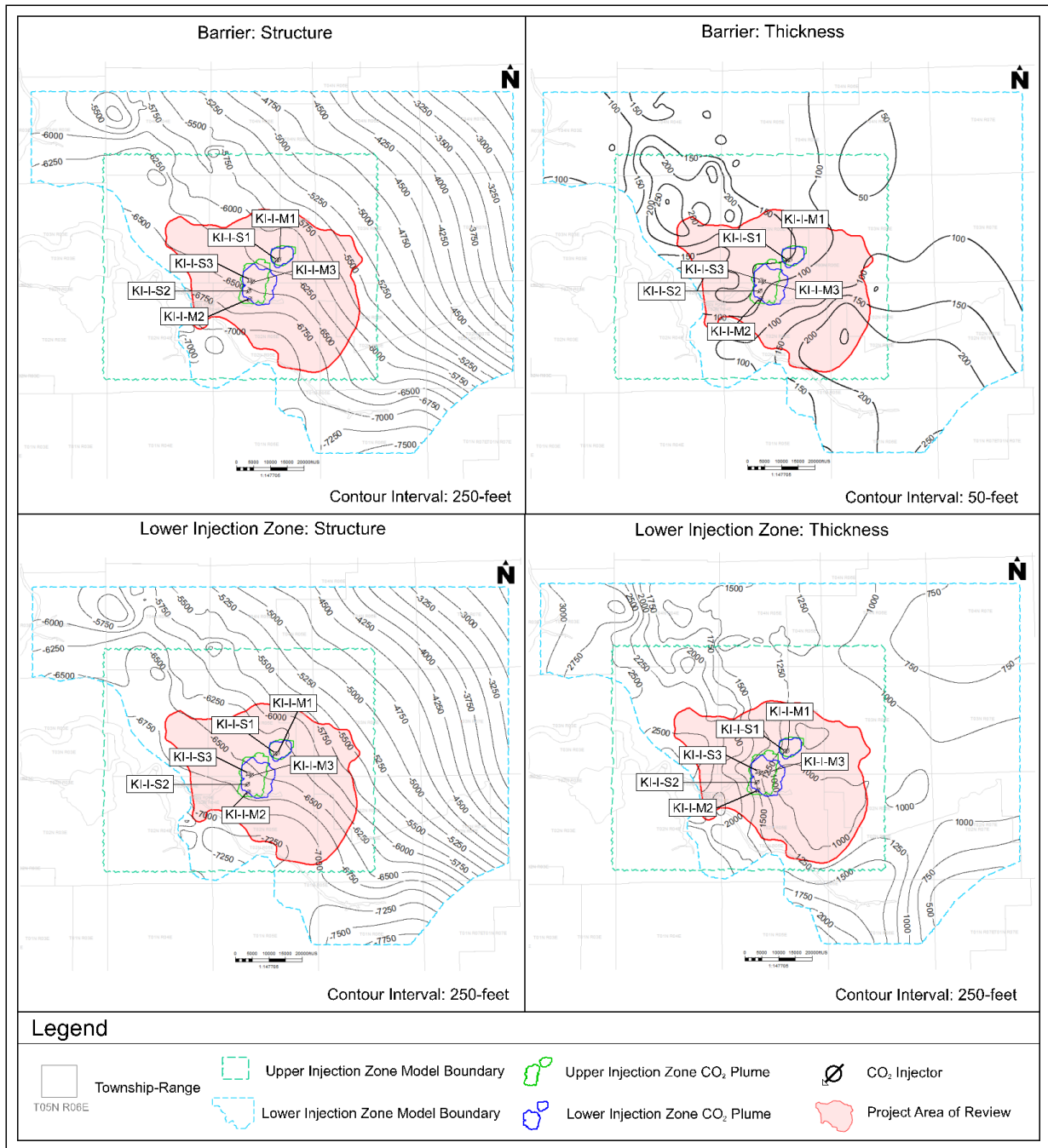


Figure 2.4-5. Thickness and structure maps for Barrier and Lower Injection Zone.

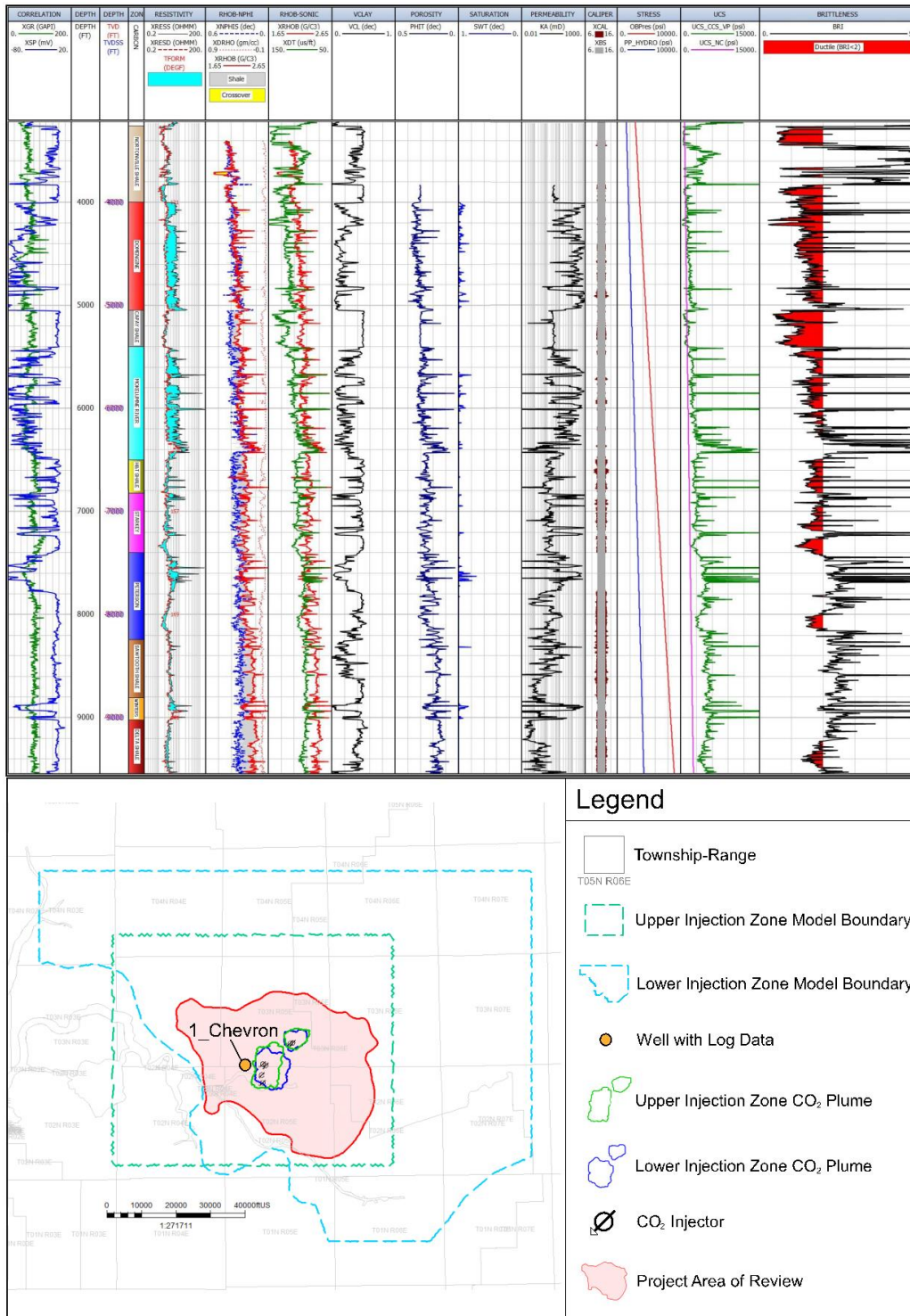


Figure 2.5-1. Unconfined compressive strength and ductility calculations for well 1_Chevron. The ductility is less than two for all of the upper confining zone, secondary confining zone, and the internal barrier. Track 1: Correlation logs. Track 2: Measured depth. Track 3: Vertical depth and vertical subsea depth. Track 4: Zones. Track 5: Resistivity. Track 6: Density and neutron logs. Track 7: Density and compressional sonic logs. Track 8: Volume of clay. Track 9: Porosity calculated from density. Track 10: Water saturation. Track 11: Permeability. Track 12: Caliper. Track 13: Overburden pressure and hydrostatic pore pressure. Track 14: UCS and UCS_NC. Track 15: Brittleness.

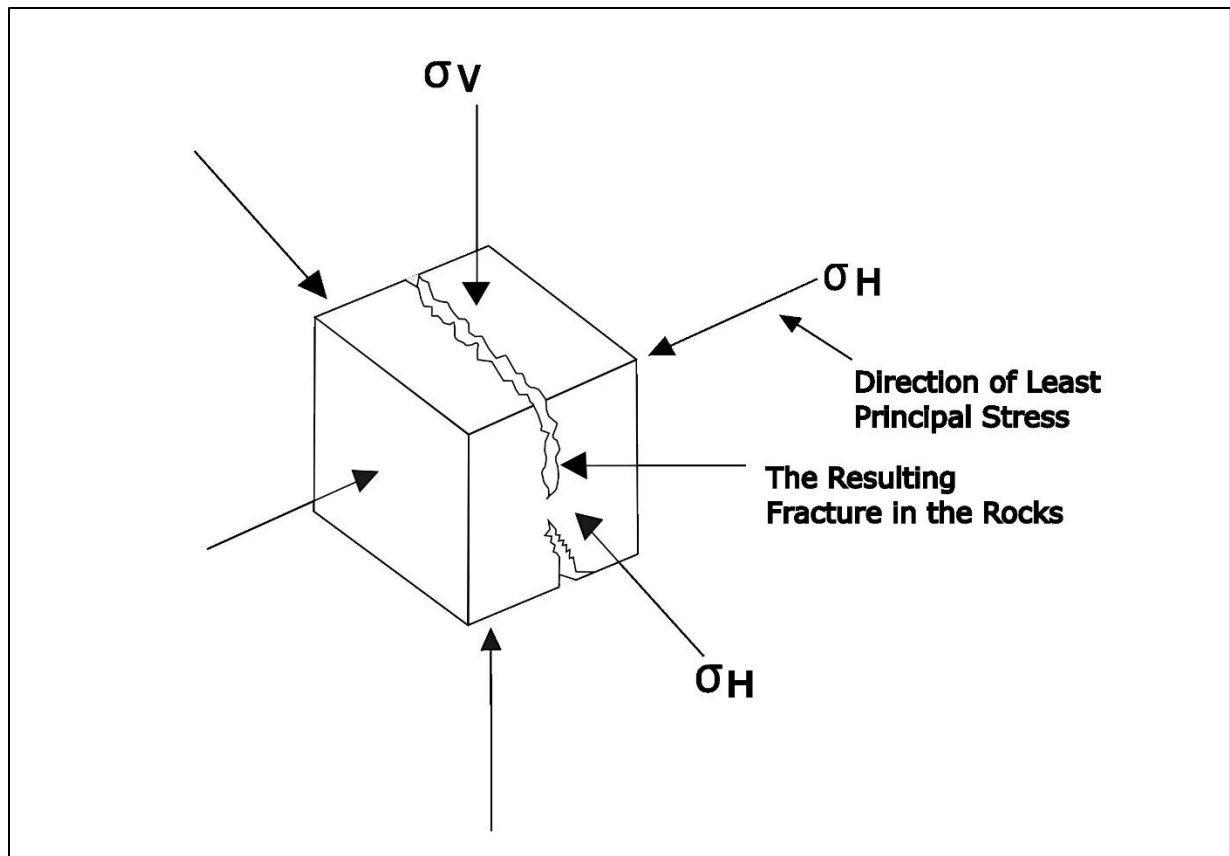


Figure 2.5-2: Stress diagram showing the three principal stresses and the fracturing that will occur perpendicular to the minimum principal stress.

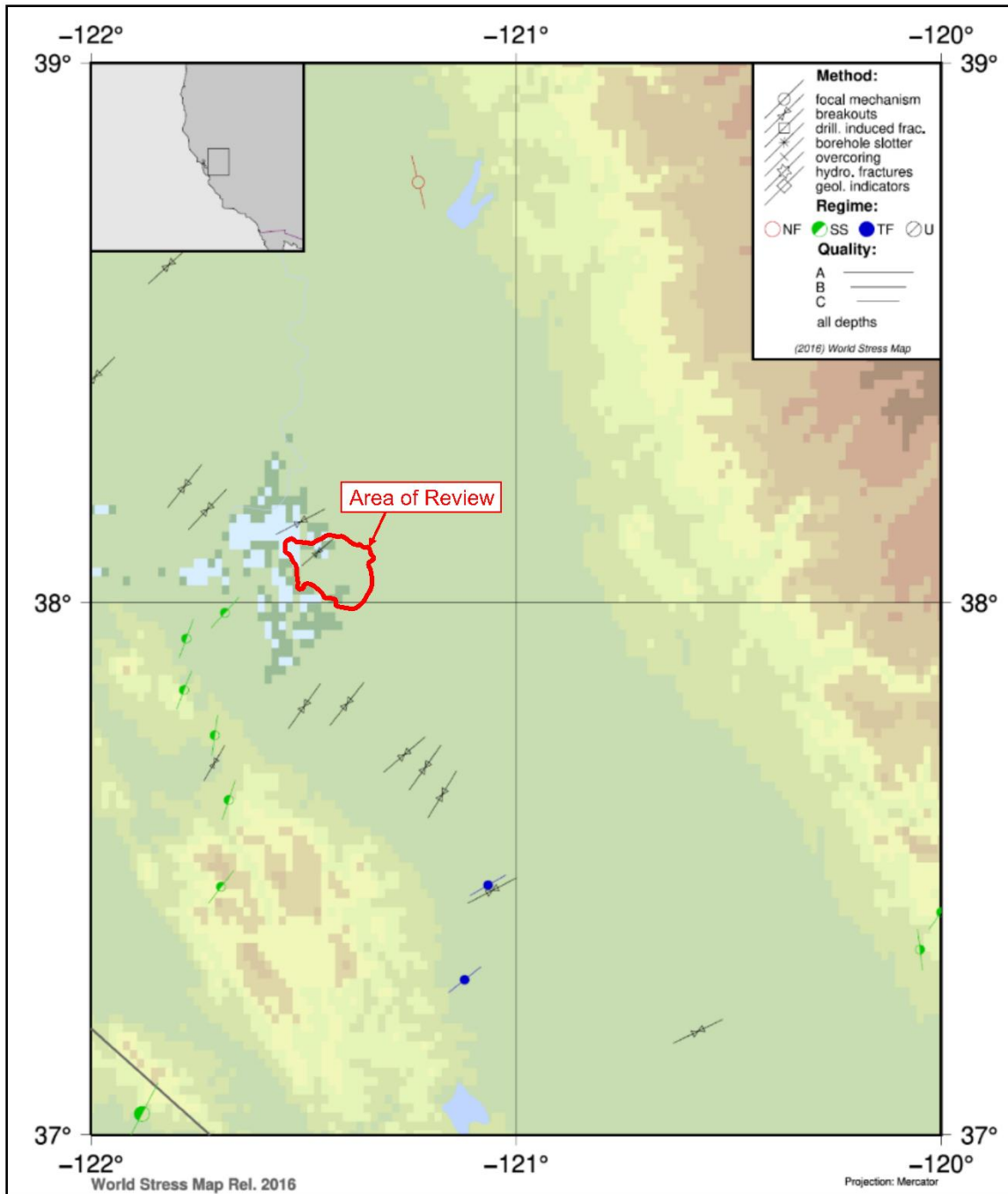


Figure 2.5-3: World Stress Map output showing S_{Hmax} azimuth indicators and earthquake faulting styles in the Sacramento Basin (Heidbach et al., 2016). In red is the outline of the project AoR. The background coloring represents topography.

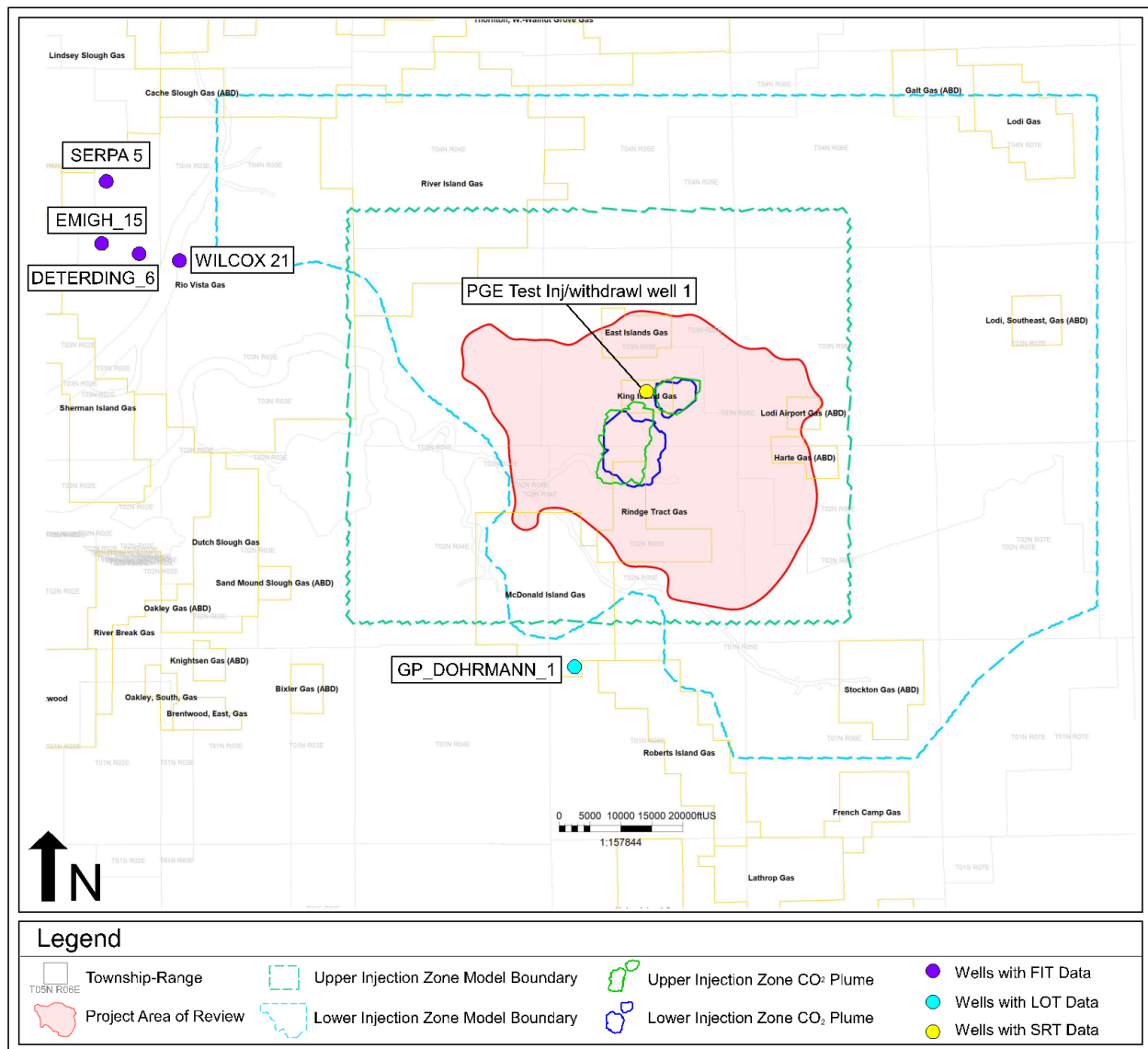


Figure 2.5-4. Map showing the location of wells with formation integrity tests (FIT).

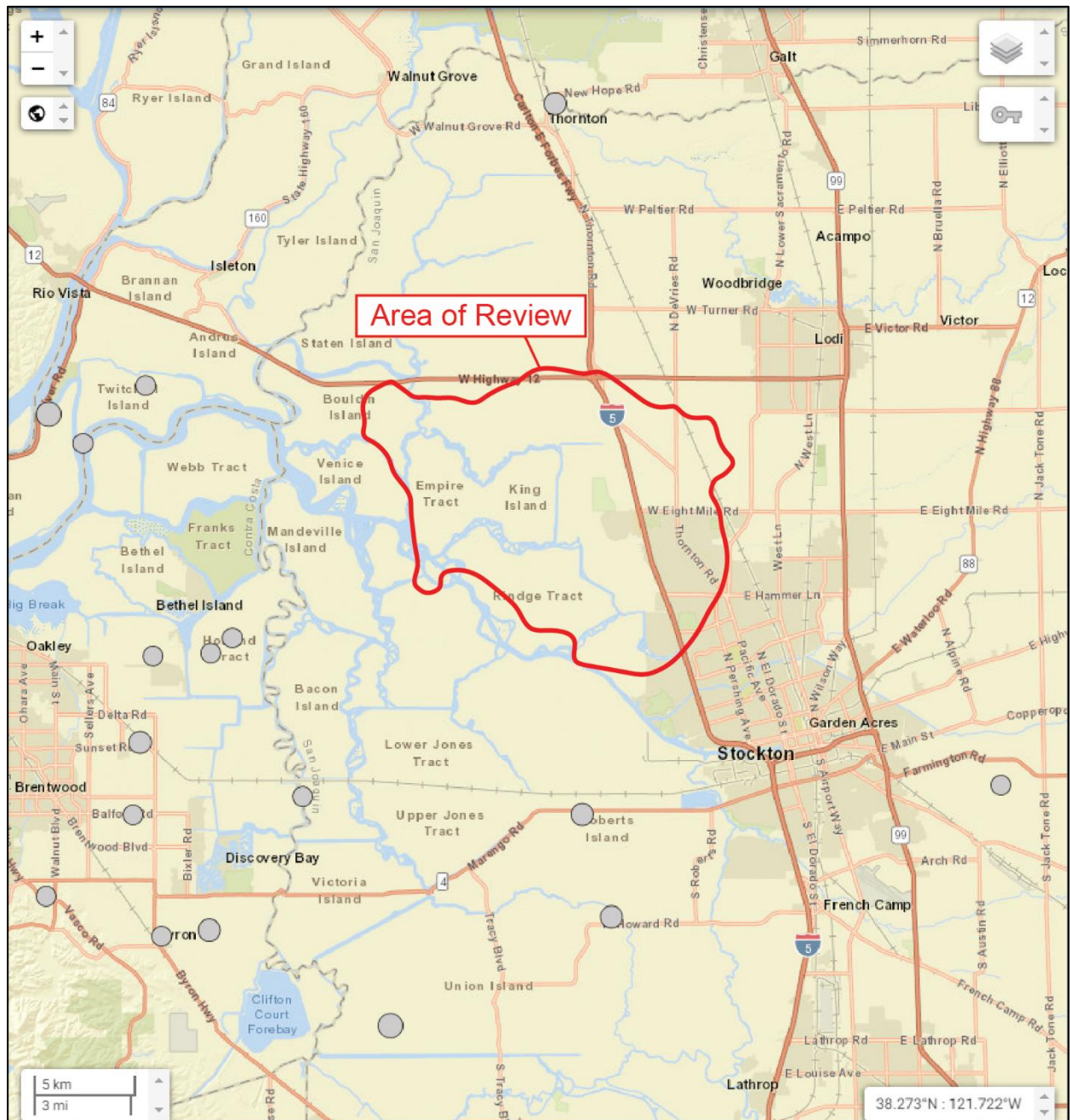


Figure 2.6-1. Historical earthquakes from the USGS catalog tool for the greater area. Data from these events are compiled in **Table 2.6-1.** (<https://earthquake.usgs.gov/earthquakes/search/>)

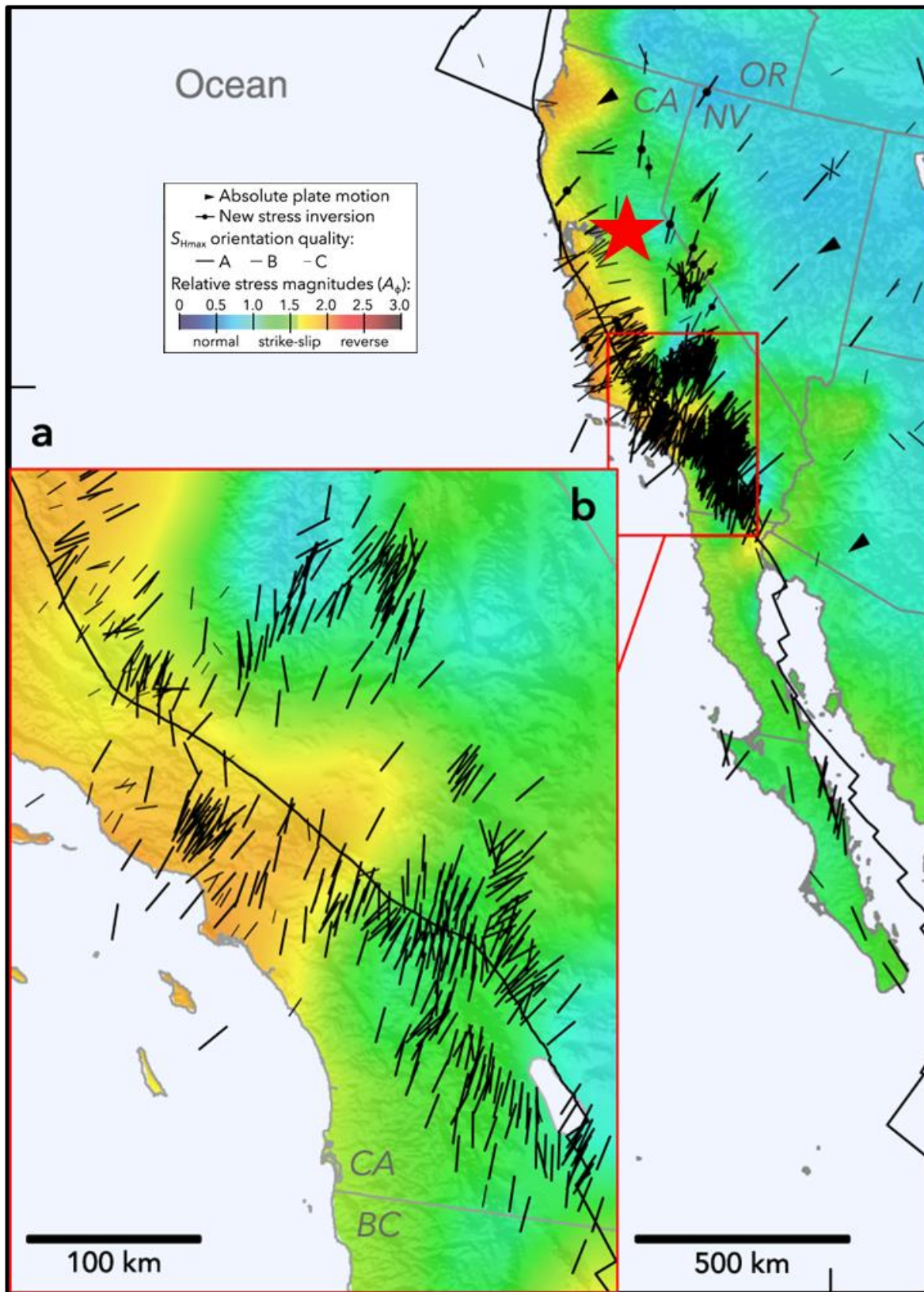


Figure 2.6-2. Image modified from Lund-Snee and Zoback (2020) showing relative stress magnitudes across California. Red star indicates the CTV V site area.

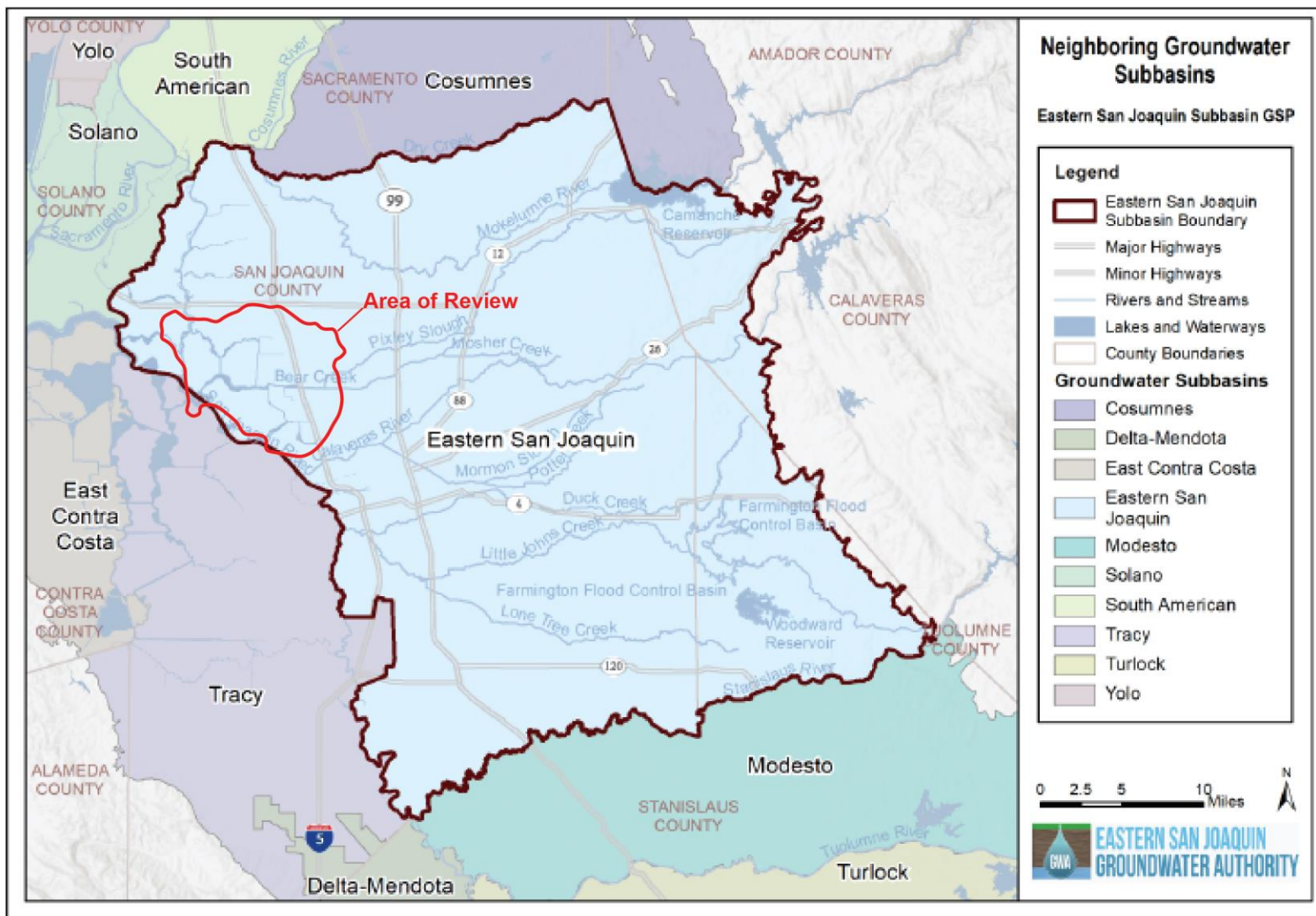


Figure 2.7-1 Map of the project AoR, groundwater subbasins, the surrounding areas

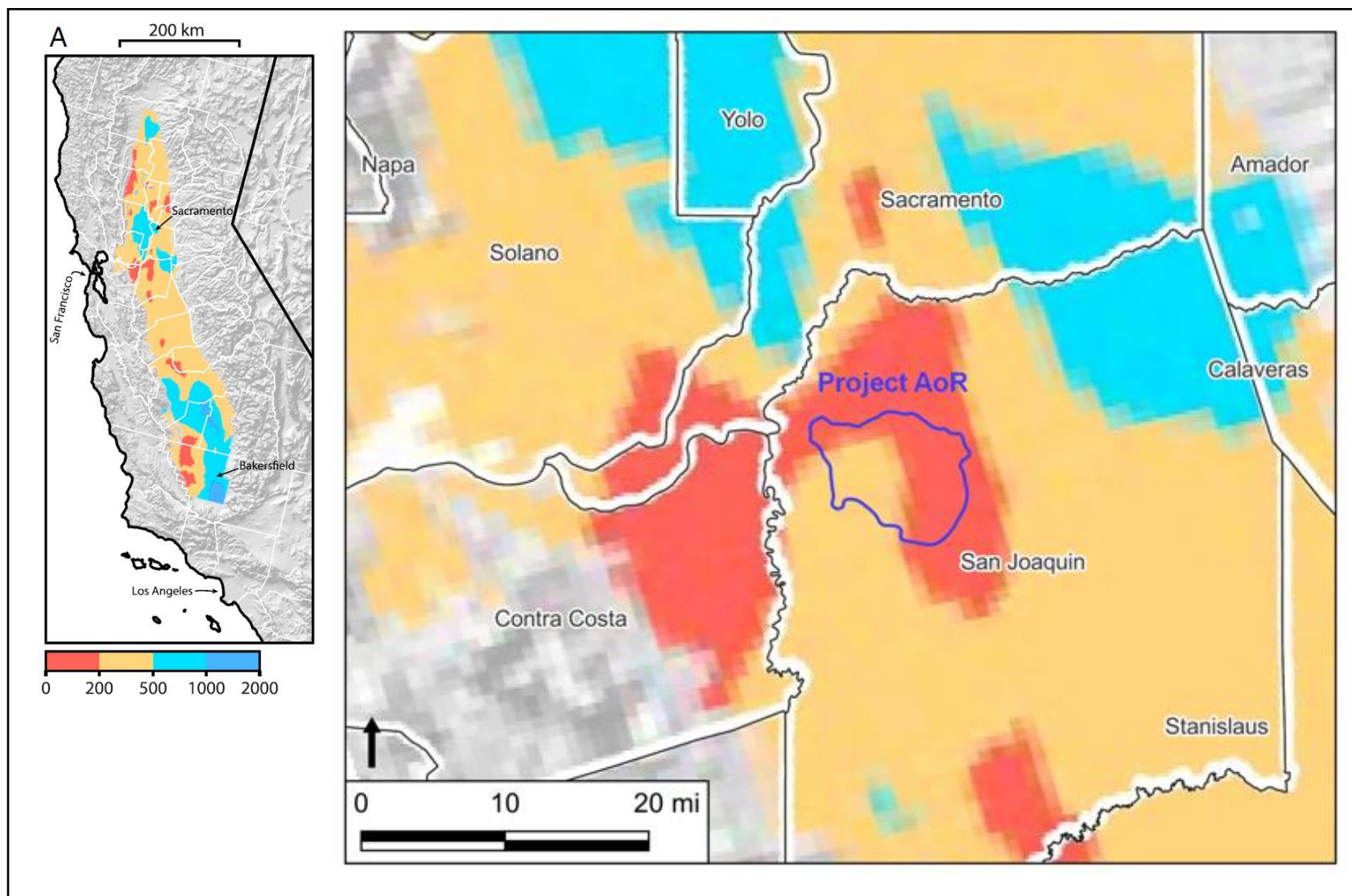


Figure 2.7-2. Elevation (meters below land surface) of the Estimated Base of Fresh Water (2,000 mg/L TDS) from Kang et al., 2020.

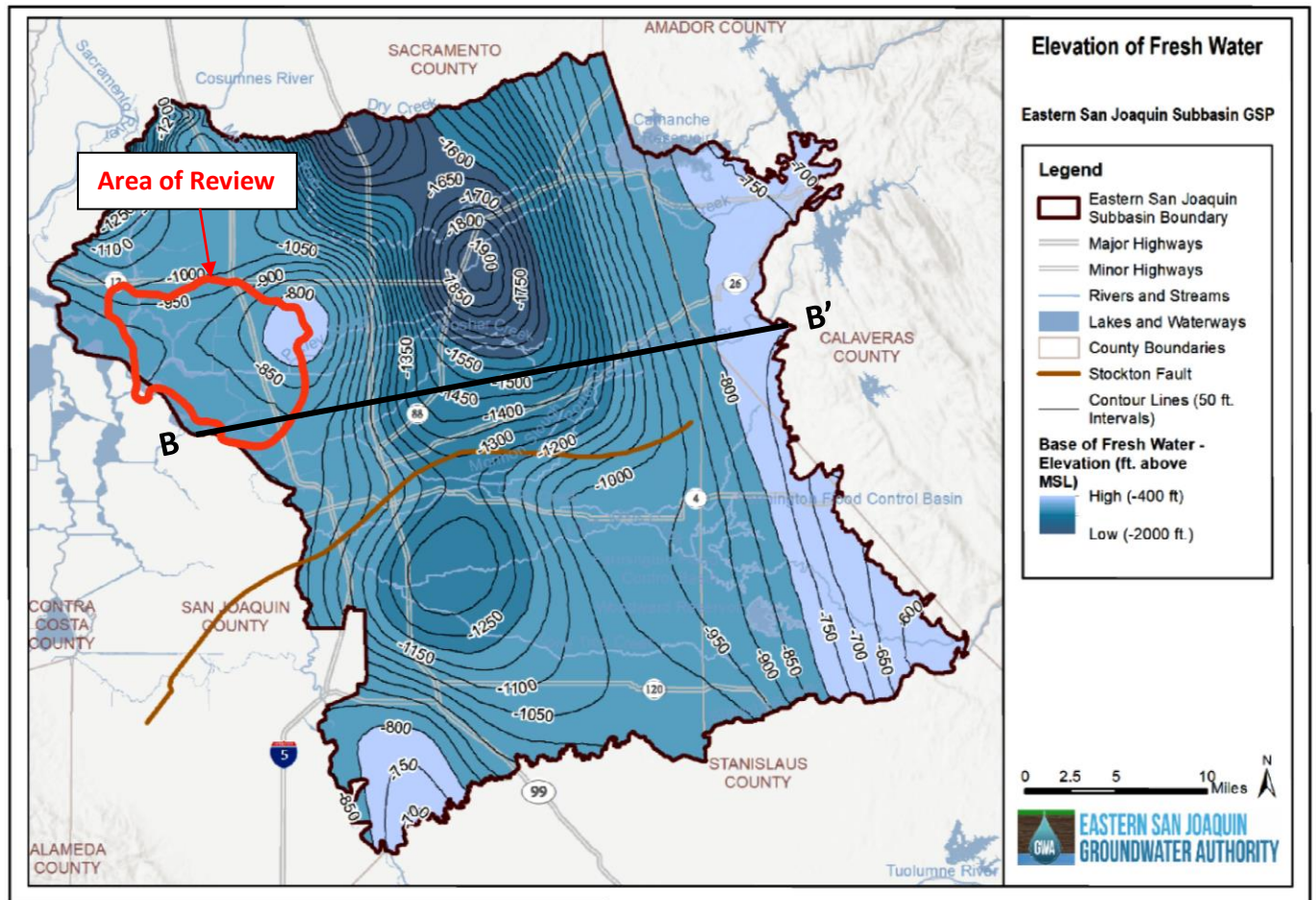


Figure 2.7-3 Base of fresh water map (ESJGA, 2019).

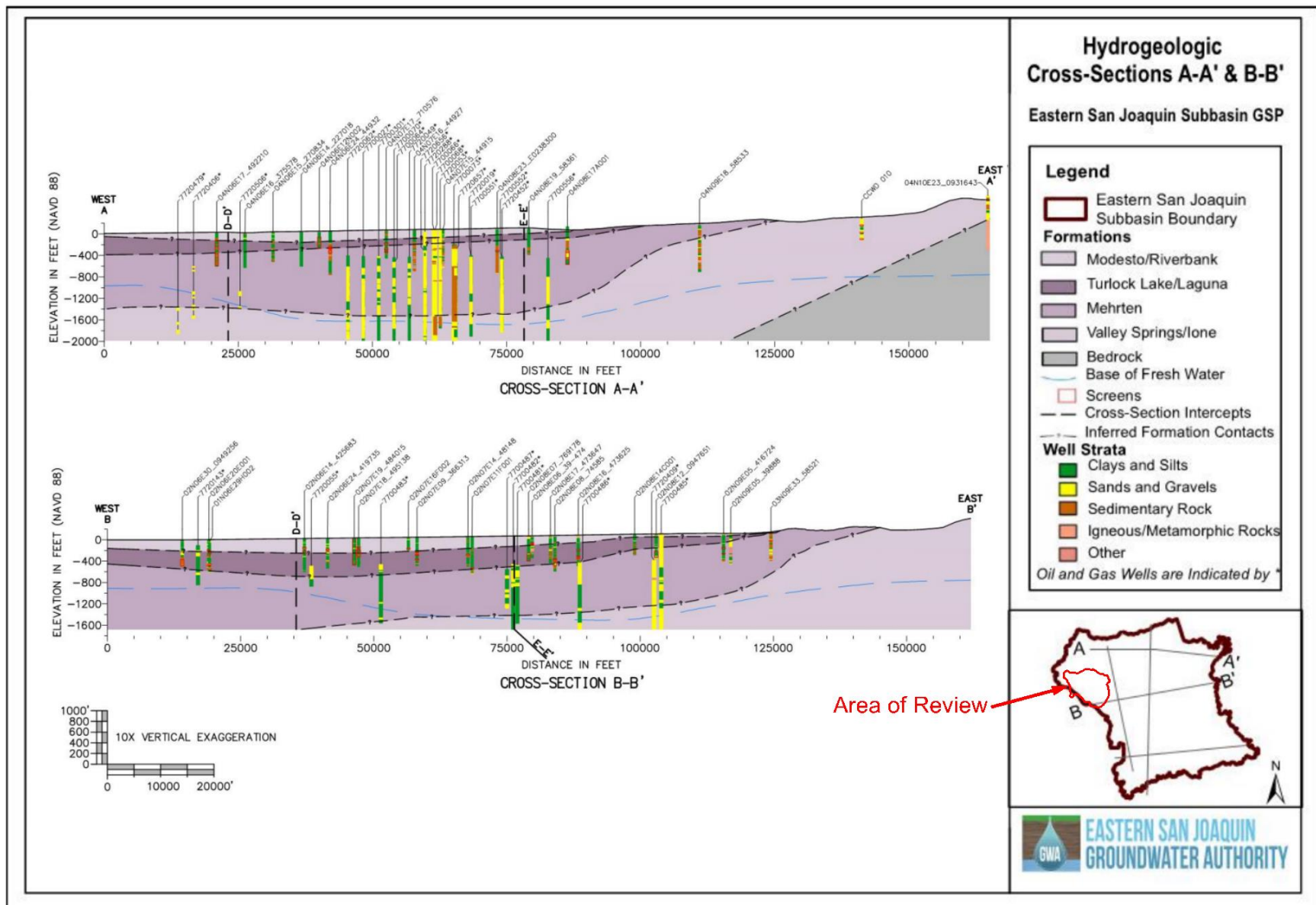


Figure 2.7-4 Geologic Cross Section B-B' showing Base of Fresh Water (ESJGA, 2019)

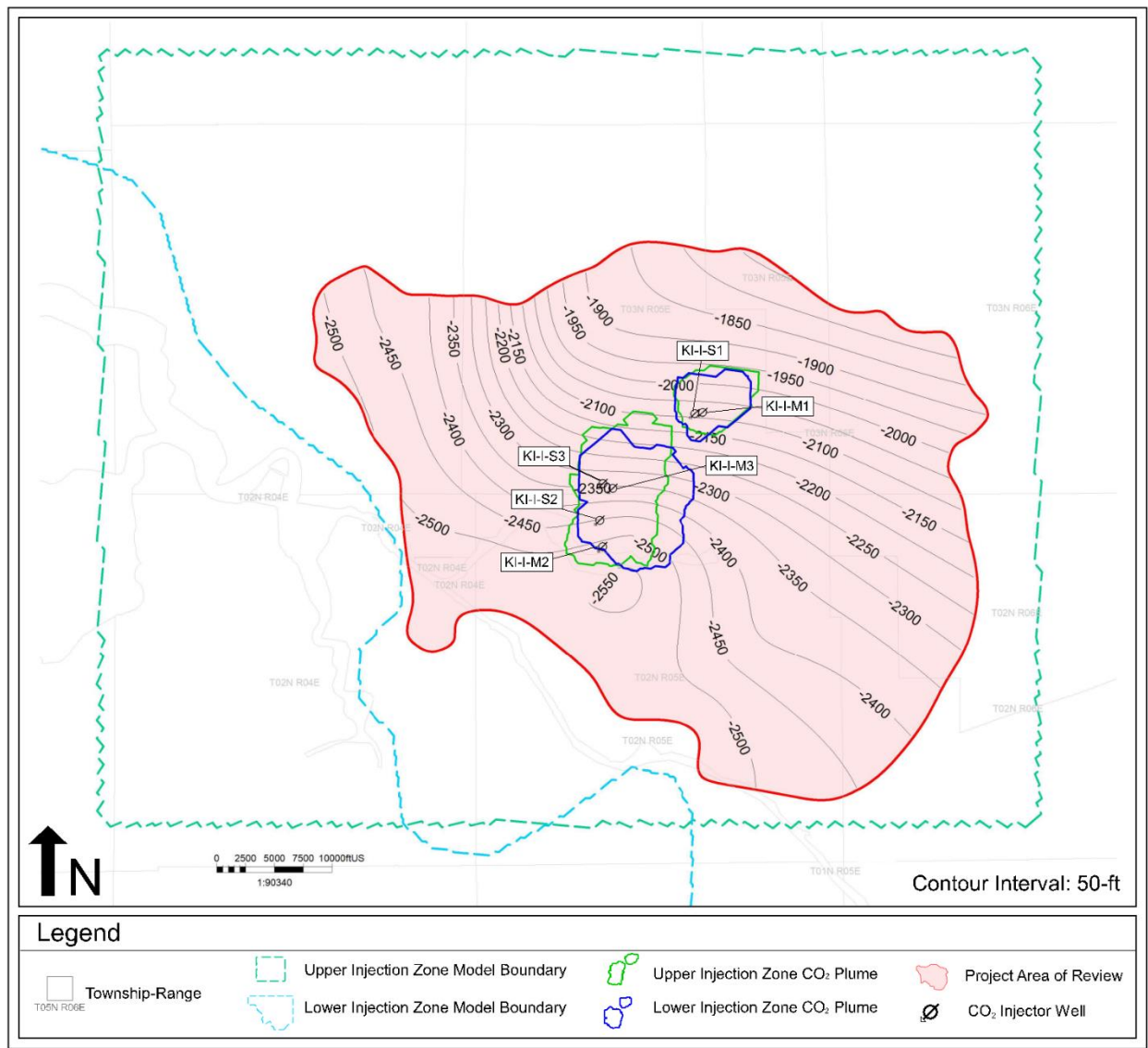


Figure 2.7-5 Depth to the base of the lowermost USDW based on the calculation of salinity from logs from AoR.

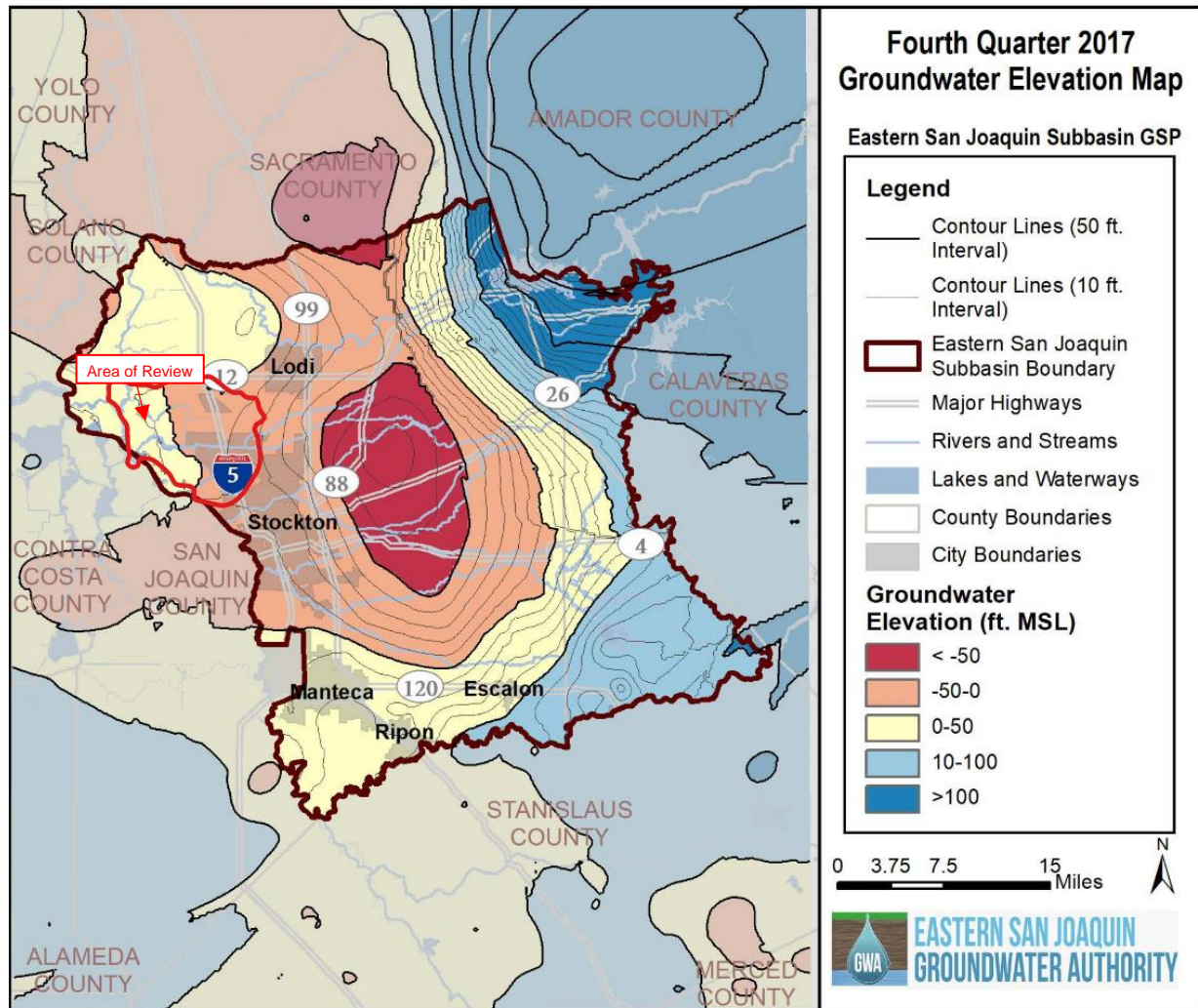


Figure 2.7-6 Groundwater level contours, 4th Quarter 2017 (ESJGA, 2019).

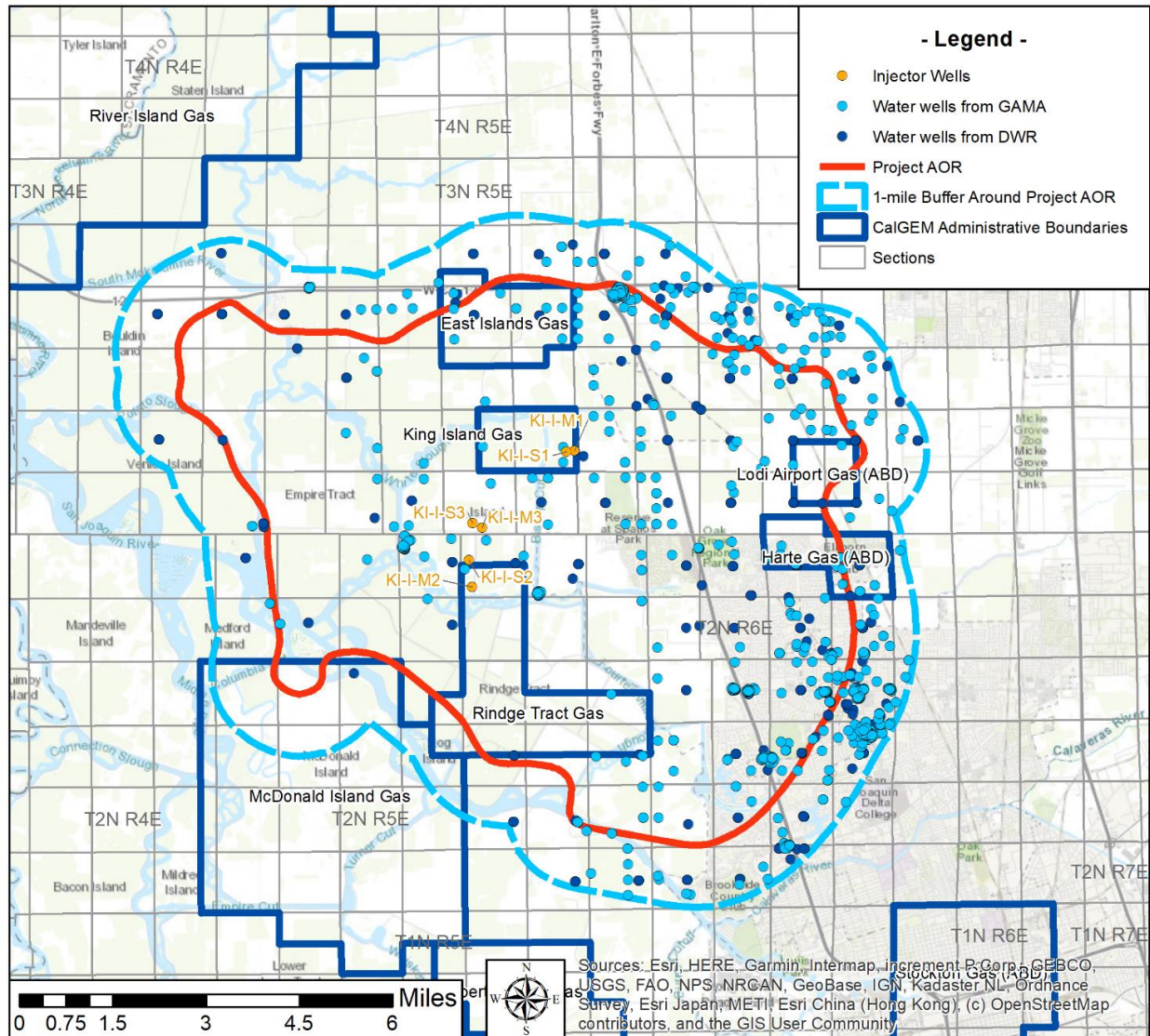


Figure 2.7-7 Water well location map.

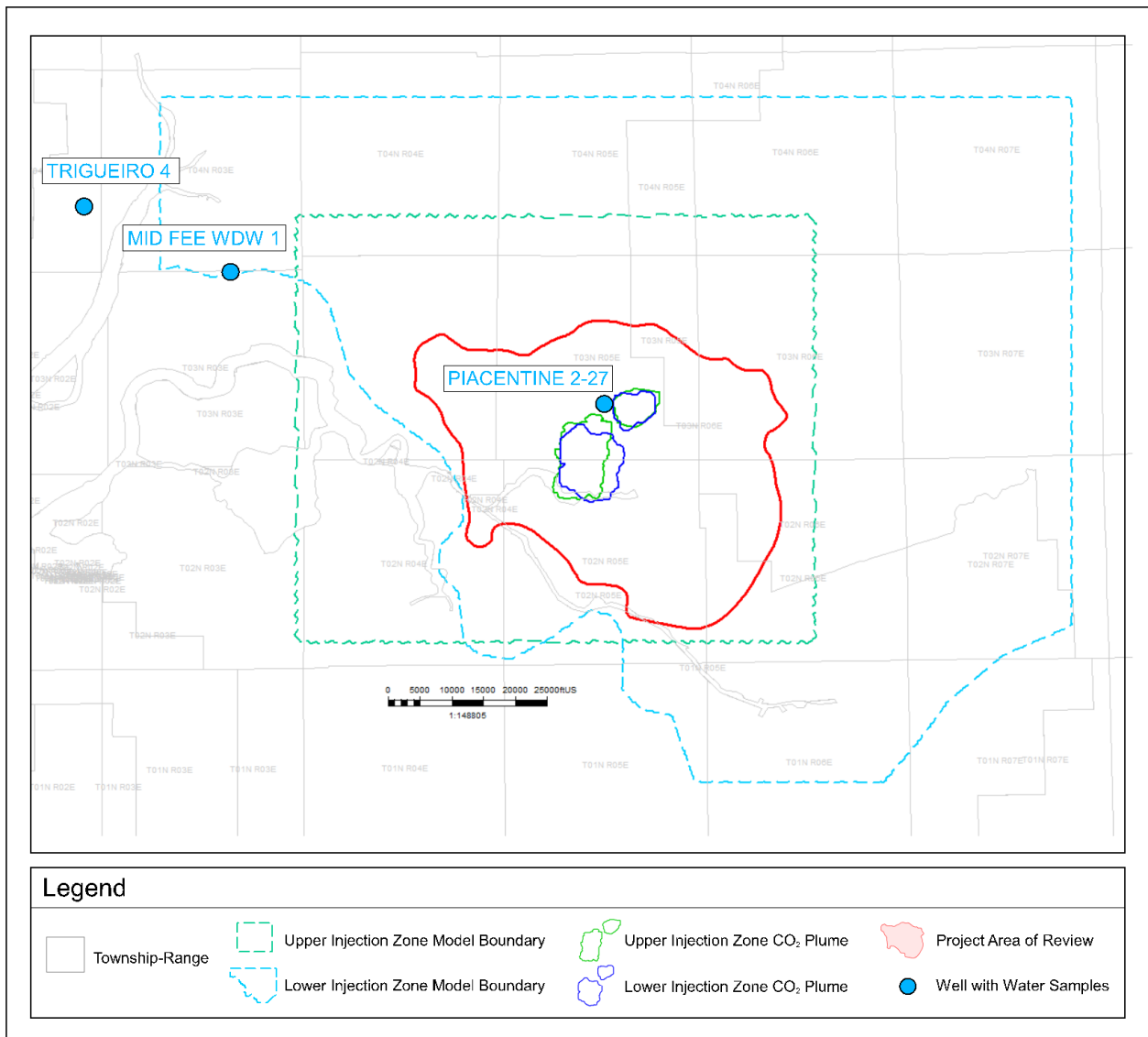


Figure 2.8-1: Map of wells with water samples.



ZALCO LABORATORIES, INC.
Analytical & Consulting Services

4309 Armour Avenue
Bakersfield, California 93308

(661) 395-0539
FAX (661) 395-3069

Core Laboratories
3437 Landco Dr
Bakersfield CA 93308

Laboratory No: 1304060-01
Date Received: 4/5/2013
Date Reported: 4/9/2013

Attention: Larry Kunkel

Sample Identification: Chamber 1507

Sampled by:

Date: 3/26/2013 Time:

Report Notes:

COMPLETE GEOCHEM ANALYSIS

pH.....	7.68	Specific Gravity @ 60 F...	1.009
Electrical Conductivity (EC).....	21.3	Resistivity.....	0.4695
(millimhos/cm @ 25 C)		(ohm meters @ 25 C)	

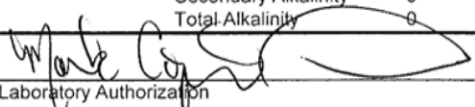
Constituents	mg/L	meq/L	Reacting %
Calcium, Ca	430	21	4.72
Magnesium, Mg	130	11	2.35
Sodium, Na	4300	190	41.14
Potassium, K	33	0.84	0.19
Iron, Fe (total)	< 1.0	0	0
Alkalinity as:			
Hydroxide, OH	0	0	0
Carbonate, CO3	0	0	0
Bicarbonate, HCO3	150	2.5	0.54
Chloride, Cl	8200	230	50.86
Sulfate, SO4	42	0.87	0.19
Sulfide, S	< 1.0		
Boron, B	9.6		
Barium, Ba	3.2		
Silica, SiO2	< 40		
Strontium, Sr	15		
Totals (Sum)	13200	456	100

Total Dissolved Solids, (Gravimetric)	14000
Calculated Hardness, CaCO3	1600
Total Alkalinity, CaCO3	150
Sodium Chloride, (total)	13000

Primary Salinity	82.66
Secondary Salinity	14.14
Total Salinity	96.8

Cation/Anion Balance, %	3.0%
Sodium, Na (Calculated), mg/L	4635.12
Langelier Scale Index	1.13
Stiff/Davis Stability Index	1.11

Primary Alkalinity	0
Secondary Alkalinity	0
Total Alkalinity	0


Laboratory Authorization

This report is furnished for the exclusive use of our Customer and applies only to the samples tested. Zalco is not responsible for report alteration or detachment.

Figure 2.8-2: Water geochemistry for the Piacentine_2-27 well (Upper Injection Zone in AoR).

GEOCHEMICAL ANALYSIS OF WATER Pro-391

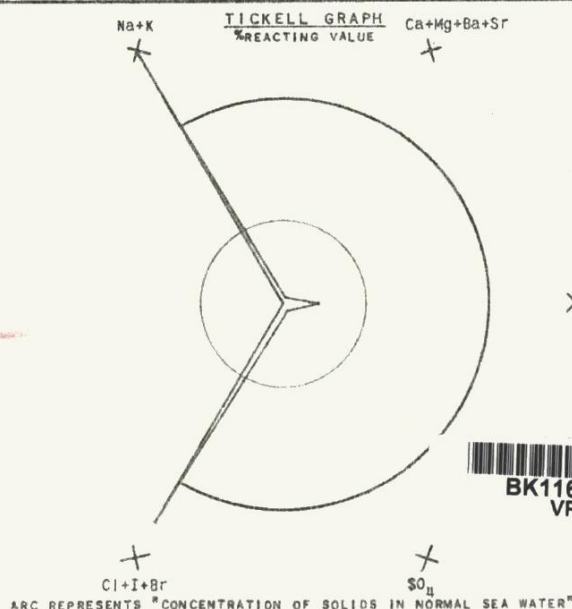
DATE OF REPORT	June 4, 1980	WELL NO.	Midland Fee WI-1, Sec. 3
DATE OF SAMPLING	No date	COMPANY	Chevron USA
SAMPLED BY	Operator	FIELD	Rio Vista, 3N/3E
LABORATORY NO.	32-8W-48	ZONE	
ANALYST	Yamada	SAMPLE SOURCE	

RADICALS		PARTS PER MILLION MILLIGRAMS PER LITER	REACTING VALUE EQUIVALENTS PER MILLION	REACTING VALUE PERCENT
SODIUM	Na	5053.6	219.82	48.73
CALCIUM	Ca	61.5	3.07	0.68
MAGNESIUM	Mg	8.9	0.73	0.16
BARIUM	Ba			
STRONTIUM	Sr			
POTASSIUM	K	75	1.92	0.43
SULPHATE	SO ₄	294.9	6.14	1.36
CHLORIDE	Cl	6867.2	193.70	42.94
CARBONATE	CO ₃	58.8	1.96	0.44
BICARBONATE	HCO ₃	1448.5	23.74	5.26
HYDROXIDE	OH			
IODIDE	I			
SILICA	SiO ₂	12.8		
IRON, ALUMINA	R ₂ O ₃	8.2		
TOTAL		13889.4	451.08	100.00

GROUP	CHEMICAL CHARACTER	MISCELLANEOUS	
ALKALIS	PRIMARY SALINITY	BORON	77.2 PPM
EARTHS	SECONDARY SALINITY	HYDROGEN SULFIDE	Absent
STRONG ACIDS	PRIMARY ALKALINITY	EQUIVALENT SALT	12000 PPM
WEAK ACIDS	SECONDARY ALKALINITY	RESISTIVITY @ 77°F	0.470 O.M.
Ca/EARTHS		CHLORINITY	11320 PPM
CHLORIDE SALINITY		SPECIFIC GRAVITY	1.0100
SULPHATE SALINITY	CARBONATE/CHLORIDE	pH	8.32

REMARKS

D. F. Moran
G. C. Cates
I-C Laboratory



BK11629433
VPC

Pro-391 (Rev. 7-71)
PRINTED IN U.S.A.

SIGNED: R. M. Yamada

Figure 2.8-3: Water geochemistry for the Midland_Fee_Water_Injection_1 well (Upper Injection Zone outside of the AoR).

MAR 02 '90 11:18 AHC RIO VISTA

P.2
~~K. Krieter~~
DuWayne

REPORT OF LAB TEST RESULTS
AHEP-1945

90-153-1

SAMPLE DATE 2-9-90	DATE RECEIVED 2-20-90	SUBMITTED BY R. George
DISTRICT Rio Vista	FIELD Rio Vista Deep	LEASE Trigueiro #4
LOCATION Tank (Swabbing Well)		
TYPE OF SAMPLE Water		ANALYSIS REQUESTED Complete Water Analysis
ANALYSIS DATE 2-22-90	ANALYSIS BY J. Brubaker	

TEST RESULTS

WATER ANALYSIS FOR TANK (SWABBING WELL) SAMPLED 2-9-90

DISSOLVED SOLIDS-MG/L		OTHER PROPERTIES
SODIUM	5235	SPECIFIC GRAVITY @ 60 F 1.002
CALCIUM	100	PH 7.97*
MAGNESIUM	14	
CHLORIDE	7120	CASO4 IONIC STRENGTH
SULFATE	310	SAMPLE= 5 SAT'N= 53.35
BICARBONATE	1635*	NEGATIVE SCALING TENDENCY
TDS	14415	CACO3 STABILITY INDEX
IRON	-	@ 100 F 1.25
		@ 140 F 1.75
		@ 180 F 2.35

Distribution

K. Krieter
R. George
Corrosion Lab

Field Remarks Newly drilled well.

Perfs: 9740'-9750'

PRESENT TREATMENT
None

REMARKS

C. A. McAfee
C. A. McAfee

Figure 2.8-4: Water geochemistry for the Trigueiro_4 well. (Lower Injection Zone outside of the AoR).

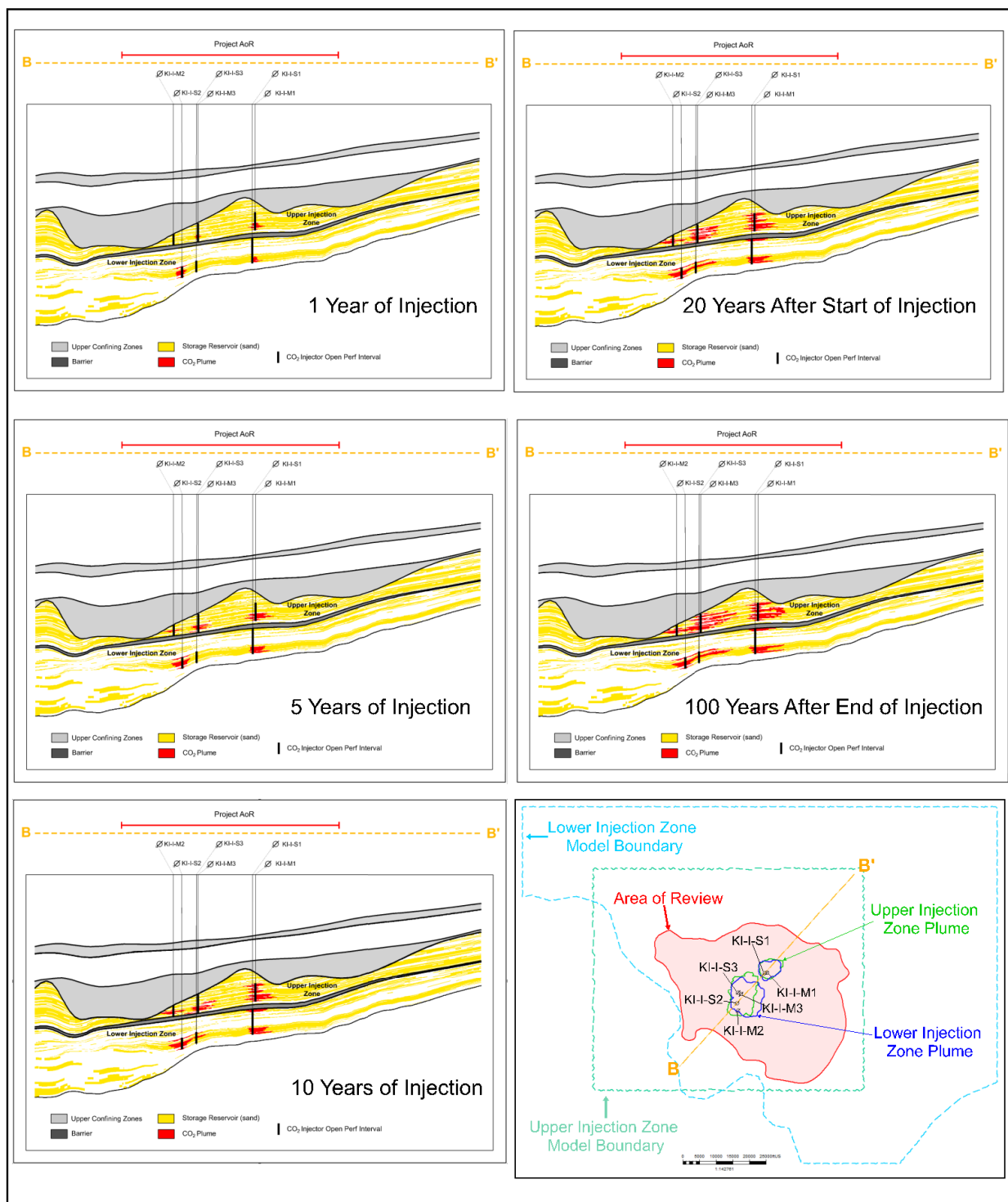


Figure 2.10-1. Lateral dispersion and development of CO₂ plumes through time and confinement under the Upper Confining Zone.

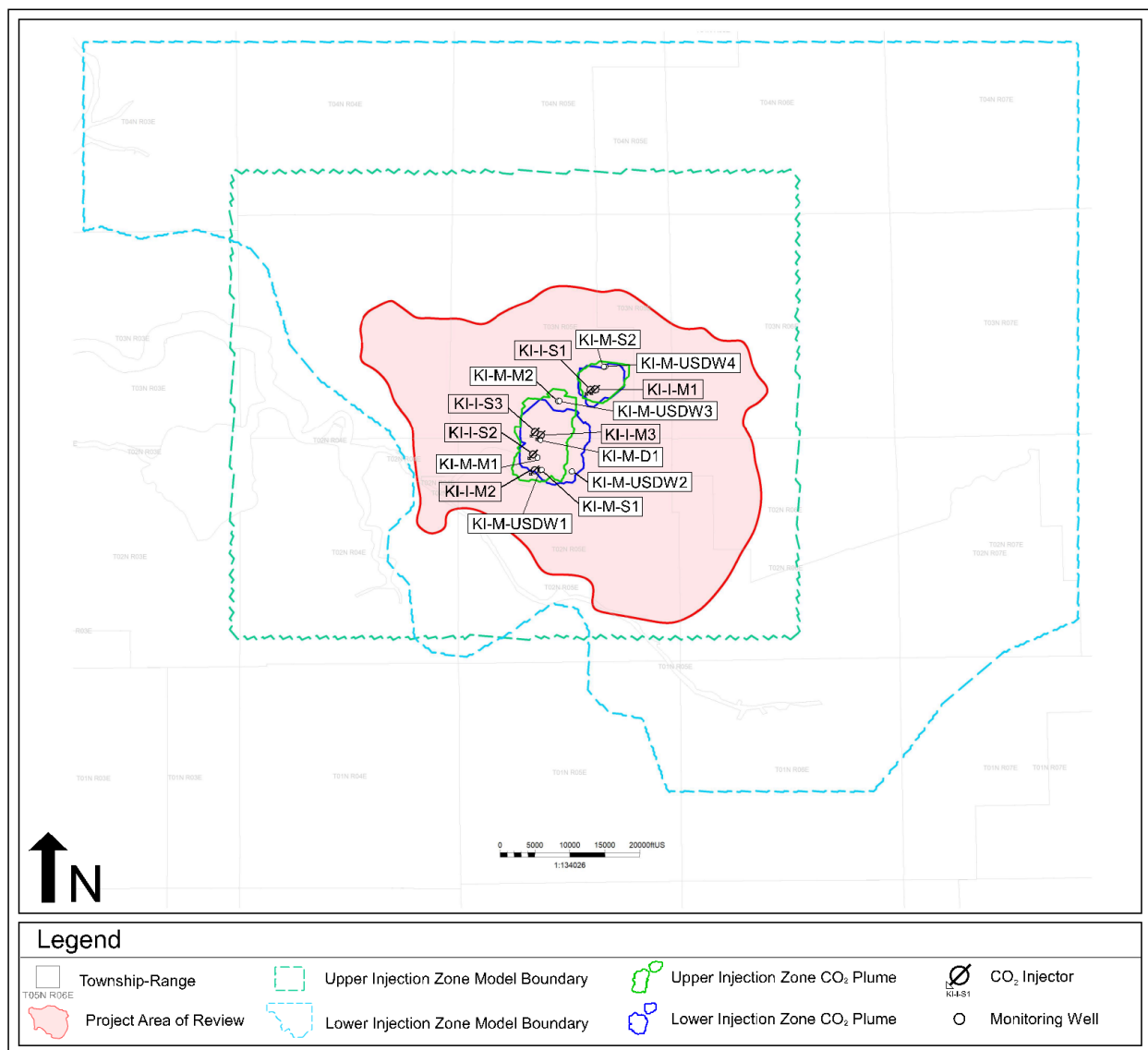


Figure 5.0-1. Map showing the location of injection wells and monitoring wells.

TABLES

Table 2.2-1 Reference list of Water Supply Wells in the AoR

Well Number	Well ID	Dataset	Type
1	AGC100012333-SJCDW00037	WB_ILRP	MUNICIPAL
2	AGW080020552-ARMSTRONG	WB_ILRP	DOMESTIC
3	AGW080020873-HOME WELL	WB_ILRP	DOMESTIC
4	AGW080017565-120	WB_ILRP	DOMESTIC
5	AGW080020944-MIKE HOUSE	WB_ILRP	DOMESTIC
6	AGW080018293-KING	WB_ILRP	DOMESTIC
7	AGW080022440-5545WELL	WB_ILRP	DOMESTIC
8	CA3910002_003_003	DDW	MUNICIPAL
9	CA3900702_001_001	DDW	MUNICIPAL
10	CA3900972_001_001	DDW	MUNICIPAL
11	CA3901010_001_001	DDW	MUNICIPAL
12	CA3400164_010_010	DDW	MUNICIPAL
13	CA3901114_001_001	DDW	MUNICIPAL
14	CA3910002_002_002	DDW	MUNICIPAL
15	CA3910002_004_004	DDW	MUNICIPAL
16	CA3901130_001_001	DDW	MUNICIPAL
17	CA3910012_022_022	DDW	MUNICIPAL
18	CA3910012_030_030	DDW	MUNICIPAL
19	CA3701780_001_001	DDW	MUNICIPAL
20	CA3910012_087_087	DDW	MUNICIPAL
21	CA3400433_003_003	DDW	MUNICIPAL
22	CA3910012_021_021	DDW	MUNICIPAL
23	CA3910012_042_042	DDW	MUNICIPAL
24	CA3900637_002_002	DDW	MUNICIPAL
25	CA3900701_001_001	DDW	MUNICIPAL
26	CA3900563_001_001	DDW	MUNICIPAL
27	CA3901248_001_001	DDW	MUNICIPAL
28	CA3910002_001_001	DDW	MUNICIPAL
29	CA3910012_037_037	DDW	MUNICIPAL
30	CA3900558_001_001	DDW	MUNICIPAL
31	CA3901248_002_002	DDW	MUNICIPAL
32	CA3900778_001_001	DDW	MUNICIPAL
33	CA3705005_001_001	DDW	MUNICIPAL
34	CA3900666_001_001	DDW	MUNICIPAL
35	CA3901098_001_001	DDW	MUNICIPAL
36	CA3900573_001_001	DDW	MUNICIPAL
37	CA3900770_001_001	DDW	MUNICIPAL
38	CA3901360_008_008	DDW	MUNICIPAL
39	CA3900616_001_001	DDW	MUNICIPAL
40	CA3302063_002_002	DDW	MUNICIPAL
41	CA3901249_001_001	DDW	MUNICIPAL
42	CA3600756_001_001	DDW	MUNICIPAL
43	CA3900666_002_002	DDW	MUNICIPAL
44	81668	DPR	DOMESTIC
45	108054	DPR	MUNICIPAL
46	81707	DPR	DOMESTIC

Table 2.2-1 Reference list of Water Supply Wells in the AoR

Well Number	Well ID	Dataset	Type
47	77694	DPR	IRRIGATION / INDUSTRIAL
48	81708	DPR	DOMESTIC
49	78503	DPR	DOMESTIC
50	03N05E19B002M	DWR	WATER SUPPLY, OTHER
51	02N06E17J001M	DWR	WATER SUPPLY, OTHER
52	03N06E28E003M	DWR	WATER SUPPLY, OTHER
53	03N05E26Q001M	DWR	WATER SUPPLY, OTHER
54	02N06E08F001M	DWR	WATER SUPPLY, OTHER
55	02N05E24C002M	DWR	WATER SUPPLY, OTHER
56	03N05E27P002M	DWR	WATER SUPPLY, OTHER
57	02N05E02R003M	DWR	WATER SUPPLY, OTHER
58	03N05E14B001M	DWR	WATER SUPPLY, OTHER
59	03N05E26C008M	DWR	WATER SUPPLY, OTHER
60	03N05E36L001M	DWR	WATER SUPPLY, OTHER
61	03N06E29B003M	DWR	WATER SUPPLY, OTHER
62	02N05E05C001M	DWR	WATER SUPPLY, OTHER
63	02N05E02H002M	DWR	WATER SUPPLY, OTHER
64	03N05E14L001M	DWR	WATER SUPPLY, OTHER
65	03N05E26R001M	DWR	WATER SUPPLY, OTHER
66	03N05E21L002M	DWR	WATER SUPPLY, OTHER
67	02N05E14F001M	DWR	WATER SUPPLY, OTHER
68	03N05E26N001M	DWR	WATER SUPPLY, OTHER
69	03N05E27P001M	DWR	WATER SUPPLY, OTHER
70	03N05E15B001M	DWR	WATER SUPPLY, OTHER
71	03N05E23N002M	DWR	WATER SUPPLY, OTHER
72	02N06E20B002M	DWR	WATER SUPPLY, OTHER
73	03N06E30R001M	DWR	WATER SUPPLY, OTHER
74	02N06E17E001M	DWR	WATER SUPPLY, OTHER
75	02N05E02R002M	DWR	WATER SUPPLY, OTHER
76	03N05E13L001M	DWR	WATER SUPPLY, OTHER
77	03N05E26K003M	DWR	WATER SUPPLY, OTHER
78	03N05E29P001M	DWR	WATER SUPPLY, OTHER
79	02N05E24L001M	DWR	WATER SUPPLY, OTHER
80	02N06E19P002M	DWR	WATER SUPPLY, OTHER
81	03N05E17A001M	DWR	WATER SUPPLY, OTHER
82	03N05E19B001M	DWR	WATER SUPPLY, OTHER
83	03N06E31C001M	DWR	WATER SUPPLY, OTHER
84	03N06E20D001M	DWR	WATER SUPPLY, OTHER
85	02N06E04M001M	DWR	WATER SUPPLY, OTHER
86	02N05E23R001M	DWR	WATER SUPPLY, OTHER
87	03N05E32N003M	DWR	WATER SUPPLY, OTHER
88	03N05E25N002M	DWR	WATER SUPPLY, OTHER
89	03N05E36M001M	DWR	WATER SUPPLY, OTHER
90	03N06E20P001M	DWR	WATER SUPPLY, OTHER

Table 2.2-1 Reference list of Water Supply Wells in the AoR

Well Number	Well ID	Dataset	Type
91	03N05E17J001M	DWR	WATER SUPPLY, OTHER
92	03N05E32N001M	DWR	WATER SUPPLY, OTHER
93	03N05E35J001M	DWR	WATER SUPPLY, OTHER
94	02N05E24N002M	DWR	WATER SUPPLY, OTHER
95	02N05E23E001M	DWR	WATER SUPPLY, OTHER
96	02N05E02H001M	DWR	WATER SUPPLY, OTHER
97	03N05E36D002M	DWR	WATER SUPPLY, OTHER
98	02N05E24C001M	DWR	WATER SUPPLY, OTHER
99	03N06E20E006M	DWR	WATER SUPPLY, OTHER
100	02N05E23H001M	DWR	WATER SUPPLY, OTHER
101	03N05E09Q001M	DWR	WATER SUPPLY, OTHER
102	03N05E24P001M	DWR	WATER SUPPLY, OTHER
103	02N06E08C001M	DWR	WATER SUPPLY, OTHER
104	02N06E16D003M	DWR	WATER SUPPLY, OTHER
105	02N06E30B001M	DWR	WATER SUPPLY, OTHER
106	02N05E25E001M	DWR	WATER SUPPLY, OTHER
107	02N06E19K001M	DWR	WATER SUPPLY, OTHER
108	02N05E13D001M	DWR	WATER SUPPLY, OTHER
109	02N05E02A001M	DWR	WATER SUPPLY, OTHER
110	03N05E26H003M	DWR	WATER SUPPLY, OTHER
111	03N05E27G001M	DWR	WATER SUPPLY, OTHER
112	03N05E29L001M	DWR	WATER SUPPLY, OTHER
113	03N05E23D002M	DWR	WATER SUPPLY, OTHER
114	03N05E16A001M	DWR	WATER SUPPLY, OTHER
115	03N05E30D001M	DWR	WATER SUPPLY, OTHER
116	03N05E36M002M	DWR	WATER SUPPLY, OTHER
117	03N06E30F001M	DWR	WATER SUPPLY, OTHER
118	03N06E30J001M	DWR	WATER SUPPLY, OTHER
119	03N05E36D001M	DWR	WATER SUPPLY, OTHER
120	02N05E12M001M	DWR	WATER SUPPLY, OTHER
121	03N05E26R006M	DWR	WATER SUPPLY, OTHER
122	03N05E15C001M	DWR	WATER SUPPLY, OTHER
123	03N05E27K001M	DWR	WATER SUPPLY, OTHER
124	03N05E23D001M	DWR	WATER SUPPLY, OTHER
125	03N06E19C004M	DWR	WATER SUPPLY, OTHER
126	03N06E20E001M	DWR	WATER SUPPLY, OTHER
127	02N06E07P001M	DWR	WATER SUPPLY, OTHER
128	02N05E26H001M	DWR	WATER SUPPLY, OTHER
129	03N05E10R001M	DWR	WATER SUPPLY, OTHER
130	03N05E15A001M	DWR	WATER SUPPLY, OTHER
131	03N05E27N001M	DWR	WATER SUPPLY, OTHER
132	03N05E32N002M	DWR	WATER SUPPLY, OTHER
133	03N05E23E002M	DWR	WATER SUPPLY, OTHER
134	03N05E36E001M	DWR	WATER SUPPLY, OTHER

Table 2.2-1 Reference list of Water Supply Wells in the AoR

Well Number	Well ID	Dataset	Type
135	03N05E35K001M	DWR	WATER SUPPLY, OTHER
136	02N05E26H002M	DWR	WATER SUPPLY, OTHER
137	02N06E20F001M	DWR	WATER SUPPLY, OTHER
138	02N05E01C001M	DWR	WATER SUPPLY, OTHER
139	03N05E16A002M	DWR	WATER SUPPLY, OTHER
140	03N05E34L001M	DWR	WATER SUPPLY, OTHER
141	03N06E19C003M	DWR	WATER SUPPLY, OTHER
142	03N06E20H001M	DWR	WATER SUPPLY, OTHER
143	02N06E06C001M	DWR	WATER SUPPLY, OTHER
144	03N05E30G001M	DWR	WATER SUPPLY, OTHER
145	03N05E30Q001M	DWR	WATER SUPPLY, OTHER
146	03N06E29P002M	DWR	WATER SUPPLY, OTHER
147	03N05E15K001M	DWR	WATER SUPPLY, OTHER
148	02N06E17A001M	DWR	WATER SUPPLY, OTHER
149	03N05E26A002M	DWR	WATER SUPPLY, OTHER
150	02N05E24D001M	DWR	WATER SUPPLY, OTHER
151	02N06E08P003M	DWR	WATER SUPPLY, OTHER
152	03N05E15J001M	DWR	WATER SUPPLY, OTHER
153	02N06E04E001M	DWR	WATER SUPPLY, OTHER
154	02N06E05D001M	DWR	WATER SUPPLY, OTHER
155	02N05E24C003M	DWR	WATER SUPPLY, OTHER
156	02N06E08L001M	DWR	WATER SUPPLY, OTHER
157	03N05E32M001M	DWR	WATER SUPPLY, OTHER
158	03N05E23P002M	DWR	WATER SUPPLY, OTHER
159	03N05E33P001M	DWR	WATER SUPPLY, OTHER
160	03N06E20Q002M	DWR	WATER SUPPLY, OTHER
161	03N06E29A001M	DWR	WATER SUPPLY, OTHER
162	03N05E23L001M	DWR	WATER SUPPLY, OTHER
163	02N06E20M002M	DWR	WATER SUPPLY, OTHER
164	02N06E19P001M	DWR	WATER SUPPLY, OTHER
165	03N05E15H001M	DWR	WATER SUPPLY, OTHER
166	02N06E08Q002M	DWR	WATER SUPPLY, OTHER
167	03N05E26K001M	DWR	WATER SUPPLY, OTHER
168	02N06E19L001M	DWR	WATER SUPPLY, OTHER

Table 2.2-1 Reference list of Water Supply Wells in the AoR

Well Number	API	Well Name	Status	Well Type
169	407720488	Olagaray 1-20	Plugged	Dry Hole
170	407720101	Zuckerman 1	Plugged	Dry Hole
171	407720469	Moresco et al Unit A 1	Plugged	Dry Gas
172	407720498	Eberhardt 15-34	Plugged	Dry Hole
173	407720217	Bouldin Development Co. 1	Plugged	Dry Hole
174	407720490	Bouldin 1-14	Plugged	Dry Hole
175	407700507	Coldani Corehole 1	Plugged	Core Hole
176	407720658	DW 23-1	Plugged	Gas
177	407720336	Transamerica 1-19	Plugged	Dry Hole
178	407720686	King Island 33-1	Plugged	Dry Gas
179	407720484	Piacentine 1-27	Idle	Dry Gas
180	407720737	Morais 16-2	Plugged	Dry Gas
181	407700509	Federal Imeson 1	Plugged	Dry Hole
182	407720583	Rizzi 1	Plugged	Dry Hole
183	407700476	Allied Properties 1	Plugged	Dry Hole
184	407700512	Pereira et al Unit 1	Plugged	Dry Hole
185	407720381	Buttes-Rio Blanco 15-77X	Plugged	Dry Hole
186	407720299	Phillips-Van Ruiten 1-29	Plugged	Dry Hole
187	407720736	Piacentine 2-27	Plugged	Dry Gas
188	407720335	Rocha et al Unit 1	Plugged	Dry Hole
189	407720496	Red House Fee 65-24	Plugged	Dry Hole
190	407720435	Argo-Buttes-Coldani 2-15	Plugged	Gas
191	407720626	Eberhardt 1	Plugged	Dry Gas
192	407720273	East Bouldin Island 1	Plugged	Dry Hole
193	407720481	Ruemmler 5-1	Plugged	Dry Hole
194	407720538	Pellegrini 1-32	Plugged	Dry Hole
195	407720511	Morais 16-1	Idle	Dry Gas
196	407700511	Core Hole G. & P. 1	Plugged	Core Hole
197	407720630	Jackson et al 1	Plugged	Dry Gas
198	407700508	Capital Fraser 19-1	Plugged	Dry Hole
199	407720172	Rio Blanco 1	Plugged	Dry Hole
200	407720645	Eberhardt 2	Plugged	Dry Gas
201	407720489	Champlin-Isola 2	Plugged	Dry Hole
202	407700468	Shell-Allied Properties 1-8	Plugged	Dry Hole
203	407700504	Empire Tract Unit 1	Plugged	Dry Hole
204	407720379	Buttes-Fox 15-37X	Plugged	Dry Hole
205	407720537	White Slough Unit 1	Plugged	Dry Hole
206	407720453	Champlin-Isola 1	Plugged	Dry Gas
207	407720628	Wysuph 1	Plugged	Dry Gas
208	407720486	Dell Aringa 1-31	Plugged	Dry Hole
209	407720143	Kelley Estates 1	Plugged	Dry Hole
210	407720283	Phillips Olagaray 1	Plugged	Dry Gas
211	407700518	Perrin 1	Plugged	Dry Hole
212	407720688	Citizen Green 1	Idle	Dry Gas
213	407700467	Victor Leonardini et al 1	Plugged	Dry Hole
214	407720568	Lodi Stig 1	Plugged	Dry Hole

Table 2.2-1 Reference list of Water Supply Wells in the AoR

Well Number	API	Well Name	Status	Well Type
215	407700475	Cortopassi 1	Plugged	Dry Hole
216	407720474	Spaletta 1	Plugged	Dry Hole
217	407700516	McCulloch-Stefani 1	Plugged	Dry Hole
218	407720367	Buttes-Coldani 15-44X	Plugged	Dry Gas
219	407700514	Union-Gianelli 1	Plugged	Dry Hole
220	407720697	Empire Tract 1	Plugged	Dry Gas
221	407720545	Fong 2	Plugged	Dry Hole
222	407700302	Brack Community B	Plugged	Dry Hole
223	407720739	PG&E Test Injection/ Withdrawa 1	Plugged	Dry Gas
224	407700496	West. Cal. Can. 4	Plugged	Dry Hole
225	407720351	Big Valley-Eberhart 1	Plugged	Dry Hole
226	407720522	SFEC-Luckey 7-1	Plugged	Dry Hole
227	407720512	Stevens 16-1	Plugged	Dry Gas
228	407720376	Sargent Slough 1	Plugged	Dry Gas
229	407720627	Bank of Stockton 1	Plugged	Dry Gas
230	407700510	Klein 1-28	Plugged	Dry Hole
231	407720290	City of Lodi 1	Plugged	Dry Hole
232	407700471	Rindge Tract 1	Plugged	Dry Hole
233	407720356	1	Plugged	Dry Hole
234	407700479	KCY-Reserve-Mobil Finkbohner U 1	Plugged	Dry Hole
235	407700513	Empire Tract 1	Plugged	Dry Hole
236	407720301	Phillips-Kooyman 1-29	Plugged	Dry Gas
237	407720456	CPC-Hatch 31-1	Plugged	Dry Hole
238	407700470	Pacific States 1	Plugged	Dry Hole
239	407700469	Allied Properties 1	Plugged	Dry Hole
240	407720566	Ripken 21-1	Plugged	Dry Hole
241	407700515	Piacentine 1	Plugged	Dry Hole
242	407720735	Morais 16-2	Plugged	Dry Gas
243	407720345	Ratto 14-1	Plugged	Dry Hole

Table 2.4-1. Formation mineralogy from x-ray diffraction (XRD) and Fourier-transform infrared spectroscopy (FTIR) in eight wells

Well	Zone	Depth (feet)	Quartz	Chert	Plagioclase	K-Feldspar	Feldspar	Albite	Oligoclase	Andesine	Labrodorite	Calcite	Dolomite	Amphibole	Siderite	Glaucanite	Apatite	Barite	Pyrite	Kaolinite	Chlorite	Illite & Mica	Smectite	MXL I/S	Total Clay
RVGU_209	Capay	4,442.5	26.0			17.0		14.0	0.0	11.0		1.0	0.0							5.0	3.0			23.0	31.0
RVGU_209	Capay	4,454.5	30.0			15.0		8.0	15.0	6.0		0.0	0.0							2.0	6.0			18.0	26.0
RVGU_209	Capay	4,476.5	30.0			18.0		13.0	4.0	6.0		0.0	0.0							5.0	9.0			15.0	29.0
RVGU_209	Capay	4,480.5	26.0			20.0		13.0	0.0	10.0		0.0	0.0							0.0	6.0			25.0	31.0
RVGU_209	Capay	4,498.5	34.0			19.0		13.0	0.0	13.0		0.0	0.0							1.0	2.0			18.0	21.0
RVGU_209	Capay	4,500.5	28.0			19.0		0.0	19.0	0.0		0.0	0.0							0.0	12.0			22.0	34.0
RVGU_248	Capay	4,425.5	35.0		25.0	15.0														5.0	5.0	5.0	10.0		25.0
Wilcox_20	Capay	4,622.0	42.2		18.7	10.7						0.0	0.0						0.6	9.4	3.4	4.5		10.5	27.8
Wilcox_20	Capay	4,905.0	34.9		20.7	10.2						0.7	0.0						1.1	15.2	5.8	5.8		5.5	32.3
Citizen_Green_1	Mokelumne	5247	27.8			16.2		34		0	0			0			0.8		0	3.6	17	0	1.1		21.7
Citizen_Green_1	Mokelumne	5249	17			32.7		6.5		0	0			0					0	34.9	0	8.4	0.5		43.8
Citizen_Green_1	Mokelumne	6400	40.3			17.1		0		3.6	29.2			0.17					0	5.2	4.0	0.4	0		9.6
Citizen_Green_1	Mokelumne	6466	36.3			12.6		0.23		0	36.6			0.57					0.7	2.7	5.4	5.0	0		13.0
Citizen_Green_1	Mokelumne	6532	34.2			24.1		0		31	0			1.1					0.5	2.9	2	4.2			9.1
Citizen_Green_1	Mokelumne	6598	33.9			22.0		0		34.5	0			0.23					0.2	3.6	5.4	0.1	0		9.2
Speckman_Decarli_1	H&T Shale	8,828.0	23.0			9.0		12.0	0.0	9.0		3.0	0.0			0.0			1.0	12.0	5.0			26.0	43.0
Speckman_Decarli_1	H&T Shale	8,830.0	30.0		17.0	11.0						0.0	0.0						4.0	3.4	14.4	6.1	14.1		38.0
Speckman_Decarli_1	H&T Shale	8,909.0	20.0			13.0		10.0	0.0	10.0		0.0	0.0			2.0			2.0	5.0	3.0			35.0	43.0
Speckman_Decarli_1	H&T Shale	8,937.0	20.0			8.0		7.0	0.0	5.0		0.0	0.0			0.0			2.0	14.0	6.0			38.0	58.0
Speckman_Decarli_1	H&T Shale	8,939.0	24.0		18.0	11.0						1.0	0.0						3.0	3.0	15.5	7.7	16.8		43.0
Speckman_Decarli_1	H&T Shale	8,940.0	23.0			12.0		14.0	0.0	15.0		0.0	0.0			0.0			0.0	4.0	5.0			27.0	36.0
Speckman_Decarli_1	H&T Shale	8,942.0	23.0			10.0		9.0	0.0	6.0		0.0	0.0			0.0			2.0	12.0	5.0			33.0	50.0
Speckman_Decarli_1	H&T Shale	9,439.0	20.0			9.0		7.0	0.0	7.0		0.0	0.0			0.0			1.0	0.0	5.0			51.0	56.0
Speckman_Decarli_1	H&T Shale	9,441.0	21.0			12.0		10.0	0.0	9.0		2.0	0.0			0.0			3.0	0.0	0.0			43.0	43.0
Citizen_Green_1	Starkey	7104	39.9			6.5		0		27.4	0			0					1.2	1.3	5.7	8.5	9.5		23.7
Citizen_Green_1	Starkey	7136	42.8			8.7		0		39.6	0								0.5	0	1.4	4.7	2.4		8.5
Citizen_Green_1	Starkey	7146	37.5			11.1		34.2									5.3		1.1		1.8	1.3	7.7		10.8
Emigh_15	Peterson Sand Unit of Starkey	10,472.5	63.0		14.0	8.0														2.0	7.0	2.0		4.0	15.0
Emigh_15	Peterson Sand Unit of Starkey	10,472.5	68.0		25.0	5.0						0.0							0.0	1.2	0.6	0.2	0.0		2.0
Emigh_15	Peterson Sand Unit of Starkey	10,478.5	42.0	7.0		12.0		14.0	8.0	0.0		0.0	0.0							3.0	6.0			8.0	17.0
Emigh_15	Peterson Sand Unit of Starkey	10,478.5	61.0		11.0	8.0														3.0	6.0	4.0		7.0	20.0
Emigh_15	Peterson Sand Unit of Starkey	10,478.5	63.0		22.0	11.0						0.0							0.0	2.4	1.0	0.6	0.0		4.0
Emigh_15	Peterson Sand Unit of Starkey	10,485.5	63.0		15.0	8.0														4.0	4.0	2.0		4.0	14.0

Well	Zone	Depth (feet)	Quartz	Chert	Plagioclase	K-Feldspar	Feldspar	Albite	Oligoclase	Andesine	Labrodorite	Calcite	Dolomite	Amphibole	Siderite	Glauconite	Apatite	Barite	Pyrite	Kaolinite	Chlorite	Illite & Mica	Smectite	MXL I/S	Total Clay
Emigh_15	Peterson Sand Unit of Starkey	10,485.5	69.0		21.0	8.0						0.0							0.0	1.4	0.3	0.3	0.0		2.0
Emigh_15	Peterson Sand Unit of Starkey	10,492.5	34.0	6.0		12.0		16.0	0.0	3.0		15.0	1.0							3.0	4.0			6.0	13.0
Emigh_15	Peterson Sand Unit of Starkey	10,492.5	51.0		12.0	5.0						14.0								2.0	3.0	4.0		9.0	18.0
Emigh_15	Peterson Sand Unit of Starkey	10,492.5	54.0		21.0	6.0						16.0							0.0	0.8	1.1	1.2	0.0		3.0
Emigh_15	Peterson Sand Unit of Starkey	10,507.5	26.0	9.0		15.0		18.0	11.0	0.0		0.0	0.0							3.0	9.0			9.0	21.0
Emigh_15	Peterson Sand Unit of Starkey	10,507.5	51.0		15.0	7.0														4.0	6.0	7.0		10.0	27.0
Emigh_15	Peterson Sand Unit of Starkey	10,507.5	56.0		30.0	8.0						0.0							0.0	2.5	2.2	1.4	0.0		6.0
Emigh_15	Peterson Sand Unit of Starkey	10,516.5	42.0		15.0	7.0						16.0								4.0	3.0	2.0		11.0	20.0
Emigh_15	Peterson Sand Unit of Starkey	10,516.5	47.0		26.0	6.0						18.0							0.0	1.4	0.7	1.0	0.0		3.0
Emigh_15	Peterson Sand Unit of Starkey	10,522.5	60.0		15.0	7.0														3.0	5.0	3.0		7.0	18.0
Emigh_15	Peterson Sand Unit of Starkey	10,522.5	63.0		30.0	4.0						0.0							0.0	1.8	0.7	0.5	0.0		3.0
JA_Serpa_4	Peterson Sand Unit of Starkey	9,623.0	54.0				29.0						2.0						2.0	4.0	6.0	3.0			13.0
JA_Serpa_4	Peterson Sand Unit of Starkey	9,633.0	50.0				34.0						2.0							6.0	2.0	4.0		2.0	14.0
JA_Serpa_4	Peterson Sand Unit of Starkey	9,641.0	55.0				33.0						3.0							4.0	2.0	3.0			9.0
JA_Serpa_4	Peterson Sand Unit of Starkey	9,653.0	66.0				23.0													4.0	4.0	3.0			11.0
JA_Serpa_4	Peterson Sand Unit of Starkey	9,670.0	48.0				36.0						3.0						2.0	4.0	4.0	3.0			11.0
JA_Serpa_4	Peterson Sand Unit of Starkey	9,683.0	56.0				34.0						2.0							4.0	2.0	2.0			8.0
JA_Serpa_4	Peterson Sand Unit of Starkey	9,690.0	38.0				9.0					49.0								2.0	2.0				4.0
JA_Serpa_4	Peterson Sand Unit of Starkey	9,704.0	26.0				19.0					49.0								2.0	2.0	2.0			6.0
JA_Serpa_4	Peterson Sand Unit of Starkey	9,715.0	55.0				34.0						2.0							3.0	4.0	2.0			9.0
JA_Serpa_4	Peterson Sand Unit of Starkey	10,366.0	71.0				6.0											7.0		9.0	3.0	4.0			16.0
JA_Serpa_4	Peterson Sand Unit of Starkey	10,388.0	68.0				10.0											5.0		9.0	3.0	5.0			17.0
JA_Serpa_4	Peterson Sand Unit of Starkey	10,408.0	51.0				6.0											37.0		4.0		2.0			6.0
Lopes_Transamerica_1	Winters	7,926.3	59.1		21.0	10.0						0.0			0.0	0.0	0.0	8.0	0.0	0.1	0.0	0.1	1.7		1.9
Lopes_Transamerica_1	Winters	7,929.3	24.6		15.1	9.8						0.0			0.0	0.0	0.0	0.0	1.8	4.4	27.6	7.1	9.6		48.7
Lopes_Transamerica_1	Winters	7,932.5	8.9		4.9	0.0						76.2			0.0	0.0	3.0	0.0	2.0	4.9	0.0	0.0	0.0		5.0
Lopes_Transamerica_1	Winters	7,935.3	27.4		18.2	10.5						0.0			0.0	0.0	0.0	0.0	1.9	4.8	27.5	7.0	2.6		41.9
Lopes_Transamerica_1	Winters	7,938.3	28.9		17.3	11.6						0.0			0.0	0.0	0.0	0.0	1.9	4.8	27.6	5.1	2.7		40.3
Lopes_Transamerica_1	Winters	7,941.3	29.4		17.9	11.3						0.0			0.0	0.0	0.0	1.9	0.9	0.0	26.7	5.0	6.9		38.6
Lopes_Transamerica_1	Winters	7,944.3	23.1		16.3	10.0						0.0			0.0	0.0	0.0	3.6	1.8	0.0	25.6	4.9	14.6		45.1
Lopes_Transamerica_1	Winters	7,947.3	22.2		17.3	9.1						0.0			0.0	0.0	0.0	5.5	1.8	0.0	24.8	6.7	12.6		44.1
Lopes_Transamerica_1	Winters	7,950.3	20.2		16.0	7.6						0.0			2.5	0.0	0.0	1.7	1.7	0.0	26.2	9.3	14.7		50.2
Lopes_Transamerica_1	Winters	7,953.3	38.5		19.9	8.5						0.0			4.7	0.0	0.0	0.0	0.0	0.0	18.8	5.1	4.4		28.3
Lopes_Transamerica_1	Winters	7,960.7	27.1		15.4	10.8						0.0			0.0	0.0	0.0	0.0	1.8	4.5	26.4	5.2	8.8		44.9
Lopes_Transamerica_1	Winters	7,962.7	22.8		16.6	9.2						0.0			0.0	0.0	0.0	0.0	1.8	0.0	24.4	9.8	15.3		49.5

Well	Zone	Depth (feet)	Quartz	Chert	Plagioclase	K-Feldspar	Feldspar	Albite	Oligoclase	Andesine	Labradorite	Calcite	Dolomite	Amphibole	Siderite	Glauconite	Apatite	Barite	Pyrite	Kaolinite	Chlorite	Illite & Mica	Smectite	MXL I/S	Total Clay
Lopes_Transamerica_1	Winters	7,965.7	28.1		18.2	11.8						0.0			0.0	0.0	0.0	0.0	0.9	0.0	27.3	5.2	8.5		41.0
Lopes_Transamerica_1	Winters	7,968.7	14.7		6.5	4.6						46.4			0.0	0.0	0.0	0.0	0.9	0.3	18.4	5.0	3.1		26.8
Lopes_Transamerica_1	Winters	7,971.7	26.1		18.9	11.7						0.0			0.0	0.0	0.0	0.0	1.8	0.0	27.6	6.4	7.6		41.6
Lopes_Transamerica_1	Winters	7,974.7	22.4		16.4	10.3						0.0			2.6	0.0	0.0	0.0	1.7	0.0	31.9	7.8	6.9		46.6
Lopes_Transamerica_1	Winters	7,977.7	26.0		17.9	9.0						0.0			0.0	0.0	0.0	0.0	2.7	0.0	31.2	13.3	0.0		44.4
Lopes_Transamerica_1	Winters	7,980.7	17.9		15.2	9.3						0.0			0.0	0.0	0.0	0.0	1.7	0.0	30.5	11.0	14.4		55.8
Lopes_Transamerica_1	Winters	7,983.7	24.8		15.3	9.0						0.0			0.0	0.0	0.0	0.0	1.8	0.0	26.4	12.7	10.0		49.1
Lopes_Transamerica_1	Winters	7,986.7	22.7		17.6	10.7						0.0			0.0	0.0	0.0	0.0	2.0	0.0	23.7	11.9	11.5		47.1
Lopes_Transamerica_1	Winters	7,989.7	17.8		16.3	8.6						0.0			0.0	0.0	0.0	0.0	1.9	0.0	27.9	12.8	14.8		55.4
Lopes_Transamerica_1	Winters	7,992.7	22.0		18.0	9.5						0.0			2.8	0.0	0.0	0.0	1.9	0.0	23.4	11.9	10.6		45.9
Lopes_Transamerica_1	Sacramento Shale	8,200.0	20.1		18.0	9.0						0.0						0.0	0.9		24.2	11.9	16.0		52.1
Lopes_Transamerica_1	Sacramento Shale	8,200.7	21.6		17.8	8.9						0.0						0.0	0.9		24.1	11.5	15.3		50.8
Lopes_Transamerica_1	Sacramento Shale	8,203.7	21.6		17.4	8.3						0.0						4.6	0.0		21.8	10.6	15.7		48.1
Lopes_Transamerica_1	Sacramento Shale	8,206.7	22.6		16.1	8.5						1.7						2.5	0.8		19.6	11.8	16.3		47.8
Lopes_Transamerica_1	Sacramento Shale	8,209.7	21.2		21.0	11.3						0.0						0.0	1.8		9.9	8.6	26.2		44.7
Lopes_Transamerica_1	Sacramento Shale	8,212.7	21.4		20.0	10.0						0.0						0.0	1.8		10.1	9.6	27.1		46.8
Lopes_Transamerica_1	Sacramento Shale	8,215.7	23.9		19.0	9.0						0.0						4.3	1.7		10.3	9.3	22.6		42.1
Lopes_Transamerica_1	Sacramento Shale	8,218.7	17.8		16.8	8.0						0.8						0.0	1.6		10.2	9.0	35.7		55.0
Lopes_Transamerica_1	Sacramento Shale	8,221.7	25.3		17.5	8.8						0.9						4.4	0.9		8.5	8.6	25.1		42.3
Lopes_Transamerica_1	Sacramento Shale	8,225.0	25.1		18.2	9.1						0.0						6.4	1.8		7.3	8.7	23.5		39.5

Table 2.4-2. Sonic porosity equations by zone

Zones	Sonic Porosity Equation	Wyllie Compaction Factor
Nortonville Shale-Domengine	Wyllie	1.3
Capay Shale – Mokelumne River Formation	Wyllie	1.2
H&T Shale-Sawtooth Shale	Wyllie	1.0

Table 2.4-3. Core samples from in the Upper Injection Zone

Well	Sample Depth (feet)	Porosity (%)	Permeability Horizontal (mD)	Permeability Vertical (mD)
Citizen_Green_1	6,400	33	367.1	—
Citizen_Green_1	6,466	31.3	71.9	—
Citizen_Green_1	6,532	30.3	54.8	—
Citizen_Green_1	6,598	31.3	135.5	—
Citizen_Green_1	6,664	30.8	46.4	—
Citizen_Green_1	6,800	27.7	4.8	—
Whiskey_Slough_1A-E	5,442	29.3	16.8	14
Whiskey_Slough_1A-E	5,543.8	30.6	86.1	23.5
Whiskey_Slough_1A-E	5,446.1	30.3	43.5	24.3
Whiskey_Slough_1A-E	5,447.6	33.5	799.3	552.4
Whiskey_Slough_1A-E	5,449.8	34.2	1,126.8	1,056.8
Whiskey_Slough_1A-E	5,452.7	33.7	1,172	990
Whiskey_Slough_1A-E	5,455.6	34	1,765.1	1,221.1
Whiskey_Slough_1A-E	5,457.5	30.3	667.6	380.6
Whiskey_Slough_1A-E	5,460.2	33.7	1,089.2	991.5
Whiskey_Slough_1A-E	5,463.1	35	1,802.4	1,925.9
Whiskey_Slough_1A-E	5,466.1	35.4	1,156.5	1,125.1
Whiskey_Slough_1A-E	5,469.1	34.9	1,922.9	1,212.8
Whiskey_Slough_1A-E	5,472.1	35.5	1,565.9	891.1
Whiskey_Slough_1A-E	5,474.9	34	1,084.7	731.1
Whiskey_Slough_1A-E	5,476.5	34.5	1,397.4	1,108.8

Table 2.4-4. Core samples from in the Lower Injection Zone

Well	Sample Depth (feet)	Porosity (%)	Permeability Horizontal (mD)
Citizen_Green_1	7,104	27.6	114.3
Citizen_Green_1	7,136	31.3	432.6
Citizen_Green_1	7,174	25.2	4.9
Citizen_Green_1	7,258	23.1	2.3
Citizen_Green_1	7,309	23	11.1

Table 2.4-5. Capay Shale, Mokelumne River Formation, H&T Shale, and Starkey Formation gross thickness and depth within the project AoR

Zone	Formation	Property	Low	High	Mean
Upper Confining Zone	Capay Shale	Thickness (feet)	72	1,361	530
		Depth (TVD)	4,154	5,670	4,778
Upper Injection Zone	Mokelumne River Formation	Thickness (feet)	18	1,902	963
		Depth (TVD)	4,427	6,975	5,433
Internal Barrier	H&T Shale	Thickness (feet)	58	269	146
		Depth (TVD)	5,328	7,164	6,396
Lower Injection Zone	Starkey Formation	Thickness (feet)	760	2,660	1,401
		Depth (TVD)	5,399	7,286	6,507

Table 2.6-1. Data from USGS earthquake catalog for faults in the greater region of the project

Number	Date	Latitude	Longitude	Depth (km)	Magnitude	Last Updated	Location
1	10/4/2021	37.8718333	-121.6375	4.43	2.69	12/10/2021	0 km N of Byron, CA
2	11/15/2017	38.1125	-121.6463333	16.24	2.74	2/16/2018	6 km SE of Rio Vista, CA
3	11/26/2010	37.9956667	-121.6101667	11.664	2.52	7/22/2022	3 km SE of Bethel Island, California
4	11/26/2010	38.0023333	-121.5981667	11.434	2.95	7/22/2022	3 km ESE of Bethel Island, California
5	10/15/2010	37.8803333	-121.388	14.552	3.13	8/6/2022	9 km WSW of Taft Mosswood, California
6	5/28/2008	37.933	-121.5591667	14.132	2.64	1/18/2017	4 km NE of Discovery Bay, California
7	7/22/2005	38.0873333	-121.681	12.587	2.8	1/11/2017	8 km S of Rio Vista, California
8	6/15/2005	37.8893333	-121.7015	--	2.5	1/11/17	4 km S of Brentwood, California
9	6/28/20004	37.9943333	-121.6421667	10.927	2.66	1/7/2017	2 km S of Bethel Island, California
10	9/29/2002	37.8745	-121.611	4.312	3.42	6/18/2022	2 km ENE of Byron, California
11	8/28/1986	38.2353333	-121.4191667	4.958	3.24	12/6/2016	1 km NNE of Thornton, California
12	5/10/1982	37.938	-121.172	5.881	2.81	2/2/2016	6 km ESE of Garden Acres, CA
13	10/2/1981	37.925	-121.6533333	9.076	2.85	12/13/2016	3 km ESE of Brentwood, California
14	8/6/1979	37.8326667	-121.5105	6	4.31	4/1/2016	6 km NNE of Mountain House, CA
15	5/9/1975	37.9566667	-121.6493333	14.95	3.1	12/15/2016	2 km SE of Knightsen, California
16	2/2/1944	37.9251667	-121.4041667	6	3.79	1/28/2016	7 km SW of Country Club, CA
17	2/14/1909	38.1	-121.7	--	4.5	6/4/2018	7 km S of Rio Vista, California

Table 2.7-1. Stratigraphic Information

Aquifer	Formation Name	Geologic Age
Principal	Younger Alluvium and Modesto/Riverbank	Holocene-Pliocene
	Turlock Lake	Recent-Plio-Pleistocene
	Laguna	Plio-Pleistocene
	Mehrten	Mio-Pliocene
	Valley Springs	Miocene
	Ione	Eocene

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Complete Work Ended	Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR0004167	NA	36150	Water Supply Domestic	37.99089	-121.42604	Centroid of Section	NA	NA	02N	05E	28	NA	NA	NA	47	57	NA
DWR	WCR0019881	NA	67118	Water Supply Irrigation - Agricultural	38.07932	-121.32436	Centroid of Section	NA	NA	03N	06E	28	NA	5/10/1961	280	158	165	NA
DWR	WCR017177	NA	67177	Water Supply Domestic	38.0941	-121.36129	Centroid of Section	NA	NA	03N	06E	19	NA	NA	NA	120	NA	NA
DWR	WCR00071359	NA	40145771	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR00071275	NA	40145784	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0288025	NA	40145808	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0259847	NA	NA	NA	38.12844	-121.34312	Centroid of Section	NA	NA	03N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0259853	NA	39-671	Water Supply Domestic	38.09393	-121.34295	Centroid of Section	NA	NA	03N	06E	20	NA	NA	NA	120	NA	NA
DWR	WCR1950-000501	NA	39-305	Water Supply Irrigation - Agriculture	38.0646	-121.34089	Centroid of Section	NA	NA	02N	06E	20	NA	5/26/1950	252	NA	NA	NA
DWR	WCR1977-001735	NA	36161	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	215	194	204	NA
DWR	WCR02047075	NA	64583	NA	38.01056	-121.32633	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0274345	NA	36198	Water Supply Domestic	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	NA	177	138	177	45
DWR	WCR1992-003342	NA	413675A	Montoring	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	102-270-8	5/20/1992	71	NA	NA	NA
DWR	WCR1992-003345	NA	413675D	Montoring	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	102-270-8	4/8/1992	70	NA	NA	NA
DWR	WCR1991-005679	NA	53771	Water Supply Domestic	38.07927	-121.30568	Centroid of Section	NA	NA	03N	06E	27	59-40-44	8/22/1997	250	220	240	NA
DWR	WCR1996-002781	NA	468030	Water Supply Domestic	38.05097	-121.40647	Centroid of Section	NA	NA	02N	05E	3	71-140-3	2/28/1996	101	90	100	NA
DWR	WCR2000-003267	NA	725869	Vapor Extraction	38.05027	-121.36084	Centroid of Section	NA	NA	02N	06E	6	NA	3/6/2000	61	NA	NA	NA
DWR	WCR2009-006312	NA	40095027	Other Unsuad	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	100-180-10	7/24/2009	NA	NA	NA	NA
DWR	WCR2009-006380	NA	40095030	Other Unsuad	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR2004-007164	NA	4014550	Montoring	37.97695	-121.38926	Centroid of Section	NA	NA	02N	05E	35	129-80-53	6/25/2004	25	NA	NA	NA
DWR	WCR2008-002716	NA	40090944	Remediation	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	9/23/2008	50	35	50	NA
DWR	WCR2008-007160	NA	40072407	Montoring	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	4/29/2008	NA	NA	NA	NA
DWR	WCR2015-011832	NA	40264629	NA	38.06033	-121.49944	Unknown	NA	NA	03N	05E	25	NA	4/9/2015	13	NA	NA	NA
DWR	WCR2011-005204	NA	40145183	Other Unsuad	38.020833	-121.356667	NA	NA	NA	02N	06E	18	82-320-10	12/22/2011	NA	NA	NA	NA
DWR	WCR00071260	NA	40148214	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0157855	NA	4029122	NA	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0148221	NA	40148221	NA	38.05117	-121.34088	Centroid of Section	NA	NA	02N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0127906	NA	4033387	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0146458	NA	16331	Water Supply Irrigation - Agricultural	38.06393	-121.34295	Centroid of Section	NA	NA	03N	06E	20	NA	8/18/1954	NA	NA	NA	NA
DWR	WCR0101434	NA	40101434	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR02049184	NA	40095024	NA	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR02027027	NA	73827	NA	38.09384	-121.32456	Centroid of Section	NA	NA	03N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0069433	NA	40145752	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR02042214	NA	40145186	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR1990-012004	NA	370903	Water Supply Domestic	38.07927	-121.30568	Centroid of Section	NA	NA	03N	06E	27	59-40-28	11/1/1990	215	NA	NA	NA
DWR	WCR1989-010278	NA	317704	Montoring	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	3/2/1989	34	NA	NA	NA
DWR	WCR1997-005002	NA	519101	Montoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	87-410-XX	4/15/1997	67	45	65	NA
DWR	WCR1997-005446	NA	58029	Water Supply Irrigation - Agriculture	38.07932	-121.34148	Centroid of Section	NA	NA	02N	06E	28	55-10-36	2/28/1995	262	148	168	NA
DWR	WCR2009-006081	NA	40095016	Other Unsuad	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	100-180-10	7/22/2009	NA	NA	NA	NA
DWR	WCR2006-000989	NA	937007	Water Supply Domestic	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	80-200-17	7/26/2006	235	205	225	40
DWR	WCR2007-003026	NA	4068919	Montoring	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	55-32-25	9/20/2007	25	10	25	NA
DWR	WCR2007-006370	NA	40095023	Montoring	38.05097	-121.40647	Centroid of Section	NA	NA	02N	06E	8	807-00-6-8	8/16/2007	613	430	305	NA
DWR	WCR2008-004638	NA	4078128	Montoring	38.043333	-121.355278	NA	NA	NA	02N	06E	6	NA	6/12/2008	46	25	45	NA
DWR	WCR2008-004644	NA	4078189	Montoring	38.03689	-121.370833	NA	NA	NA	02N	05E	12	NA	6/11/2008	42	20	40	NA
DWR	WCR2013-002960	NA	40162848	Other Unsuad	38.1147222	-121.3941667	NA	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2013-007233	NA	40162454	Other Unsuad	38.1138889	-121.3952778	NA	NA	NA	03N	05E	14	55-320-19	6/18/2013	NA	NA	NA	NA
DWR	WCR2010-006011	NA	40121087C	Other Unsuad	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-280-14	10/13/2010	NA	NA	NA	NA
DWR	WCR2009-004437	T0607700310-MM10	NA	Montoring	38.053485	-121.4583184	Unknown	38.053485	-121.4583184	02N	05E	6	NA	6/16/2009	23	NA	NA	NA
DWR	WCR2002-005396	NA	40095075	Water Supply Domestic	38.06875	-121.32098	Centroid of Section	NA	NA	02N	06E	8	82-320-03	4/15/2003	230	210	230	NA
DWR	WCR2002-005396	NA	40095075	Montoring	38.09119	-121.32471	Centroid of Section	NA	NA	02N	06E	16	677-480-14	1/19/2003	NA	NA	NA	NA
DWR	WCR2012-000892	NA	40148219	Other Unsuad	38.020556	-121.333333	NA	NA	NA	02N	06E	17	NA	2/9/2012	NA	NA	NA	NA
DWR	WCR2014-000516	NA	40208832	Other Unsuad	37.9841667	-121.340278	NA	NA	NA	02N	06E	32	110-20-3	3/27/2014	NA	NA	NA	NA
DWR	WCR2017-011011	NA	40354912	Montoring	38.04186	-121.418331	Unknown	NA	NA	02N	06E	4	66050-2	9/21/2017	NA	4	19	NA
DWR	WCR2017-011012	NA	40354911	Montoring	38.04444	-121.418333	Unknown	NA	NA	02N	05E	4	66050-2	9/22/2017	24	5	20	NA
DWR	WCR2020-011370	NA	NA	Water Supply Domestic	38.0167895	-121.327193	NA	NA	NA	02N	06E	16	677-370-32	8/25/2020	66	NA	NA	NA
DWR	WCR2016-006655	NA	40145186	Water Supply Domestic	38.0688129	-121.3699216	NA	NA	NA	03N	06E	30	655-130-04	4/6/2016	NA	NA	NA	23
DWR	WCR0157850	NA	40145185	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0166127	NA	40145825	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0188634	NA	11966	Montoring	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	697-410-073	7/18/2003	NA	40	50	38
DWR	WCR0301983	NA	4027247	NA	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0212337	NA	40145192	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0199785	NA	4066818	NA	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	NA	NA	NA	NA	NA
DWR	WCR0285259	NA	47620	Water Supply Domestic	38.10864	-121.36146	Centroid of Section	NA	NA	03N	06E	18	NA	9/9/1968	129	NA	NA	38
DWR	WCR0244642	NA	39-469	Water Supply Irrigation - Agricultural	38.0941	-121.36129	Centroid of Section	NA	NA	03N	06E	19	NA	NA	116	NA	NA	NA
DWR	WCR0199785	NA	4066818	Water Supply Domestic	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	NA	NA	NA	NA	NA
DWR	WCR1977-007120	NA	36118A	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	164	NA	NA	NA
DWR	WCR1979-001435	NA	137338	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	4/29/1979	170	120	160	NA
DWR	WCR1988-001950	NA	206527A	Montoring	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	1/27/1988	32	NA	NA	NA
DWR	WCR1989-004585	NA	28442	Montoring	38.11	-121.33027	Centroid of Section	NA	NA	02N	06E	5	NA	5/11/1989	68	NA	NA	NA
DWR	WCR1989-004679	NA	28430	Montoring	38.10986	-121.51138	Centroid of Section	NA	NA	03N	04E	14	NA	5/15/1989	NA	NA	NA	NA
DWR	WCR1995-006045	NA	574050	Montoring	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	102-240-2	1/23/1995	68	48	68	NA
DWR	WCR1995-006027	NA	574140	Water Supply Domestic	38.07943	-121.34526	Centroid of Section	NA	NA	03N	06E	28	55-10-36	5/29/1995	260	200	260	NA

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR2012-00508	NA	40167739	Monitoring	38.011111	-121.320556	NA	NA	NA	02N	06E	21	NA	10/10/2012	140	81	81	NA
DWR	WCR2012-01101	NA	NA	Water Supply Public	38.018458	-121.325653	NA	NA	NA	02N	06E	17	077-340-17	12/22/2020	268	NA	NA	NA
DWR	WCR2012-00313	NA	NA	Monitoring	38.029124	-121.321112	NA	NA	NA	02N	06E	8	072-420-19	8/31/2020	NA	NA	NA	NA
DWR	WCR0063131	NA	NA	NA	38.0004	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0150204	NA	4166689	NA	38.12338	-121.32827	Centroid of Section	NA	NA	02N	06E	11	NA	NA	NA	NA	NA	NA
DWR	WCR1997-005780	NA	532910	Water Supply Domestic	38.03559	-121.32272	Centroid of Section	NA	NA	02N	06E	9	72-300-40	12/5/1997	175	150	170	NA
DWR	WCR2001-008171	NA	808631	Monitoring	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	92-464-18	11/5/2001	45	25	45	NA
DWR	WCR2009-003796	NA	6101070	Other Unused	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	8/25/2009	NA	NA	NA	NA
DWR	WCR0212039	NA	4016747	NA	38.0064	-121.32621	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0200712	NA	6202748	NA	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0285271	NA	39-862	Water Supply Domestic	38.07943	-121.428	Centroid of Section	NA	NA	03N	06E	29	NA	NA	120	NA	NA	NA
DWR	WCR0286337	NA	6106799	NA	38.109	-121.38629	Centroid of Section	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0286352	NA	1130273	Water Supply Irrigation - Agriculture	38.06428	-121.38629	Centroid of Section	NA	NA	03N	05E	13	NA	5/26/2012	200	NA	NA	49
DWR	WCR0276109	NA	6107189	NA	38.03594	-121.37474	Centroid of Section	NA	NA	03N	05E	12	NA	NA	NA	NA	NA	NA
DWR	WCR1950-005621	NA	39-1187	Water Supply Domestic	38.10926	-121.4368	Centroid of Section	NA	NA	03N	05E	16	NA	7/8/1950	54	NA	NA	NA
DWR	WCR0289841	NA	48145	Water Supply Irrigation - Agriculture	38.05022	-121.32341	Centroid of Section	NA	NA	03N	06E	4	NA	4/31/1957	13	NA	NA	NA
DWR	WCR0200770	NA	4016740	Water Supply Irrigation - Agriculture	38.01907	-121.31087	Centroid of Section	NA	NA	02N	06E	13	NA	NA	6	NA	NA	NA
DWR	WCR0325988	NA	11957	Monitoring	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	097-410-073	7/18/2003	NA	40	50	38
DWR	WCR1989-008751	NA	323827	Water Supply Domestic	38.02705	-121.30588	Centroid of Section	NA	NA	02N	06E	27	99-20-6	10/21/1989	250	NA	NA	NA
DWR	WCR1992-003734	NA	413630A	Monitoring	38.01928	-121.32527	Centroid of Section	NA	NA	02N	06E	16	77-360-21	11/9/1992	NA	NA	NA	NA
DWR	WCR1997-005694	NA	519100	NA	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	6/18/1997	NA	46	NA	NA
DWR	WCR1995-005113	NA	559856	Other Unused	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	97-410-48	9/24/1995	NA	NA	NA	NA
DWR	WCR2005-00425	NA	1077655	Water Supply Domestic	38.05027	-121.38084	Centroid of Section	NA	NA	02N	06E	6	NA	9/12/2005	248	220	240	84
DWR	WCR2012-011587	NA	NA	Monitoring	38.029124	-121.321112	Centroid of Section	NA	NA	02N	06E	8	072-420-19	8/31/2020	NA	NA	NA	NA
DWR	WCR2012-003721	NA	40134183	Other Unused	38.03592	-121.32272	Centroid of Section	NA	NA	02N	06E	8	78-170-39	9/20/2011	NA	NA	NA	NA
DWR	WCR2002-00600	NA	NA	Water Supply Irrigation - Agriculture	38.01511	-121.32688	>50 FT	NA	NA	02N	06E	17	077-230-540	5/9/2002	130	110	130	26
DWR	WCR2015-01149	NA	62089432	NA	38.11588	-121.38206	>50 FT	NA	NA	03N	04E	7	0651052-66	5/16/2015	NA	NA	NA	NA
DWR	WCR0215-02025	NA	62012821	Other Unused	38.114722	-121.38333	NA	NA	NA	03N	05E	14	55-320-19	10/10/2012	NA	NA	NA	NA
DWR	WCR0091842	NA	50090944	NA	38.12306	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	NA	NA	NA	NA	NA
DWR	WCR0034628	NA	119528	NA	38.0798	-121.38118	Centroid of Section	NA	NA	03N	06E	30	NA	NA	NA	NA	NA	NA
DWR	WCR0069816	NA	60145789	NA	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0032290	NA	60145786	NA	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0201779	NA	8719	Water Supply Stock or Animal Watering	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	1/8/1955	99	NA	NA	NA
DWR	WCR0222339	NA	60156689	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0212837	NA	60145798	NA	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR014669	NA	60395028	NA	38.00638	-121.36021	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0015666	NA	60145755A	NA	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	12/7/2012	NA	NA	NA	NA
DWR	WCR0059688	NA	60090519	NA	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0030005	NA	728914	Other Unknown	38.05026	-121.34188	Centroid of Section	NA	NA	02N	06E	5	NA	NA	354	354	NA	NA
DWR	WCR03195	NA	60134183	Water Supply Irrigation - Agriculture	37.97711	-121.3594	Centroid of Section	NA	NA	02N	06E	31	NA	11/6/1980	158	158	158	35
DWR	WCR1958-005625	NA	35778	Other Not Specified	38.0064	-121.37991	Centroid of Section	NA	NA	03N	05E	24	NA	4/25/1958	34	NA	NA	NA
DWR	WCR0321809	NA	60145830A-B	Other Unknown	38.0943	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	12/6/2012	NA	NA	NA	NA
DWR	WCR1967-00070	NA	47155	Water Supply Domestic	38.06904	-121.45555	Centroid of Section	NA	NA	03N	05E	32	NA	2/15/1967	47	42	47	NA
DWR	WCR1962-00370	NA	60145801	NA	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR1962-00920	NA	495708	Water Supply Irrigation - Agriculture	38.07932	-121.34346	Centroid of Section	NA	NA	03N	06E	28	59-20-28	6/8/1962	310	120	310	120
DWR	WCR1980-01957	NA	374069	Water Supply Domestic	38.02105	-121.32527	Centroid of Section	NA	NA	02N	06E	16	77-370-10	4/7/1990	205	NA	NA	NA
DWR	WCR1989-01518	NA	114869	NA	38.10971	-121.46291	Centroid of Section	NA	NA	03N	04E	13	NA	7/3/1989	70	70	NA	NA
DWR	WCR1992-00159	NA	321532	Monitoring	38.02105	-121.32527	Centroid of Section	NA	NA	02N	06E	16	75-320-34	8/30/1990	75	NA	NA	NA
DWR	WCR1989-00159	NA	293320	Monitoring	38.02105	-121.32527	Centroid of Section	NA	NA	02N	06E	16	79-350-16	8/31/1992	75	NA	NA	NA
DWR	WCR1878-00112	NA	137308	Water Supply Domestic	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	6/6/1978	160	110	150	NA
DWR	WCR2003-002191	NA	75698	Monitoring	38.006	-121.335778	NA	NA	NA	02N	06E	19	100-180-19	11/15/2003	25	10	25	NA
DWR	WCR1986-040602	NA	615096	NA	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	87-410-19	9/20/1986	43	64	NA	NA
DWR	WCR2005-007525	NA	6029120	Monitoring	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	5/6/2005	NA	NA	NA	NA
DWR	WCR2007-003896	NA	6067315	Injection	38.109	-121.38629	Centroid of Section	NA	NA	03N	05E	14	55-150-26	11/15/2007	15	5	15	NA
DWR	WCR1997-005694	NA	519104	Monitoring	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	6/18/1997	NA	46	NA	NA
DWR	WCR2007-003956	NA	6067315	Injection	38.109	-121.38629	Centroid of Section	NA	NA	03N	05E	14	55-150-26	11/15/2007	15	5	15	NA
DWR	WCR1997-00425	NA	1077655	Monitoring	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	114-60-5	4/15/1997	27	5	27	NA
DWR	WCR2021-01306	NA	NA	Monitoring	38.029124	-121.321112	NA	NA	NA	02N	06E	8	072-420-19	8/31/2020	NA	NA	NA	NA
DWR	WCR0215-02025	NA	62012821	Other Unused	38.114722	-121.38333	NA	0551148	NA	03N	05E	14	55-320-19	10/10/2012	NA	NA	NA	NA
DWR	WCR2012-002934	NA	60162830	Other Unused	38.113889	-121.393333	NA	NA	NA	03N	05E	14	55-320-19	10/10/2012	NA	NA	NA	NA
DWR	WCR2012-002947	NA	60162835	Other Unused	38.113611	-121.393556	NA	NA	NA	03N	05E	14	55-320-19	10/10/2012	NA	NA	NA	NA
DWR	WCR2012-003396	NA	NA	Monitoring	38.019119	-121.324271	NA	NA	NA	02N	06E	16	077-410-19	9/20/2011	NA	NA	NA	NA
DWR	WCR2003-005413	NA	NA	Monitoring	38.019119	-121.324271	NA	NA	NA	02N	06E	16	NA	3/17/2003	NA	NA	NA	NA
DWR	WCR2020-013700	NA	NA	Monitoring	38.0207706	-121.3341049	NA	NA	NA	02N	06E	17	077-280-31	9/15/2020	85	80	85	NA
DWR	WCR02127611	NA	6201267	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0209873	NA	60145794	NA	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0279084	NA	304332-G	Monitoring	38.0064	-121.32527	Centroid of Section	NA	NA	02N	06E	21	NA	3/3/1989	NA	NA	NA	NA
DWR	WCR1954-00734	NA	39-303	Water Supply Public	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	1/1/1954	268	170	236	NA
DWR	WCR0032000	NA	60134189	NA	38.03599	-121.32272	Centroid of Section	NA	NA	02N	06E	9	NA	NA	NA	NA	NA	NA
DWR	WCR1988-01452	NA	17670	Water Supply Domestic	38.0347952	-121.34358	Centroid of Section	NA	NA	02N	06E	28	NA	2/19/1988	188	40	188	NA
DWR	WCR1960-00514	NA	35795	Water Supply Irrigation - Agriculture	38.0064	-121.34312	Centroid of Section	NA	NA	02N	06E	17	NA	10/18/1960	128	NA	NA	NA
DWR	WCR0265670	NA	60095018	NA	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR1986-040991	NA	25061	Water Supply Domestic	37.99103	-121.40763	Centroid of Section	NA	NA	02N	06E	24	NA	5/29/1986	95	NA	NA	NA
DWR	WCR1984-004256	NA	4567															

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR2005-007168	NA	4027246	Monitoring	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	4/29/2005	NA	NA	NA	NA
DWR	WCR2004-004879	NA	754482	Monitoring	38.05026	-121.34188	Centroid of Section	NA	NA	02N	06E	5	110-220-17	9/20/2004	40	35	38	21
DWR	WCR2006-000761	NA	940363	Water Supply Irrigation - Agriculture	38.119	-121.39829	Centroid of Section	NA	NA	02N	06E	14	55-320-57	7/31/2006	96	90	14	36
DWR	WCR1993-004521	NA	465226	Water Supply Irrigation - Agriculture	38.0652778	-121.3983333	Centroid of Section	NA	NA	02N	06E	35	55-360-1	7/8/1983	208	208	238	NA
DWR	WCR2000-004441	NA	731139	Monitoring	38.0205556	-121.3563889	NA	NA	NA	02N	06E	18	82-400-1	6/13/2000	32	10	30	NA
DWR	WCR2012-002942	NA	4012630	Other Unused	38.1138889	-121.3933333	NA	NA	NA	03N	06E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2012-000833	NA	40145188	Other Unused	38.0502778	-121.3563889	NA	NA	NA	02N	06E	18	82-400-1	1/8/2012	NA	NA	NA	NA
DWR	WCR2010-000692	NA	944963	Water Supply Domestic	38.09093	-121.5301	Centroid of Section	NA	NA	03N	06E	27	69-40-6	5/11/2010	43	41	51	10
DWR	WCR2011-005202	NA	40145181	Other Unused	38.0206333	-121.3563889	NA	NA	NA	02N	06E	18	82-320-19	12/19/2011	NA	NA	NA	NA
DWR	WCR2011-002544	NA	40140645	Other Unused	37.9841667	-121.3477778	NA	NA	NA	02N	06E	32	NA	11/8/2011	NA	NA	NA	NA
DWR	WCR2010-000607	NA	40121099	Other Unused	38.02108	-121.32254	Centroid of Section	NA	NA	02N	06E	16	77-480-14	10/14/2010	NA	NA	NA	NA
DWR	WCR01000384	NA	NA	NA	38.06547	-121.41726	Centroid of Section	NA	NA	03N	05E	34	NA	NA	NA	NA	NA	NA
DWR	WCR0045115	NA	E0095032	NA	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0115298	NA	44205	Water Supply Irrigation - Agricultural	38.0541	-121.35129	Centroid of Section	NA	NA	03N	06E	19	NA	8/15/1968	152	NA	NA	NA
DWR	WCR0115037	NA	43093	Water Supply Irrigation - Agricultural	38.05	-121.35123	Centroid of Section	NA	NA	03N	06E	31	NA	3/17/1971	170	158	200	15
DWR	WCR2023-005403	NA	NA	Remediation	38.019119	-121.324271	NA	NA	NA	02N	06E	16	077-480-14	1/19/2023	NA	NA	NA	NA
DWR	WCR00505056	NA	44901	Water Supply Irrigation - Agricultural	38.10864	-121.36146	Centroid of Section	NA	NA	03N	06E	18	NA	3/30/1966	185	90	95	28
DWR	WCR2021-001305	NA	NA	Monitoring	38.09124	-121.332112	NA	NA	NA	02N	06E	8	072-420-19	8/31/2020	NA	NA	NA	NA
DWR	WCR2020-000948	NA	E017784	Water Supply Irrigation - Agricultural	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0268886	NA	E0156693	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0317061	NA	115049	Unknown	38.05046	-121.37458	Centroid of Section	NA	NA	02N	05E	1	NA	5/15/1975	NA	NA	NA	NA
DWR	WCR0214104	NA	422139	Other Unknown	38.1962891	-121.328441	-50 FT	NA	NA	03N	06E	16	NA	NA	235	195	235	NA
DWR	WCR02027398	NA	E0156697	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR1986-004204	NA	187166	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	9/19/1986	157	NA	NA	NA
DWR	WCR1991-003945	NA	365327	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	71-180-20	4/2/1991	32	NA	NA	NA
DWR	WCR1989-004884	NA	288438	Monitoring	38.11	-121.53027	Centroid of Section	NA	NA	03N	04E	15	NA	5/2/1989	52	NA	NA	NA
DWR	WCR2010-002614	NA	489715	Water Supply Irrigation - Agriculture	38.07932	-121.32048	Centroid of Section	NA	NA	02N	06E	28	55-320-9	11/4/1993	340	104	144	NA
DWR	WCR0014935	NA	E0156694	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR2023-005402	NA	NA	Remediation	38.019119	-121.324271	NA	NA	NA	02N	06E	16	077-480-14	1/19/2023	NA	NA	NA	NA
DWR	WCR2023-005410	NA	NA	Monitoring	38.019119	-121.324271	NA	NA	NA	02N	06E	16	077-480-14	3/17/2023	NA	NA	NA	NA
DWR	WCR0018007	NA	NA	NA	38.07938	-121.32048	Centroid of Section	NA	NA	03N	06E	28	NA	NA	NA	NA	NA	NA
DWR	WCR2020-013697	NA	NA	Monitoring	38.020711	-121.334939	NA	NA	NA	02N	06E	17	077-280-31	9/16/2020	70	55	70	NA
DWR	WCR1962-000602	NA	952574	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	3/29/1962	167	NA	NA	NA
DWR	WCR121029A-B	NA	NA	Unknown	38.01915376	-121.321568	-50 FT	NA	NA	02N	06E	16	077-040-014	10/14/2019	43	16	NA	NA
DWR	WCR0253325	NA	E0145181	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0270654	NA	E029116	NA	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0189746	NA	E0135640	NA	38.05022	-121.32341	Centroid of Section	NA	NA	02N	06E	4	NA	NA	NA	NA	NA	NA
DWR	WCR0221983	NA	E0145189	Other Unused	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0133671	NA	E0145909	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0163282	NA	29208	Water Supply Domestic	38.07927	-121.30588	Centroid of Section	NA	NA	03N	06E	27	NA	11/15/1978	222	207	222	NA
DWR	WCR0119328	NA	39-484	Water Supply Domestic	38.095	-121.35723	Centroid of Section	NA	NA	03N	06E	31	NA	NA	140	NA	NA	NA
DWR	WCR015952	NA	E0145905	NA	38.094	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	227	NA	NA	NA
DWR	WCR0139750	NA	E0121095A-C	Unknown	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	077-040-014	10/15/2020	NA	NA	NA	NA
DWR	WCR0139751	NA	E0148220	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0124550	NA	E068687	NA	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	NA	NA	NA	NA	NA
DWR	WCR1970-003173	NA	12463	Water Supply Irrigation - Agriculture	38.0941967	-121.38	NA	NA	NA	03N	06E	29	NA	9/30/1970	111	NA	NA	NA
DWR	WCR1980-011695	NA	55313	Water Supply Irrigation - Agriculture	38.07943	-121.3428	Centroid of Section	NA	NA	03N	06E	29	NA	4/2/1980	167	NA	NA	NA
DWR	WCR0324666	NA	75551	Water Supply Domestic	38.09384	-121.32456	Centroid of Section	NA	NA	03N	06E	21	NA	10/3/1980	210	NA	NA	65
DWR	WCR0253236	NA	E0145198	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR1989-000244	NA	703973	Vapor Extraction	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	77-280-2	10/26/1988	46	50	NA	NA
DWR	WCR2000-007220	NA	812967	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	82-320-19	6/12/2000	32	10	30	NA
DWR	WCR2008-004639	NA	4078136	Monitoring	38.0430556	-121.321111	NA	NA	NA	02N	06E	4	NA	5/17/2008	32	20	30	NA
DWR	WCR2007-004074	NA	406669	Monitoring	38.12338	-121.39824	Centroid of Section	NA	NA	03N	06E	11	55-320-5	9/20/2007	75	65	117	75
DWR	WCR2005-007465	NA	4021805	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	74-880-10	11/8/2005	36	10	30	NA
DWR	WCR1997-005006	NA	519106	Monitoring	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	87-410-3	4/4/1997	137	112	132	NA
DWR	WCR2021-001309	NA	NA	Monitoring	38.029124	-121.332112	NA	NA	NA	02N	06E	8	072-420-19	8/31/2020	NA	NA	NA	NA
DWR	WCR2012-002956	NA	E0162944	Water Supply Domestic	38.145	-121.39829	NA	NA	NA	03N	06E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2020-017035	NA	NA	Water Supply Domestic	38.104819	-121.361798	NA	NA	NA	02N	06E	18	557071	1/22/2020	305	225	305	NA
DWR	WCR0006603	NA	E067302	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	06E	14	NA	NA	NA	NA	NA	NA
DWR	WCR2012-000896	NA	40148212	Other Unused	38.0205556	-121.336111	NA	NA	NA	02N	06E	17	NA	2/7/2012	NA	NA	NA	NA
DWR	WCR2013-000827	NA	E0182440	Other Unused	38.1138889	-121.3952778	NA	NA	NA	03N	06E	14	55-150-26	6/18/2013	NA	21	26	NA
DWR	WCR2013-000486	NA	40140455	Other Unused	37.9841667	-121.3461111	NA	NA	NA	02N	06E	32	116-190-7	11/3/2011	NA	NA	NA	NA
DWR	WCR2013-007232	NA	40182453	Other Unused	38.1138889	-121.3952778	NA	NA	NA	03N	06E	14	55-150-26	6/18/2013	NA	21	26	NA
DWR	WCR2014-000515	NA	40208931	Other Unused	37.9841667	-121.3402778	NA	NA	NA	02N	06E	32	110-20-3	3/26/2014	NA	NA	NA	NA
DWR	WCR0124681	NA	E043285	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR01105024	NA	39-282	Other Unknown	38.03559	-121.32272	Centroid of Section	NA	NA	02N	06E	9	NA	12/21/1946	200	NA	NA	NA
DWR	WCR0127907	NA	E032788	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	06E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0049840	NA	E0095027	NA	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0121025	NA	E0380466	NA	38.12338	-121.39824	Centroid of Section	NA	NA	03N	06E	11	NA	NA	NA	NA	NA	NA
DWR	WCR0064087	NA	44539	NA	38.09393	-121.34295	Centroid of Section	NA	NA	03N	06E	20	NA	NA	NA	NA	NA	NA
DWR	WCR1988-004131	NA	250593	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	9/9/1988	220	NA	NA	NA
DWR	WCR1979-001555	NA	425669	Water Supply Domestic	38.0943	-121.37891	Centroid of Section	NA	NA	03N	06E	24	NA	4/30/1979	153	110	150	NA
DWR	WCR1979-001309	NA	425646	Water														

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR0302673	NA	E0154727	NA	38.0064	-121.3257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0163358	NA	39-273	Water Supply Domestic	37.97895	-121.38926	Centroid of Section	NA	NA	02N	05E	35	NA	NA	NA	NA	NA	NA
DWR	WCR2001-000706	NA	78-278	Water Supply Domestic	38.12335	-121.38	Centroid of Section	NA	NA	02N	05E	12	NA	10/30/2001	190	190	190	NA
DWR	WCR1989-000909	NA	704867	Water Supply Industrial	38.12346	-121.41747	Centroid of Section	NA	NA	03N	05E	10	25-100-XX	8/21/1981	380	380	380	NA
DWR	WCR1993-001412	NA	407560	Water Supply Domestic	38.09303	-121.34295	Centroid of Section	NA	NA	03N	06E	20	55-230-15	5/10/1993	265	200	260	NA
DWR	WCR1997-001626	NA	476403	Water Supply Domestic	38.07878	-121.3799	Centroid of Section	NA	NA	03N	05E	25	69-70-19	8/26/1997	84	40	60	NA
DWR	WCR2012-003330	NA	40152819	Other Unknown	38.1147222	-121.3933333	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA	
DWR	WCR2013-006111	NA	40182434	Other Unknown	38.1138889	-121.3952778	NA	NA	03N	05E	14	55-150-26	8/16/2013	NA	5	5	25	NA
DWR	WCR2006-001519	NA	332903	Monitoring	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	55-320-46	7/18/2006	25	5	25	NA
DWR	WCR2008-005234	NA	4073158	Other Unknown	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	55-150-25	4/24/2008	NA	NA	NA	NA
DWR	WCR2012-005412	NA	NA	Monitoring	38.091919	-121.324271	Centroid of Section	NA	NA	02N	06E	16	NA	3/17/2023	NA	NA	NA	NA
DWR	WCR0120497	NA	E078101	NA	38.05046	-121.37458	Centroid of Section	NA	NA	02N	05E	1	NA	NA	NA	NA	NA	NA
DWR	WCR0023067	NA	NA	NA	38.02106	-121.32267	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0192088	NA	25242	Water Supply Domestic	38.07943	-121.3428	Centroid of Section	NA	NA	03N	06E	29	NA	7/14/1977	225	NA	NA	53
DWR	WCR0186129	NA	E030683	NA	38.05657	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	NA	NA	NA	NA	NA
DWR	WCR0324664	NA	97701	Water Supply Irrigation - Agricultural	38.08384	-121.32456	Centroid of Section	NA	NA	03N	05E	21	NA	8/18/1972	165	NA	NA	NA
DWR	WCR0324672	NA	NA	NA	38.0796	-121.36118	Centroid of Section	NA	NA	03N	06E	30	NA	NA	NA	NA	NA	NA
DWR	WCR0141965	NA	E0156691	NA	38.05131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0368034	NA	144072	Water Supply Domestic	38.05657	-121.34102	Centroid of Section	NA	NA	02N	06E	8	NA	4/23/1966	NA	NA	NA	NA
DWR	WCR0258585	NA	20305	Water Supply Irrigation - Agricultural	38.07932	-121.32436	Centroid of Section	NA	NA	03N	06E	28	NA	NA	210	NA	NA	NA
DWR	WCR1982-001496	NA	227336	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	7/27/1982	335	NA	NA	NA
DWR	WCR1992-001320	NA	304357	Monitoring	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	81-260-27	9/26/1992	70	NA	NA	NA
DWR	WCR1989-000705	NA	270342	Water Supply Irrigation - Agriculture	38.07927	-121.30868	Centroid of Section	NA	NA	03N	06E	27	59-40-20	8/21/1981	249	NA	NA	NA
DWR	WCR1999-001204	NA	535333E	Other Unknown	38.0297222	-121.322222	NA	NA	NA	02N	06E	9	79-170-39	5/28/1999	NA	NA	NA	NA
DWR	WCR2002-008121	NA	808983	Water Supply Domestic	37.99103	-121.40763	Centroid of Section	NA	NA	02N	05E	27	71-50-10	1/18/2002	100	60	80	10
DWR	WCR004-007167	NA	4014553	Monitoring	37.97895	-121.38926	Centroid of Section	NA	NA	02N	05E	35	79-80-53	8/24/2004	25	NA	NA	NA
DWR	WCR2000-003266	NA	725861	Vapor Extraction	38.05027	-121.36084	Centroid of Section	NA	NA	02N	06E	6	NA	3/6/2000	6	NA	NA	NA
DWR	WCR2000-003269	NA	725871	Vapor Extraction	38.05027	-121.36084	Centroid of Section	NA	NA	02N	06E	6	NA	3/6/2000	50	NA	NA	NA
DWR	WCR2003-008734	NA	E011964	Monitoring	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	97-410-73	7/18/2003	50	40	50	NA
DWR	WCR2005-003800	NA	40101074	Other Unknown	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	8/20/2005	NA	NA	NA	NA
DWR	WCR2013-008884	NA	40148210	Other Unknown	38.0055556	-121.3336111	NA	NA	NA	02N	06E	17	NA	9/6/2013	NA	NA	NA	NA
DWR	WCR2011-005301	NA	40145199	Other Unknown	38.0208333	-121.3563889	NA	NA	NA	02N	06E	18	82-320-10	12/22/2011	NA	NA	NA	NA
DWR	WCR2008-001239	NA	1078666	Vapor Extraction	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	102-24-22	4/10/2008	105	102	104	NA
DWR	WCR2009-001242	NA	1078669	Vapor Extraction	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	102-24-22	4/2/2009	75	70	72	NA
DWR	WCR2020-006934	NA	NA	Remediation	38.0561481	-121.4563645	NA	NA	NA	02N	06E	6	NA	6/19/2020	30	NA	NA	13
DWR	WCR0100354	NA	16335	Water Supply Domestic	38.05282	-121.50471	Centroid of Section	NA	NA	02N	04E	2	NA	2/28/1955	102	NA	NA	12
DWR	WCR0146841	NA	NA	NA	38.0636	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR018132	NA	NA	NA	38.06486	-121.34266	Centroid of Section	NA	NA	03N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR2023-005411	NA	NA	Monitoring	38.019119	-121.324271	NA	NA	NA	02N	06E	16	NA	3/17/2023	NA	NA	NA	NA
DWR	WCR0085584	NA	66295	NA	38.07927	-121.30588	Centroid of Section	NA	NA	03N	06E	27	NA	NA	NA	NA	NA	NA
DWR	WCR2021-013953	NA	NA	Monitoring	38.0475	-121.408956	50 FT	NA	NA	02N	05E	3	6605038	10/20/2021	16	11	16	15
DWR	WCR1989-002678	NA	543524	Monitoring	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	11/2/1985	65	45	65	NA
DWR	WCR1994-004385	NA	547527	Water Supply Domestic	38.06547	-121.41726	Centroid of Section	NA	NA	03N	05E	34	NA	9/5/1994	102	40	60	NA
DWR	WCR1995-000408	NA	574055	Monitoring	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	102-240-2	1/23/1995	68	58	68	NA
DWR	WCR1987-001699	NA	17681	Water Supply Domestic	38.07927	-121.30588	Centroid of Section	NA	NA	03N	06E	27	NA	10/13/1987	250	NA	NA	NA
DWR	WCR2007-001515	NA	832996	Monitoring	38.109	-121.39829	Centroid of Section	NA	NA	03N	06E	14	55-320-19	8/2/2007	NA	14	75	NA
DWR	WCR2001-006487	NA	40140456	Other Unknown	37.9941667	-121.3461111	NA	NA	NA	02N	06E	32	116-190-7	11/4/2001	NA	NA	NA	NA
DWR	WCR1997-000004	NA	510103	Monitoring	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	97-410-XX	8/25/1997	62	40	60	NA
DWR	WCR2005-006524	NA	4062800	Monitoring	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	55-320-46	11/11/2005	50	40	50	NA
DWR	WCR1989-001136	NA	520393	Water Supply Domestic	38.07943	-121.34268	Centroid of Section	NA	NA	03N	06E	29	55-24-27	9/22/1981	192	192	192	NA
DWR	WCR2003-008727	NA	E011960	Monitoring	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	97-410-73	9/18/2003	50	40	50	NA
DWR	WCR2006-004885	NA	4034805	Monitoring	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	97-464-18	11/02/2006	45	28	42	NA
DWR	WCR2011-006196	NA	40140469	Other Unknown	37.985	-121.347222	NA	NA	NA	02N	06E	21	NA	10/21/2011	NA	NA	NA	NA
DWR	WCR2007-003880	NA	4067308	Injection	38.109	-121.39829	Centroid of Section	NA	NA	03N	06E	14	55-150-26	11/15/2007	25	20	25	NA
DWR	WCR2020-012530	NA	NA	Monitoring	38.012067	-121.317912	NA	NA	NA	02N	06E	21	681-260-52	5/30/2018	101	91	101	28
DWR	WCR2012-002950	NA	40182838	Other Unknown	38.1136111	-121.3930566	NA	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2019-019591	NA	E0301792	Water Supply Domestic	38.06	-121.36022	Unknown	NA	NA	02N	06E	35	NA	2/24/2019	70	40	60	NA
DWR	WCR018125	NA	NA	NA	38.08059	-121.5301	Unknown	NA	NA	03N	05E	27	NA	NA	NA	NA	NA	NA
DWR	WCR0129768	NA	E066746	NA	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	NA	NA	NA	NA	NA
DWR	WCR0015667	NA	E0145754-B	NA	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	11/9/2012	NA	NA	NA	NA
DWR	WCR0060032	NA	E011586	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0060020	NA	E0150070	NA	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0019933	NA	E0101075	NA	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0181253	NA	63101	Water Supply Irrigation - Agricultural	38.06489	-121.34266	Centroid of Section	NA	NA	03N	05E	32	NA	4/24/1978	423	380	420	30
DWR	WCR01707	NA	E04200	NA	38.10581	-121.36146	NA	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0165770	NA	E034802	NA	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0211194	NA	E0145800	NA	38.0664	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR1992-003967	NA	404426	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	71-180-19	12/9/1992	22	NA	NA	NA
DWR	WCR1989-011028	NA	336988	Water Supply Domestic	38.02105	-121.34266	Centroid of Section	NA	NA	02N	06E	23	NA	10/13/1989	165	165	165	NA
DWR	WCR1981-003897	NA	96888	Water Supply Domestic	38.05957	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	4/6/1981	232	NA	NA	NA
DWR	WCR1983-003415	NA	23946	Water Supply Domestic	38.07943	-121.34268	Centroid of Section	NA	NA	03N	06E	29	NA	10/25/1983	160	NA	NA	NA
DWR	WCR1990-010761	NA	3648580	Monitoring	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	77-360-21	10/11/1990	75	NA	NA	NA
DWR	WCR2003-007710	NA	786586															

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Done	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR0047228	NA	NA	NA	38.07976	-121.3799	Centroid of Section	NA	NA	03N	05E	25	NA	NA	NA	NA	NA	NA
DWR	WCR0079192	NA	NA	NA	37.99139	-121.3598	Centroid of Section	NA	NA	02N	06E	30	NA	NA	NA	NA	NA	NA
DWR	WCR197501483	NA	131036	Water Supply Domestic	38.10071	-121.4931	Centroid of Section	NA	NA	03N	06E	13	NA	158	730/1939	158	NA	NA
DWR	WCR1985-000281	NA	111977	Water Supply Domestic	38.10887	-121.37989	Centroid of Section	NA	NA	03N	05E	13	NA	104/1965	73	NA	NA	NA
DWR	WCR00321810	NA	E0145806	NA	38.0604	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR1954-000747	NA	39-448	NA	38.10971	-121.4931	Centroid of Section	NA	NA	03N	04E	13	NA	1/1/1954	54	NA	NA	NA
DWR	WCR1110263	NA	38-0039	Water Supply Domestic	38.00393	-121.34295	Centroid of Section	NA	NA	03N	06E	20	NA	1/7/1978	130	130	40	NA
DWR	WCR1978-000578	NA	86095	Other Unusual	38.0094	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	12/20/1978	NA	NA	NA	NA
DWR	WCR1978-000966	NA	86095	Water Supply Irrigation - Agriculture	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	NA	2/8/1978	368	95	335	NA
DWR	WCR1990-004944	NA	328625D	Montmorina	38.0604	-121.32267	Centroid of Section	NA	NA	03N	06E	21	87-410-48	8/5/1990	50	NA	NA	NA
DWR	WCR1991-012468	NA	4217121	Water Supply Domestic	38.07927	-121.30988	Centroid of Section	NA	NA	03N	05E	27	55-320-40	2/21/1991	300	NA	NA	NA
DWR	WCR2015-013488	NA	393953	Water Supply Irrigation - Agricultural	38.114167	-121.441687	Unknown	NA	NA	02N	05E	16	5507010	4/23/2015	160	NA	155	8
DWR	WCR2007-000729	NA	4084285	Other Unusual	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	104-180-14	11/8/2007	NA	NA	NA	NA
DWR	WCR2012-001446	NA	40150274	Injection	38.020556	-121.325278	NA	NA	NA	02N	06E	16	77-490-27	4/9/2012	59	54	56	NA
DWR	WCR2012-000861	NA	40167742	Monitoring	38.011111	-121.320556	NA	NA	NA	02N	06E	21	NA	11/8/2012	57	45	55	NA
DWR	WCR2012-000329	NA	40162818	Other Unusual	38.115	-121.393889	NA	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2009-000392	NA	349256	Water Supply Irrigation - Agriculture	37.99139	-121.3598	Centroid of Section	NA	NA	03N	05E	30	93-110-10	10/28/2009	500	365	485	152
DWR	WCR2013-000829	NA	40182432	Other Unusual	38.113889	-121.395278	NA	NA	NA	03N	05E	14	55-150-26	6/18/2013	NA	5	25	NA
DWR	WCR2004-000629	NA	40132942	Other Unusual	38.113889	-121.395278	NA	NA	NA	03N	05E	14	55-150-26	6/18/2013	NA	5	25	NA
DWR	WCR2011-000494	NA	40140464	Other Unusual	37.995	-121.344722	NA	NA	NA	02N	06E	32	NA	10/25/2011	NA	NA	NA	NA
DWR	WCR0008167	NA	E0145767	NA	38.0604	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR2012-013132	NA	NA	Monitoring	38.020124	-121.332112	NA	NA	NA	02N	06E	8	072-420-19	8/31/2020	NA	NA	NA	NA
DWR	WCR20082783	NA	E034904	NA	38.0094	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0196520	NA	E0130633	NA	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR02021778	NA	6543	Water Supply Domestic	38.03583	-121.36051	Centroid of Section	NA	NA	02N	06E	7	NA	3/8/1967	232	NA	NA	NA
DWR	WCR0268949	NA	33568	Water Supply Irrigation - Agricultural	38.10844	-121.34312	Centroid of Section	NA	NA	03N	06E	17	NA	8/6/1956	162	68	76	24
DWR	WCR028136	NA	E028136	NA	38.05128	-121.42467	Centroid of Section	NA	NA	02N	06E	4	NA	NA	NA	NA	NA	NA
DWR	WCR0117856	NA	E0095030	NA	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0121374	NA	E067307	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR1985-000339	NA	210987	Water Supply Domestic	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	80-290-31	5/31/1985	160	NA	NA	NA
DWR	WCR1985-000404	NA	178249	Water Supply Domestic	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	NA	6/25/1985	144	NA	NA	NA
DWR	WCR1984-000823	NA	156307	Water Supply Domestic	38.108889	-121.38	NA	NA	NA	03N	05E	13	NA	8/2/1984	195	NA	NA	NA
DWR	WCR1981-002381	NA	227014	Water Supply Domestic	38.05022	-121.32341	Centroid of Section	NA	NA	02N	06E	4	NA	8/7/1981	215	NA	NA	NA
DWR	WCR1985-00112	NA	159856D	Other Unusual	38.0094	-121.32267	Centroid of Section	NA	NA	02N	06E	21	87-410-48	8/5/1990	50	NA	NA	NA
DWR	WCR1992-001190	NA	299321	Montmorina	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	79-350-16	8/14/1992	62	NA	NA	NA
DWR	WCR1989-008278	NA	304332D	NA	38.0604	-121.32267	Centroid of Section	NA	NA	02N	06E	21	87-410-21	3/3/1989	NA	NA	NA	NA
DWR	WCR2012-002964	NA	40182652	Other Unusual	38.115	-121.393611	NA	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2009-000724	NA	40101068	Other Unusual	38.1094	-121.393611	Centroid of Section	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2005-007170	NA	4027248	Monitoring	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	4/29/2005	NA	NA	NA	NA
DWR	WCR2011-005300	NA	40145196	Other Unusual	38.020833	-121.356389	NA	NA	NA	02N	06E	18	82-320-10	12/21/2011	NA	NA	NA	NA
DWR	WCR2013-000933	NA	40182436	Other Unusual	38.113889	-121.395278	NA	NA	NA	03N	05E	14	55-150-26	6/18/2013	NA	5	15	NA
DWR	WCR2008-001238	NA	1278865	Vapor Extraction	38.0604	-121.32267	Centroid of Section	NA	NA	02N	06E	21	87-410-48	8/5/1990	50	NA	NA	NA
DWR	WCR2011-005027	NA	40145186	Other Unusual	38.020833	-121.356389	NA	NA	NA	02N	06E	18	82-320-10	12/23/2011	NA	NA	NA	NA
DWR	WCR2015-011172	NA	E0269429	NA	38.113568	-121.395206	>50 FT	NA	NA	03N	04E	7	06515026-66	5/13/2015	150	NA	NA	NA
DWR	WCR0007196	NA	E0156890	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR2015-000436	NA	17067700310-AMV9	Monitoring	38.0550918	-121.458189	Unknown	18 0550918	-121 458189	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0006036	NA	E067314	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR2023-000389	NA	NA	Montmorina	38.018119	-121.324271	NA	NA	NA	02N	06E	16	077-480-14	11/9/2023	NA	NA	NA	NA
DWR	WCR0297295	NA	E087373	NA	38.1238	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	NA	NA	NA	NA	NA
DWR	WCR0296938	NA	E0145748	NA	38.0094	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0298509	NA	E0156895	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0286032	NA	E014560	NA	37.97695	-121.38926	Centroid of Section	NA	NA	02N	06E	35	NA	NA	NA	NA	NA	NA
DWR	WCR0101233	NA	NA	NA	38.0553	-121.36051	Centroid of Section	NA	NA	02N	06E	7	NA	NA	NA	NA	NA	NA
DWR	WCR1980-000151	NA	35794	Water Supply Domestic	38.10887	-121.37989	Centroid of Section	NA	NA	03N	05E	13	NA	9/21/1980	87	NA	NA	NA
DWR	WCR0196632	NA	E0145786	NA	38.0604	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0124188	NA	247054	Water Supply Domestic	37.97697	-121.37493	Centroid of Section	NA	NA	02N	06E	36	NA	NA	85	85	85	20
DWR	WCR0295275	NA	NA	NA	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0174210	NA	E067310	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0196566	NA	E0145197	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR1977-002412	NA	45023	Water Supply Domestic	38.10887	-121.37989	Centroid of Section	NA	NA	03N	05E	13	NA	12/1/1977	124	NA	NA	NA
DWR	WCR1980-000632	NA	411189	Other Unusual	38.02072	-121.393611	Centroid of Section	NA	NA	02N	06E	27	55-320-29	11/21/1980	27	NA	NA	NA
DWR	WCR1989-011911	NA	328910	Water Supply Domestic	38.10844	-121.36146	Centroid of Section	NA	NA	03N	05E	18	55-170-31	10/18/1989	175	NA	NA	NA
DWR	WCR1997-001625	NA	476402	Water Supply Domestic	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	NA	8/20/1997	260	230	250	NA
DWR	WCR1992-004622	NA	421284	Montmorina	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	82-320-10	12/24/1992	32	20	32	8
DWR	WCR1986-000178	NA	86864	Water Supply Domestic	38.02027	-121.40047	Centroid of Section	NA	NA	02N	06E	3	NA	NA	5	35	8	1
DWR	WCR0005060	NA	73817	Water Supply Domestic	38.07943	-121.3458	Centroid of Section	NA	NA	03N	05E	29	NA	7/27/1961	125	NA	NA	NA
DWR	WCR0042160	NA	E0134191	NA	38.02559	-121.32272	Centroid of Section	NA	NA	02N	06E	9	NA	NA	NA	NA	NA	NA
DWR	WCR0146854	NA	NA	NA	38.0943	-121.37891	Centroid of Section	NA	NA	03N	05E	24	NA	NA	NA	NA	NA	NA
DWR	WCR0281997	NA	E0080668	NA	38.0094	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0267648	NA	E0095021	NA	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0268885	NA	E0174529	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0163280	NA	35-279	Other Unknown	38.02567	-121.34707	Centroid of Section	NA	NA	02N	06E	8	NA	NA	126	NA	NA	NA
DWR	WCR20042418	NA	NA	NA	38.02027	-121.50471	Centroid of Section	NA	NA	02N	06E	2	NA	NA	NA	NA	NA	NA

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR1987-004393	NA	197068	Catholic Protection	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	NA	7/31/1987	40	NA	NA	NA
DWR	WCR1987-004412	NA	197071	Catholic Protection	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	NA	8/3/1987	40	NA	NA	NA
DWR	WCR2002-006267	NA	809299	Other Unused	38.104	-121.33829	Centroid of Section	NA	NA	03N	06E	14	55-320-25	3/29/2002	NA	NA	NA	NA
DWR	WCR2002-006498	NA	38.019119	Remediation	38.019119	-121.324271	NA	NA	02N	06E	16	077-480-14	1/19/2003	NA	NA	NA	NA	
DWR	WCR2002-003800	NA	NA	Catholic Protection	38.014877	-121.317387	10 FT	NA	NA	02N	06E	16	08114013 (NRAB)	3/15/2001	49	NA	NA	NA
DWR	WCR2010-000004	NA	40121059	Other Unused	38.02106	-121.32267	Centroid of Section	NA	NA	02N	06E	16	77-480-14	10/15/2010	NA	NA	NA	NA
DWR	WCR2012-1901304	NA	55322	Monitoring	38.029124	-121.333112	NA	NA	02N	06E	27	072-520-19	8/31/2002	NA	NA	NA	NA	
DWR	WCR2012-002479	NA	55322	Water Supply Domestic	38.02927	-121.30588	Centroid of Section	NA	NA	03N	06E	14	NA	1/14/1980	246	NA	NA	NA
DWR	WCR00204667	NA	E032799	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	04E	14	NA	NA	NA	NA	NA	NA
DWR	WCR00505318	NA	05444	Water Supply Irrigation - Agriculture	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	3/23/1987	160	140	144	NA
DWR	WCR20037559	NA	38.278	Other Unused	38.02026	-121.34188	Centroid of Section	NA	NA	02N	06E	5	NA	6/10/1948	92	NA	NA	NA
DWR	WCR1980-002446	NA	71446	Water Supply Irrigation - Agriculture	38.005	-121.35123	Centroid of Section	NA	NA	03N	06E	31	NA	2/27/1980	400	NA	NA	NA
DWR	WCR0241082	NA	E032890	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	04E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0274372	NA	NA	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0317050	NA	NA	NA	38.11	-121.53027	Centroid of Section	NA	NA	03N	04E	15	NA	NA	NA	NA	NA	NA
DWR	WCR0321811	NA	E0145819	NA	38.0064	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0269675	NA	E0145790	NA	38.0064	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR1989-004554	NA	288441	Monitoring	38.11	-121.53027	Centroid of Section	NA	NA	03N	04E	15	NA	5/8/1989	52	NA	NA	NA
DWR	WCR1991-011976	NA	484038	Water Supply Domestic	38.09567	-121.34102	Centroid of Section	NA	NA	02N	06E	8	80-290-20	9/21/1991	205	NA	190	NA
DWR	WCR1995-006437	NA	580244	Water Supply Domestic	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	77-350-19	11/1/1995	200	175	195	NA
DWR	WCR1995-006612	NA	580216	Water Supply Domestic	38.05097	-121.40047	Centroid of Section	NA	NA	02N	06E	3	71-40-88	9/19/1995	90	73	85	NA
DWR	WCR00404095	NA	78567	Water Supply Domestic	38.0641	-121.35129	Centroid of Section	NA	NA	03N	06E	19	NA	8/4/1986	94	NA	NA	28
DWR	WCR2012-003959	NA	40162947	Other Unused	38.1147222	-121.341687	NA	NA	02N	06E	14	55-320-19	10/1/2012	NA	NA	NA	NA	
DWR	WCR2011-003727	NA	40134189	Other Unused	38.03559	-121.32272	Centroid of Section	NA	NA	02N	06E	9	79-170-39	7/20/2011	NA	NA	NA	NA
DWR	WCR2016-016700	NA	805341	Water Supply Irrigation - Agriculture	38.115278	-121.371944	Unknown	NA	NA	03N	06E	13	NA	4/6/2016	385	240	380	NA
DWR	WCR2011-005026	NA	40145189	Other Unused	38.021111	-121.355586	NA	NA	02N	06E	16	82-320-10	12/20/2011	NA	NA	NA	NA	
DWR	WCR2020-012516	NA	NA	Monitoring	38.012087	-121.379192	NA	NA	03N	06E	21	881-260-52	6/11/2019	NA	NA	NA	NA	
DWR	WCR0078958	NA	38-870	Water Supply Irrigation - Agriculture	38.02930	-121.34295	Centroid of Section	NA	NA	03N	06E	20	NA	NA	NA	NA	NA	NA
DWR	WCR0181238	NA	36124	NA	38.19844	-121.34312	Centroid of Section	NA	NA	03N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0071106	NA	E072441	NA	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	NA	NA	NA	NA	NA	NA
DWR	WCR0071298	NA	E0134192	NA	38.03559	-121.32272	Centroid of Section	NA	NA	02N	06E	9	NA	NA	NA	NA	NA	NA
DWR	WCR0143482	NA	E0145813	NA	38.0064	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0204186	NA	E0101435	NA	38.0064	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0133564	NA	E0145770	NA	38.0064	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0045892	NA	E005057	NA	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	NA	NA	NA	NA	NA	NA
DWR	WCR0269556	NA	38.07943	Water Supply Irrigation - Agriculture	38.07943	-121.3428	Centroid of Section	NA	NA	03N	06E	29	NA	4/6/1955	NA	NA	NA	NA
DWR	WCR1955-000091	NA	16340	Water Supply Irrigation - Agriculture	38.10827	-121.37899	Centroid of Section	NA	NA	03N	06E	13	NA	4/29/1955	94	NA	NA	NA
DWR	WCR1991-002610	NA	434901	Water Supply Domestic	38.02027	-121.34098	Centroid of Section	NA	NA	02N	06E	12	69-30-14	12/13/1989	205	NA	NA	NA
DWR	WCR1994-000618	NA	412178	Water Supply Domestic	38.05022	-121.32341	Centroid of Section	NA	NA	02N	06E	4	70-90-5	7/10/1994	235	190	230	NA
DWR	WCR1995-001826	NA	460902	Water Supply Domestic	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	75-200-24	11/17/1995	206	186	200	NA
DWR	WCR1987-004410	NA	197069	Catholic Protection	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	NA	8/3/1987	40	NA	NA	NA
DWR	WCR1991-001288	NA	298402	Monitoring	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	77-280-22	11/7/1989	45	NA	NA	17
DWR	WCR2007-003879	NA	4067307	Injection	38.109	-121.39829	Centroid of Section	NA	NA	03N	06E	14	55-150-26	11/15/2007	25	20	25	NA
DWR	WCR2007-003882	NA	4067310	Injection	38.109	-121.39829	Centroid of Section	NA	NA	03N	06E	14	55-150-26	11/15/2007	25	20	25	NA
DWR	WCR2008-005219	NA	4073126	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	82-320-10	3/8/2008	113	108	113	NA
DWR	WCR2012-011448	NA	40150278	Injection	38.020556	-121.325278	NA	NA	02N	06E	16	77-480-14	8/21/2012	50	52	52	NA	
DWR	WCR2012-005856	NA	40167731	Monitoring	38.011111	-121.320556	NA	NA	02N	06E	21	NA	11/27/2012	44	32	42	NA	
DWR	WCR2012-005857	NA	40167738	Monitoring	38.011111	-121.320556	NA	NA	02N	06E	21	NA	11/8/2012	132	80	95	NA	
DWR	WCR2000-002603	NA	726537	Monitoring	38.020333	-121.350444	NA	NA	02N	06E	18	82-400-9	8/8/2000	26	10	25	NA	
DWR	WCR2000-004047	NA	726537	Monitoring	38.050005	-121.450172	Unknown	38.050005	-121.450172	02N	06E	6	NA	12/22/2000	NA	NA	NA	4
DWR	WCR2012-005406	NA	1700700310-44W5	NA	38.019119	-121.324271	NA	NA	02N	06E	16	077-480-14	1/19/2003	NA	NA	NA	NA	
DWR	WCR0045107	NA	E0051537	NA	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR2013-006825	NA	40184265	Other Unused	38.1138889	-121.395278	NA	NA	03N	06E	14	55-150-26	6/18/2013	NA	5	5	14	NA
DWR	WCR0007487	NA	E073126	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR00101718	NA	55235	NA	38.03559	-121.32272	Centroid of Section	NA	NA	02N	06E	9	NA	NA	NA	NA	NA	NA
DWR	WCR0184132	NA	E029123	NA	38.00638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0030591	NA	E021268	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR01841328	NA	44982	NA	38.0026	-121.34188	Centroid of Section	NA	NA	02N	06E	5	NA	NA	NA	NA	NA	NA
DWR	WCR01841384	NA	E0145188	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0143467	NA	E0150276	NA	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0204-007162	NA	40145457	Monitoring	37.97959	-121.34098	Centroid of Section	NA	NA	02N	06E	15	128-38-3	6/24/2004	56	NA	NA	NA
DWR	WCR2003-008752	NA	E011999	Monitoring	38.0064	-121.32267	Centroid of Section	NA	NA	02N	06E	21	97-410-73	7/18/2003	40	30	40	NA
DWR	WCR1997-009011	NA	519113	Monitoring	38.0064	-121.32267	Centroid of Section	NA	NA	02N	06E	21	97-410-XX	7/28/1997	188	152	182	NA
DWR	WCR1995-002088	NA	474347	Vapor Extraction	38.02105	-121.32267	Centroid of Section	NA	NA	02N	06E	16	NA	8/10/1995	77	73	76	NA
DWR	WCR1995-004247	NA	464738	Water Supply Irrigation - Agriculture	38.06518	-121.37088	Centroid of Section	NA	NA	03N	06E	19	55-144-10	7/17/1993	203	220	210	NA
DWR	WCR2016-006535	NA	NA	Water Supply Irrigation - Agriculture	38.087829	-121.371231	NA	NA	03N	06E	24	055-130-13	4/6/2016	NA	NA	NA	18	
DWR	WCR2005-007391	NA	4029312	Vapor Extraction	38.0064	-121.32267	Centroid of Section	NA	NA	02N	06E	21	NA	7/11/2005	90	85	90	NA
DWR	WCR2012-003125	NA	40162887	Other Unused	38.136111	-121.393556	NA	NA	03N	06E	14	55-320-19	10/1/2012	NA	NA	NA	NA	
DWR	WCR2000-003688	NA	40181642	Other Unused	38.021867	-121.343889	NA	38.021867	-121.343889	02N	06E	16	78-200-15	6/19/2001	NA	NA	NA	NA
DWR	WCR2020-013259	NA	NA	Monitoring	37.994591	-121.342371	NA	NA	02N	06E	32	110-02-003	6/12/2019	19	4	19	9	
DWR	WCR2006-001516	NA	932900	Monitoring	38.109	-121.39829	Centroid of Section	NA	NA	03N	06E	14	55-320-45	7/19/2006	76	71	76	NA
DWR	WCR2008-001240	NA	1079867	Vapor Extraction	38.0064	-121.32267	Centroid of Section	NA	NA	02N	06E	21	102-24-22	4/16/2008	75	70	72	NA
DWR	WCR2008-002219	NA																

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR1776-000556	NA	41-180	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	262	NA	NA	NA
DWR	WCR0153848	NA	39-277	Other Unknown	38.05022	-121.32341	Centroid of Section	NA	NA	02N	06E	4	NA	8/25/1949	50	NA	NA	NA
DWR	WCR0280794	NA	14-7220	NA	38.05109	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR01967878	NA	E0145000	NA	38.05131	-121.36041	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	E0150087	NA	38.02106	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA	NA	NA
DWR	WCR1948-000136	NA	39-319	NA	38.00646	-121.34089	Centroid of Section	NA	NA	02N	06E	20	NA	NA	NA	NA	NA	NA
DWR	WCR1989-000391	NA	41-827	Water Supply Domestic	38.10887	-121.37389	Centroid of Section	NA	NA	03N	05E	13	NA	5/5/1948	318	180	305	NA
DWR	WCR1992-000388	NA	25660	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-300-15	5/20/1992	190	NA	NA	NA
DWR	WCR1992-000344	NA	4136758	Monitoring	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	102-270-8	5/21/1992	71	NA	NA	NA
DWR	WCR1992-000394	NA	4136758	Monitoring	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	102-20-8	5/21/1992	74	NA	NA	NA
DWR	WCR2020-000626	NA	E0121095	Other Unused	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-480-14	10/15/2010	NA	NA	NA	NA
DWR	WCR2020-004153	NA	805397	Water Supply Domestic	38.0177778	-121.3158333	NA	NA	04N	05E	22	013-130-240-200	12/10/2018	430	287	287	50	
DWR	WCR0005871	NA	29059	Water Supply Domestic	38.10864	-121.36146	Centroid of Section	NA	NA	03N	05E	18	NA	4/15/1978	120	100	120	26
DWR	WCR2019-000551	NA	NA	Remediation	38.0118438	-121.3149355	NA	NA	02N	06E	21	681-260-52	2/22/2019	135	85	135	27	
DWR	WCR2013-007228	NA	E0182447	Other Unused	38.1138889	-121.3952778	NA	NA	03N	05E	14	55-150-26	6/18/2013	NA	21	26	NA	
DWR	WCR2011-005021	NA	E0145180	Other Unused	38.0208333	-121.3563889	NA	NA	02N	06E	18	82-320-10	12/19/2011	NA	NA	NA	NA	
DWR	WCR0063121	NA	E014563	NA	37.97895	-121.38926	Centroid of Section	NA	NA	02N	05E	35	NA	NA	NA	NA	NA	NA
DWR	WCR0091418	NA	11864	Water Supply Domestic	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	097-410-073	7/18/2003	NA	49	50	38
DWR	WCR2010-000618	NA	E0121095	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-480-14	10/14/2010	NA	NA	NA	NA
DWR	WCR0140136	NA	E0121096-C	Unknown	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-480-14	10/14/2010	NA	NA	NA	NA
DWR	WCR0041322	NA	NA	NA	38.05046	-121.37458	Centroid of Section	NA	NA	02N	05E	1	NA	NA	NA	NA	NA	NA
DWR	WCR0058137	NA	E0150289	NA	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0138442	NA	E0150279	NA	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0130814	NA	NA	NA	38.05027	-121.36084	Centroid of Section	NA	NA	02N	06E	6	NA	NA	NA	NA	NA	NA
DWR	WCR2023-005401	NA	NA	Vapor Extraction	38.019119	-121.324271	NA	NA	02N	06E	16	077-480-14	1/19/2023	NA	NA	NA	NA	NA
DWR	WCR2023-005406	NA	NA	Remediation	38.019119	-121.324271	NA	NA	02N	06E	16	077-480-14	1/19/2023	NA	NA	NA	NA	NA
DWR	WCR0018626	NA	E0079306	NA	38.027078	-121.37098	Centroid of Section	NA	NA	03N	05E	25	NA	NA	NA	NA	NA	NA
DWR	WCR0172624	NA	NA	NA	38.12357	-121.43884	Centroid of Section	NA	NA	03N	05E	9	NA	NA	NA	NA	NA	NA
DWR	WCR1981-002636	NA	42824	Water Supply Domestic	38.05384	-121.32456	Centroid of Section	NA	NA	03N	05E	21	NA	10/27/1981	196	NA	NA	NA
DWR	WCR1981-006377	NA	720816	Water Supply Domestic	38.07927	-121.30588	Centroid of Section	NA	NA	03N	05E	27	NA	7/10/1981	220	NA	NA	NA
DWR	WCR1985-000136	NA	304158	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	11/01/1989	71	NA	NA	NA	NA
DWR	WCR1966-000454	NA	8075	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	7/23/1966	184	NA	NA	NA
DWR	WCR1966-000418	NA	8055	Water Supply Domestic	38.1236111	-121.4399444	NA	NA	03N	05E	9	NA	3/11/1966	100	NA	NA	NA	
DWR	WCR1990-000615	NA	53471	Water Supply Domestic	38.1097222	-121.4927778	NA	NA	03N	05E	13	NA	6/26/1991	678	NA	NA	NA	
DWR	WCR2000-000328	NA	725870	Vapor Extraction	38.05027	-121.36084	Centroid of Section	NA	NA	02N	06E	6	NA	3/16/2000	95	NA	NA	NA
DWR	WCR1997-005448	NA	530176	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-320-1	6/12/1997	260	220	260	NA
DWR	WCR2012-005862	NA	E0187745	Monitoring	38.0111111	-121.3205556	NA	NA	02N	06E	21	NA	1/129/2012	77	70	75	NA	
DWR	WCR2013-002561	NA	E0162841	Other Unused	38.1155856	-121.3402778	Centroid of Section	NA	NA	03N	05E	14	55-320-19	NA	NA	NA	NA	NA
DWR	WCR2012-000883	NA	E0148209	Other Unused	38.0205556	-121.3336111	NA	NA	02N	06E	17	NA	2/6/2012	NA	NA	NA	NA	NA
DWR	WCR2006-006975	NA	E044481	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	79-35-16	7/5/2006	50	30	50	NA
DWR	WCR2008-002715	NA	E0080943	Remediation	38.12336	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	9/25/2008	15	5	25	NA
DWR	WCR20019261	NA	E008380	Water Supply Irrigation - Agriculture	38.00384	-121.35458	Centroid of Section	NA	NA	03N	05E	18	NA	2/24/1982	635	450	27	NA
DWR	WCR0134395	NA	8544	NA	38.10864	-121.36146	Centroid of Section	NA	NA	03N	05E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0015681	NA	E0118025	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0006442	NA	E0101069	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0138768	NA	E0145750	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0040890	NA	E005025	NA	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	NA	NA	NA	NA	NA	NA
DWR	WCR0130085	NA	73811	NA	38.10864	-121.36146	Centroid of Section	NA	NA	03N	05E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0241308	NA	E0134188	NA	38.05384	-121.32456	Centroid of Section	NA	NA	03N	05E	9	NA	NA	NA	NA	NA	NA
DWR	E01451593	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA	NA	NA
DWR	WCR0192411	NA	95257	NA	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0244719	NA	76541	Water Supply Domestic	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	NA	146	133	146	NA
DWR	WCR0263508	NA	18710	NA	38.07943	-121.34328	Centroid of Section	NA	NA	03N	05E	29	NA	NA	NA	NA	NA	NA
DWR	WCR0267121	NA	E066690	NA	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	NA	NA	NA	NA	NA
DWR	WCR0271599	NA	39-687	Water Supply Irrigation - Agriculture	38.06489	-121.34266	Centroid of Section	NA	NA	03N	05E	32	NA	NA	200	NA	NA	NA
DWR	WCR1992-001145	NA	299464	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	79-350-16	11/17/1992	75	NA	NA	NA
DWR	WCR1990-002769	NA	294266	Monitoring	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	7/27/1990	25	NA	NA	NA
DWR	WCR1983-000961	NA	495197	Water Supply Industrial	38.10887	-121.37889	Centroid of Section	NA	NA	03N	05E	13	55-160-48	6/28/1993	250	210	220	NA
DWR	WCR2004-007879	NA	E001258	Monitoring	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	12/22/2004	100	95	100	NA
DWR	WCR2006-001517	NA	932901	Monitoring	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	55-320-45	7/21/2006	25	5	25	NA
DWR	WCR2000-000602	NA	723638	Monitoring	38.0208333	-121.3563889	NA	NA	02N	06E	18	NA	6/16/1992	635	450	27	NA	
DWR	WCR2009-004798	NA	E0101434	Other Unused	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-630-32	11/11/2009	NA	NA	NA	NA
DWR	WCR2019-007323	NA	NA	Water Supply Domestic	38.0154402	-121.3256158	NA	NA	02N	06E	16	077-360-370	5/3/2019	NA	NA	NA	NA	39
DWR	WCR2012-002945	NA	E0152833	Other Unused	38.1130556	-121.3919444	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA	NA
DWR	WCR2013-007228	NA	E0182448	Other Unused	38.1138889	-121.3952778	NA	NA	03N	05E	14	55-150-26	6/18/2013	NA	21	26	NA	NA
DWR	WCR2013-007229	NA	E0182450	Other Unused	38.1138889	-121.3952778	NA	NA	03N	05E	14	55-150-26	6/18/2013	NA	21	26	NA	NA
DWR	WCR2020-008596	NA	NA	Remediation	38.0551798	-121.4583739	Centroid of Section	NA	NA	02N	06E	6	NA	6/19/2020	31	NA	NA	13
DWR	WCR0216149	NA	E0187740	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0208678	NA	15345	Water Supply Irrigation - Agriculture	38.10864	-121.36146	Centroid of Section	NA	NA	03N	05E	18	NA	NA	119	NA	NA	NA
DWR	WCR2023-005391	NA	NA	Monitoring	38.019119	-121.324271	NA	NA	02N	06E	16	077-480-14	1/19/2023	NA	NA	NA	NA	NA
DWR	WCR0173837	NA	45032	NA	38.10864	-121.36146	Centroid of Section	NA	NA	03N	05E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0207026	NA	33867	Water Supply Domestic	38.05384	-121.32456	Centroid of Section	NA	NA	03N	05E	20	NA	3/26/1957	NA	NA	NA	18
DWR	E01457429	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA	NA	NA
DWR	E0156892	NA	38.02131															

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR2012-001445	NA	40150270	Injection	38.020556	-121.325278	NA	NA	NA	02N	06E	16	77-490-27	4/9/2012	59	51	48	NA
DWR	WCR2012-002951	NA	40162839	Other Unused	38.113889	-121.392778	NA	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2012-002965	NA	40162863	Other Unused	38.114722	-121.393056	NA	NA	NA	04N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2011-009303	NA	40145502	Other Unused	38.003833	-121.396667	NA	NA	NA	02E	16E	18	82-300-10	12/19/2011	NA	NA	NA	NA
DWR	WCR2011-002871	NA	40140484	Other Unused	37.985	-121.344722	NA	NA	NA	02N	06E	32	NA	10/13/2011	NA	NA	NA	NA
DWR	WCR2011-004497	NA	40140468	Other Unused	37.985	-121.344722	NA	NA	NA	02N	06E	32	NA	10/21/2011	NA	NA	NA	NA
DWR	WCR2006-002283	NA	1027415	Water Supply Domestic	37.97683	-121.40791	Centroid of Section	NA	NA	04N	05E	34	131-220-20	12/22/2006	80	80	80	20
DWR	WCR2008-001741	NA	40172441	Monitoring	37.9815	-121.34047	Centroid of Section	NA	NA	02N	06E	29	104-160-4	3/2/2013	55	40	55	NA
DWR	WCR2012-001302	NA	38.029124	NA	-121.332112	NA	NA	NA	NA	02N	06E	8	072-420-19	8/31/2020	NA	NA	NA	NA
DWR	WCR0405114	NA	E0095025	NA	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR2011-009656	NA	E0270047	Monitoring	38.044196	-121.417177	Centroid of Section	NA	NA	02N	05E	4	6605052	9/21/2017	29	4	NA	NA
DWR	WCR0064091	NA	55313	Water Supply Irrigation - Agriculture	38.07943	-121.3426	Centroid of Section	NA	NA	02N	06E	24	NA	4/2/1980	NA	140	NA	NA
DWR	WCR1981-002380	NA	227013	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	8/11/1981	148	NA	NA	NA
DWR	WCR1986-003929	NA	197571	Water Supply Public	38.06504	-121.45555	Centroid of Section	NA	NA	03N	05E	32	NA	5/16/1986	75	NA	NA	NA
DWR	WCR2003-002192	NA	786689	Monitoring	38.005	-121.325778	NA	NA	NA	02N	06E	19	100-180-10	10/16/2003	25	10	25	NA
DWR	WCR1994-003079	NA	495529	Other Unused	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-360-21	7/27/1994	NA	NA	NA	NA
DWR	WCR1994-005850	NA	569196	Water Supply Public	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	NA	8/9/1994	560	110	160	NA
DWR	WCR2006-005113	NA	4095027	Monitoring	37.99155	-121.34547	Centroid of Section	NA	NA	02N	06E	29	108-40-2	5/26/2006	618	240	260	31
DWR	WCR2008-001741	NA	40172441	Water Supply Domestic	38.07927	-121.39088	Centroid of Section	NA	NA	03N	05E	27	NA	11/01/2004	310	270	310	NA
DWR	WCR2000-003272	NA	725874	Vapor Extraction	38.05027	-121.36084	Centroid of Section	NA	NA	02N	06E	6	NA	3/6/2000	50	15	50	NA
DWR	WCR1990-006093	NA	342426	Monitoring	38.08049	-121.51123	Centroid of Section	NA	NA	03N	04E	26	NA	9/12/1990	52	NA	NA	NA
DWR	WCR1997-005039	NA	519110A	Monitoring	38.064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-41-79	3/27/1997	144	101	111	NA
DWR	WCR1992-001166	NA	290332	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	79-300-XX	8/19/1992	81	NA	NA	NA
DWR	WCR2003-000239	NA	912470	Water Supply Domestic	38.09384	-121.32456	Centroid of Section	NA	NA	03N	05E	21	NA	11/14/2003	260	220	260	NA
DWR	WCR2015-011168	NA	E0269433	NA	38.113588	-121.399206	>50 FT	NA	NA	03N	04E	7	0651026-66	5/8/2015	150	NA	NA	NA
DWR	WCR2012-000219	NA	955433	Water Supply Domestic	38.067778	-121.388989	NA	NA	NA	03N	05E	23	55-130-16	12/20/2012	240	100	220	17
DWR	WCR2012-000265	NA	844897	Water Supply Irrigation - Agriculture	38.115833	-121.382556	NA	NA	NA	03N	05E	13	NA	12/16/2013	240	280	36	NA
DWR	WCR2012-001447	NA	E0150275	Injection	38.020556	-121.325278	NA	NA	NA	02N	06E	16	77-490-27	4/11/2012	59	56	58	NA
DWR	WCR2008-001241	NA	1078668	Vapor Extraction	38.064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	102-24-22	4/1/2008	26	15	25	NA
DWR	WCR2006-002217	NA	797934	Monitoring	38.057976	-121.37799	Centroid of Section	NA	NA	03N	05E	25	55-13-1	8/28/2006	28	8	28	17
DWR	WCR2011-003726	NA	40134188	Other Unused	38.05058	-121.32272	Centroid of Section	NA	NA	02N	06E	9	79-170-39	12/1/2011	NA	NA	NA	NA
DWR	WCR2005-004615	NA	739036	Monitoring	38.054444	-121.370833	NA	NA	NA	02N	05E	1	68-20-1	5/6/2005	966	520	540	NA
DWR	WCR2007-003885	NA	4067314	Monitoring	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	55-150-26	11/15/2007	25	20	25	NA
DWR	WCR2013-006823	NA	E0182433	Other Unused	38.113889	-121.392778	NA	NA	NA	02N	06E	19	55-150-26	6/18/2013	NA	5	25	NA
DWR	WCR2011-005205	NA	40145184	Other Unused	38.021111	-121.356389	NA	NA	NA	02N	06E	18	82-300-10	12/20/2011	NA	NA	NA	NA
DWR	WCR2009-006085	NA	40095020	Other Unused	38.0638	-121.36022	Centroid of Section	NA	NA	02N	06E	19	100-180-10	7/22/2009	NA	NA	NA	NA
DWR	WCR2012-001101	NA	NA	Water Supply Public	38.0156085	-121.3179492	NA	NA	NA	02N	06E	16	681-14-007	12/14/2020	317	NA	NA	NA
DWR	WCR2003-003643	NA	NA	Water Supply Public	38.02093	-121.325778	Centroid of Section	NA	NA	03N	05E	20	NA	NA	NA	NA	NA	NA
DWR	WCR0036795	NA	9743	Water Supply Public	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	5/26/1956	130	NA	NA	NA
DWR	WCR2012-005407	NA	NA	Remediation	38.019119	-121.324271	NA	NA	NA	02N	06E	16	077-480-14	1/19/2023	NA	NA	NA	NA
DWR	WCR1960-000261	NA	55227	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	3/9/1960	200	NA	NA	NA
DWR	WCR2012-000851	NA	E0150278	Injection	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0133652	NA	E0121094	NA	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR1992-001164	NA	299331	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	79-350-16	8/17/1992	42	NA	NA	NA
DWR	WCR1983-003873	NA	814860	Water Supply Domestic	38.07927	-121.30588	Centroid of Section	NA	NA	03N	05E	27	NA	7/28/1983	195	NA	NA	NA
DWR	WCR1994-000250	NA	440984	Water Supply Public	38.02046	-121.34039	Centroid of Section	NA	NA	03N	05E	20	NA	6/24/1994	353	255	353	NA
DWR	WCR1994-000559	NA	417124	Water Supply Domestic	38.10844	-121.34312	Centroid of Section	NA	NA	03N	05E	17	NA	6/1/1994	303	263	303	NA
DWR	WCR2008-002718	NA	40080946	Remediation	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	9/24/2008	50	30	50	NA
DWR	WCR2005-005935	NA	4053388	Monitoring	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	55-320-20	11/30/2006	25	5	25	NA
DWR	WCR2008-004598	NA	40173101	Monitoring	38.049333	-121.37	NA	NA	NA	02N	06E	1	11/16/2008	NA	NA	NA	NA	NA
DWR	WCR2010-012520	NA	NA	Monitoring	38.012067	-121.371912	NA	NA	NA	02N	06E	21	081-200-52	6/4/2018	54	64	28	NA
DWR	WCR2015-013467	NA	993955	Water Supply Irrigation - Agriculture	38.112222	-121.442222	Unknown	NA	NA	03N	05E	16	5507011	4/10/2015	160	136	156	9
DWR	WCR2011-011834	NA	E0064267	Other Unused	38.068033	-121.494444	Unknown	NA	NA	03N	05E	35	NA	4/9/2015	NA	NA	NA	NA
DWR	WCR0030265	NA	NA	NA	37.97697	-121.37483	Centroid of Section	NA	NA	03N	05E	36	NA	NA	NA	NA	NA	NA
DWR	WCR0050598	NA	728915	Other Unknown	38.05026	-121.34188	Centroid of Section	NA	NA	02N	06E	5	NA	NA	NA	2	146	NA
DWR	WCR2020-006526	T06077003-10-MW 14	NA	Monitoring	38.056498	-121.457778	Unknown	38.054904	-121.457778	02N	06E	6	NA	6/24/2020	121	NA	NA	13
DWR	WCR0070496	NA	E0145522	NA	37.97956	-121.39265	Centroid of Section	NA	NA	02N	06E	35	NA	NA	NA	NA	NA	NA
DWR	WCR0040434	NA	E0145812	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0242214	NA	E0079937	NA	38.07976	-121.37799	Centroid of Section	NA	NA	03N	05E	25	NA	NA	NA	NA	NA	NA
DWR	WCR0296174	NA	E0148218	NA	38.02117	-121.34089	Centroid of Section	NA	NA	03N	05E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0172231	NA	NA	NA	37.99155	-121.34547	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0268926	NA	E0145828	NA	38.064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0267500	NA	E066601	NA	38.05046	-121.37458	Centroid of Section	NA	NA	02N	05E	1	NA	NA	NA	NA	NA	NA
DWR	WCR0284455	NA	477556	Water Supply Domestic	38.07976	-121.36118	Centroid of Section	NA	NA	03N	05E	30	NA	6/15/1967	80	NA	NA	NA
DWR	WCR0145762	NA	E0145763	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	06E	36	NA	NA	NA	NA	NA	NA
DWR	WCR1989-004680	NA	288431	Monitoring	38.10988	-121.51138	Centroid of Section	NA	NA	03N	04E	14	NA	5/1/1989	10	NA	NA	NA
DWR	WCR1986-002495	NA	178221	Monitoring	38.02567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	9/24/1986	52	NA	NA	NA
DWR	WCR1994-001876	NA	456753A	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	82-300-10	3/30/1994	32	NA	NA	NA
DWR	WCR1996-001444	NA	762385	Water Supply Irrigation - Agriculture	38.02046	-121.34039	Centroid of Section	NA	NA	03N	05E	20	NA	10/16/1996	50	NA	NA	NA
DWR	WCR1995-006047	NA	574053	Monitoring	38.064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	102-240-2	12/31/1995	68	46	68	NA
DWR	WCR2001-002407	NA	736641	Other Unused	38.0325	-121.3391667	NA	NA	NA	02N	06E	8	80-290-23	4/18/2001	NA	NA	NA	NA
DWR</																		

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR2011-002410	NA	40140478	Other Unused	37.985	-121.344722	NA	NA	NA	02N	06E	32	NA	10/27/2011	NA	NA	NA	NA
DWR	WCR2020-008599	T0607700310-MW6	NA	Monitoring	38.052898	-121.457986	Unknown	38.052898	-121.457986	02N	05E	6	NA	6/15/2020	18	NA	NA	NA
DWR	WCR2020-012519	NA	37.87686	Monitoring	38.02067	-121.317912	NA	NA	NA	02N	05E	31	981-280-52	05/2018	79	NA	NA	28
DWR	WCR040405	NA	NA	Other Unused	37.87686	-121.38928	Centroid of Section	NA	NA	03E	35E	NA	NA	NA	NA	NA	NA	NA
DWR	WCR0185147	NA	6073157	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0198203	NA	36200	Water Supply Domestic	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	NA	178	158	178	43
DWR	WCR0074620	NA	6101075	Other Unused	38.004	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0213268	Q044801	NA	Other Unused	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0131478	NA	E005053	NA	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	NA	NA	NA	NA	NA
DWR	WCR0131479	NA	E005054	NA	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	NA	NA	NA	NA	NA
DWR	WCR006638	NA	61214	Water Supply Domestic	38.05164	-121.44262	Centroid of Section	NA	NA	02N	05E	5	NA	NA	NA	NA	NA	14
DWR	WCR0241815	NA	E078116	NA	38.05027	-121.36084	Centroid of Section	NA	NA	02N	06E	6	NA	NA	NA	NA	NA	NA
DWR	WCR0283635	NA	E068819	NA	38.12338	-121.38824	Centroid of Section	NA	NA	03N	05E	11	NA	NA	NA	NA	NA	NA
DWR	WCR0286454	NA	39-681	Water Supply Irrigation - Agriculture	38.07943	-121.3428	Centroid of Section	NA	NA	03N	05E	29	NA	NA	205	NA	NA	NA
DWR	WCR1950-000520	NA	39-1185	Water Supply Domestic	38.1028	-121.4368	Centroid of Section	NA	NA	03N	05E	16	NA	7/6/1950	45	NA	NA	NA
DWR	WCR1950-003769	NA	321531	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	05E	16	75-230-34	8/29/1950	75	NA	NA	NA
DWR	WCR1998-005245	NA	703980	Vapor Extraction	38.02117	-121.34098	Centroid of Section	NA	NA	02N	05E	17	77-280-2	10/26/1998	60	46	48	NA
DWR	WCR2021-013061	NA	NA	Monitoring	38.009124	-121.332112	NA	NA	NA	02N	05E	8	072-420-19	8/31/2020	NA	NA	NA	NA
DWR	WCR0027035	NA	75873	NA	38.02109	-121.32258	Centroid of Section	NA	NA	02N	05E	18	NA	NA	NA	NA	NA	NA
DWR	WCR2021-009839	NA	NA	Water Supply Domestic	38.0257801	-121.4729182	NA	NA	NA	02N	05E	18	129-000-054	7/7/2021	63	43	63	20
DWR	WCR0058698	NA	E021806	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	05E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0086953	NA	NA	NA	38.07927	-121.30588	Centroid of Section	NA	NA	03N	05E	27	NA	NA	NA	NA	NA	NA
DWR	WCR0231-005409	NA	NA	Monitoring	38.019119	-121.324271	NA	NA	NA	02N	05E	16	NA	3/17/2023	NA	NA	NA	NA
DWR	WCR0233158	NA	61460	Water Supply Domestic	38.07927	-121.30588	Centroid of Section	NA	NA	03N	05E	27	NA	7/28/1983	184	150	184	46
DWR	WCR0200453	NA	E034905	NA	38.0064	-121.32257	Centroid of Section	NA	NA	02N	05E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0143670	NA	E048622	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	05E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0241326	NA	E0145791	NA	38.004	-121.32257	Centroid of Section	NA	NA	02N	05E	16	NA	NA	NA	NA	NA	NA
DWR	WCR0207023	NA	45014	Water Supply Domestic	38.10864	-121.36146	Centroid of Section	NA	NA	03N	05E	18	NA	10/13/1977	80	NA	NA	40
DWR	WCR0091634	NA	E0095026	NA	38.0038	-121.36022	Centroid of Section	NA	NA	02N	05E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0171244	NA	E0167745	NA	38.004	-121.32257	Centroid of Section	NA	NA	02N	05E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0100380	NA	44088	NA	38.0048	-121.34098	Centroid of Section	NA	NA	02N	05E	20	NA	NA	NA	NA	NA	NA
DWR	WCR0000275	NA	67142	Water Supply Domestic	38.05022	-121.32341	Centroid of Section	NA	NA	02N	05E	4	NA	7/29/1961	130	NA	NA	NA
DWR	WCR0134770	NA	NA	NA	38.03559	-121.32272	Centroid of Section	NA	NA	02N	05E	9	NA	NA	NA	NA	NA	NA
DWR	WCR1980-000387	NA	39-307	Water Supply Domestic	38.004	-121.32257	Centroid of Section	NA	NA	02N	05E	21	NA	7/10/1981	170	NA	NA	NA
DWR	WCR1958-000279	NA	39-298	Water Supply Public	38.02105	-121.32267	Centroid of Section	NA	NA	02N	05E	16	NA	6/23/1958	37	237	317	NA
DWR	WCR1980-001711	NA	55322	Water Supply Domestic	38.07927	-121.30588	Centroid of Section	NA	NA	03N	05E	27	NA	11/14/1980	250	NA	NA	NA
DWR	WCR1987-000325	NA	47861	NA	38.004	-121.32267	Centroid of Section	NA	NA	02N	05E	21	NA	8/16/1987	252	100	214	NA
DWR	WCR1948-000127	NA	39-301	Other Unused	38.02117	-121.34098	Centroid of Section	NA	NA	02N	05E	17	NA	18/18/1948	200	NA	NA	NA
DWR	WCR1955-000529	NA	32920	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	05E	16	NA	10/26/1955	250	175	248	NA
DWR	WCR1987-006793	NA	272304	Catholic Protection	37.99156	-121.34047	Centroid of Section	NA	NA	02N	05E	29	NA	8/2/1987	40	NA	NA	NA
DWR	WCR1986-007401	NA	42511	Other Unused	38.08478	-121.32415	Centroid of Section	NA	NA	03N	05E	33	NA	5/8/1986	NA	NA	NA	NA
DWR	WCR1989-004275	NA	700188	Water Supply Domestic	38.07927	-121.30588	Centroid of Section	NA	NA	03N	05E	27	NA	8/24/1989	280	280	280	NA
DWR	WCR1992-004626	NA	421269	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	05E	18	82-320-10	12/3/1992	37	15	35	NA
DWR	WCR1991-001399	NA	299403	Monitoring	38.02117	-121.34098	Centroid of Section	NA	NA	02N	05E	17	77-280-2	10/18/1991	45	NA	NA	NA
DWR	WCR1986-003206	NA	194927	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	05E	16	NA	7/1/1986	210	NA	NA	NA
DWR	WCR1991-010308	NA	634105	Other Unused	38.019119	-121.36022	Centroid of Section	NA	NA	02N	05E	19	107-192-12	11/7/1991	20	NA	NA	NA
DWR	WCR1995-002089	NA	475438	Vapor Extraction	38.02105	-121.32257	Centroid of Section	NA	NA	02N	05E	16	79-350-16	8/11/1995	65	45	55	NA
DWR	WCR1992-000738	NA	413639E	Monitoring	38.02105	-121.32267	Centroid of Section	NA	NA	02N	05E	16	77-360-21	11/10/1992	NA	NA	NA	NA
DWR	WCR1992-009047	NA	433994	Water Supply Domestic	38.02105	-121.32267	Centroid of Section	NA	NA	02N	05E	16	77-360-11	5/3/1992	233	185	205	NA
DWR	WCR1990-002288	NA	288429	NA	38.019119	-121.36022	Centroid of Section	NA	NA	02N	05E	19	77-360-12	9/9/1990	77	NA	NA	NA
DWR	WCR2012-002940	NA	60162827	Other Unused	38.1147222	-121.3930556	NA	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2012-011555	NA	60145195	Other Unused	38.0208333	-121.3933889	NA	NA	NA	02N	05E	18	82-320-10	11/3/2012	NA	NA	NA	NA
DWR	WCR2006-005112	NA	40162826	Monitoring	37.99156	-121.34047	Centroid of Section	NA	NA	02N	05E	29	108-40-2	5/26/2006	619	450	470	30
DWR	WCR2005-007167	NA	6027245	Monitoring	38.0038	-121.36022	Centroid of Section	NA	NA	02N	05E	19	NA	4/26/2005	NA	NA	NA	NA
DWR	WCR2012-000895	NA	60148223	Other Unused	38.0208333	-121.3336111	NA	NA	NA	02N	05E	17	NA	2/13/2012	NA	NA	NA	NA
DWR	WCR2011-002411	NA	60140479	Other Unused	37.985	-121.344722	NA	NA	NA	02N	05E	32	NA	10/20/2011	NA	NA	NA	NA
DWR	WCR2011-006499	NA	60140477	Other Unused	37.985	-121.344722	NA	NA	NA	02N	05E	32	NA	10/19/2011	NA	NA	NA	NA
DWR	WCR004218	NA	E0145776A-B	Vapor Extraction	38.004	-121.32257	Centroid of Section	NA	NA	02N	05E	21	NA	1/30/2012	NA	NA	NA	NA
DWR	WCR0078519	NA	NA	NA	38.05022	-121.32341	Centroid of Section	NA	NA	02N	05E	4	NA	NA	NA	NA	NA	NA
DWR	WCR0100358	NA	33973	NA	38.05026	-121.34188	Centroid of Section	NA	NA	02N	05E	5	NA	NA	NA	NA	NA	NA
DWR	WCR0285736	NA	E0148923	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	05E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0325989	NA	11961	Monitoring	38.004	-121.32267	Centroid of Section	NA	NA	02N	05E	21	097-410-073	7/18/2003	NA	30	40	39
DWR	WCR1992-002065	NA	371917	Test Well	37.99139	-121.3598	Centroid of Section	NA	NA	02N	05E	30	114-20-XX	7/16/1992	260	NA	NA	NA
DWR	WCR1990-006789	NA	349806A	Monitoring	38.004	-121.32267	Centroid of Section	NA	NA	02N	05E	21	67-410-18	7/24/1990	71	NA	NA	NA
DWR	WCR2010-000310	NA	60121079	Other Unused	38.02105	-121.32257	Centroid of Section	NA	NA	02N	05E	16	NA	13/13/2010	NA	NA	NA	NA
DWR	WCR2009-006313	NA	60095028	Other Unused	38.0038	-121.36022	Centroid of Section	NA	NA	02N	05E	19	100-180-10	7/24/2009	NA	NA	NA	NA
DWR	WCR2004-007168	NA	6014554	Monitoring	37.97895	-121.38926	Centroid of Section	NA	NA	02N	05E	35	129-80-53	6/25/2004	31	NA	NA	NA
DWR	WCR2003-005679	NA	39-1214	Water Supply Irrigation - Agriculture	38.05027	-121.36084	Centroid of Section	NA	NA	02N	05E	6	NA	3/9/2003	NA	NA	NA	NA
DWR	WCR1989-00489	NA	E0107711	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	05E	18	71-180-20	11/18/2010	25	25	10	16
DWR	WCR2009-004654	NA	60108622	Other Unused	38.0038	-121.4258	Centroid of Section	NA	NA	02N	05E	21	233-366-7	10/19/2009	NA	NA	NA	10
DWR	WCR0059456	NA	142004	Water Supply Domestic	38.02097	-121.4047	Centroid of Section	NA	NA	02N	05E	3	NA	4/14/1976	74	69	74	NA
DWR	WCR2002-005398	NA	NA	Monitoring	38.079119	-121.324271	NA	NA	NA	02N	05E	16	077-480-14	11/9/2003	NA	NA	NA	NA
DWR	WCR2002-005699	NA	NA	Water Supply Domestic	38.02097	-121.320303	Unknown	NA	NA	02N	05E	9						

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR1986-007395	NA	42522	Other Unused	38.06478	-121.32415	NA	NA	NA	03N	06E	33	NA	4/24/1986	NA	NA	NA	NA
DWR	WCR1990-004843	NA	328625C	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-410-48	7/29/1990	70	NA	NA	NA
DWR	WCR2004-005357	NA	788174	Other Unused	38.05105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	7/29/2004	NA	NA	NA	NA
DWR	WCR1991-003742	NA	360554	Water Supply Irrigation - Agriculture	38.06028	-121.34188	Centroid of Section	NA	NA	01N	06E	5	70-10-39	4/16/1991	305	NA	NA	NA
DWR	WCR2002-000898	NA	702866	Monitoring	38.06046	-121.34089	Centroid of Section	NA	NA	02N	06E	20	97-110-24	5/23/2002	520	480	505	NA
DWR	WCR1991-006142	NA	374051	Water Supply Domestic	38.10887	-121.37889	Centroid of Section	NA	NA	03N	05E	13	55-150-51	10/6/1991	186	NA	NA	NA
DWR	WCR2004-000508	NA	#080973	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	102-24-22	11/17/2004	90	85	90	40
DWR	WCR2007-000309	NA	#086746	Monitoring	38.1115	-121.393333	NA	NA	NA	02N	06E	11	55-32-19	6/29/2007	50	10	25	NA
DWR	WCR2010-006009	NA	#01210978	Other Unused	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-480-14	10/13/2010	NA	NA	NA	NA
DWR	WCR2008-005111	NA	#050525	Monitoring	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	108-40-2	5/26/2008	618	540	560	35
DWR	WCR2009-001897	NA	805186	Water Supply Domestic	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	80-300-3	5/16/2009	250	230	250	31
DWR	WCR2015-011286	NA	NA	Water Supply Domestic	38.101707	-121.489116	NA	NA	NA	03N	04E	24	055-020-020-000	8/1/2019	141	NA	NA	NA
DWR	WCR2020-013709	NA	NA	Monitoring	38.002799	-121.334097	NA	NA	NA	02N	06E	17	877-280-31	9/15/2020	100	80	100	NA
DWR	WCR0163283	NA	47555	Water Supply Domestic	38.07096	-121.35118	Centroid of Section	NA	NA	03N	06E	30	NA	6/14/1967	80	NA	NA	NA
DWR	WCR034037	NA	E034801	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0155382	NA	E0101070	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0408891	NA	E050526	NA	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	NA	NA	NA	NA	NA	NA
DWR	WCR0172208	NA	16326	Water Supply Irrigation - Agricultural	38.06084	-121.32456	Centroid of Section	NA	NA	03N	06E	21	NA	5/10/1954	NA	NA	NA	21
DWR	WCR1992-004629	NA	421272	Monitoring	38.01331	-121.360381	Centroid of Section	NA	NA	02N	06E	18	82-300-10	12/4/1992	31	19	31	NA
DWR	WCR1991-001325	NA	304396	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	81-260-26	9/24/1992	70	NA	NA	NA
DWR	WCR2000-007221	NA	812968	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	82-320-10	6/12/2000	30	10	30	NA
DWR	WCR2011-005392	NA	#0145200	Other Unused	38.020833	-121.356667	NA	NA	NA	02N	06E	18	82-320-10	12/21/2011	NA	NA	NA	NA
DWR	WCR2011-003728	NA	#0134186	Other Unused	38.020558	-121.32272	Centroid of Section	NA	NA	02N	06E	9	78-170-39	7/21/2011	NA	NA	NA	NA
DWR	WCR2004-007166	NA	#014552	Monitoring	37.97595	-121.38926	Centroid of Section	NA	NA	02N	05E	35	129-80-53	6/28/2004	55	NA	NA	NA
DWR	WCR2003-008733	NA	E011963	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-410-73	7/18/2003	50	10	50	NA
DWR	WCR2005-006116	NA	#027241	Monitoring	38.06036	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	4/29/2005	NA	NA	NA	NA
DWR	WCR2008-005110	NA	#026554	Monitoring	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	801-805-8	5/16/2008	613	210	230	31
DWR	WCR2005-008376	NA	#015186	Monitoring	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	55-320-45	8/11/2005	25	5	25	NA
DWR	WCR2008-002284	NA	1097416	Other Unused	37.97883	-121.40791	Centroid of Section	NA	NA	02N	05E	34	131-200-20	12/21/2008	NA	NA	NA	NA
DWR	WCR2002-007171	NA	#020541	Other Not Specified	38.12338	-121.39824	Centroid of Section	NA	03N	05E	11	NA	NA	9/22/2008	25	5	25	NA
DWR	WCR1995-006186	NA	823550	Water Supply Domestic	38.07035	-121.30345	Centroid of Section	NA	NA	03N	06E	28	59-20-42	1/6/1995	260	210	260	NA
DWR	WCR2008-007154	NA	E042627	Monitoring	38.06036	-121.36022	Centroid of Section	NA	NA	02N	06E	19	97-600-4	8/8/2008	20	5	20	NA
DWR	WCR2006-001598	NA	932303	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	82-400-11	7/24/2006	64	58	62	12
DWR	WCR2005-006119	NA	#027243	Monitoring	38.06036	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	4/29/2005	NA	NA	NA	NA
DWR	WCR2005-005615	NA	#025054	Vapor Extraction	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	4/25/2005	30	5	30	NA
DWR	WCR2020-012529	NA	NA	Monitoring	38.012067	-121.317912	NA	NA	NA	02N	06E	21	981-260-52	5/29/2018	140	125	140	29
DWR	WCR2008-001243	NA	1078670	Vapor Extraction	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	102-24-22	4/8/2008	72	69	71	NA
DWR	WCR2015-011181	NA	E0269437	NA	38.112588	-121.39209	>50 FT	NA	NA	02N	06E	7	0551026-46	6/8/2015	150	NA	NA	NA
DWR	WCR2012-001448	NA	#0150276	Injection	38.020558	-121.322778	NA	NA	NA	02N	06E	16	77-490-27	4/10/2012	59	50	52	NA
DWR	WCR2012-002555	NA	#0162843	Other Unused	38.1115	-121.393889	NA	NA	NA	03N	05E	14	55-320-19	10/10/2012	NA	NA	NA	NA
DWR	WCR2012-002596	NA	#0162854	Other Unused	38.114722	-121.393558	NA	NA	NA	03N	05E	14	55-320-19	10/10/2012	NA	NA	NA	NA
DWR	WCR2021-002870	NA	#014083	Other Unused	37.985	-121.47222	NA	NA	NA	02N	06E	32	NA	10/25/2021	NA	NA	NA	NA
DWR	WCR0198696	NA	NA	NA	37.99103	-121.40783	Centroid of Section	NA	NA	02N	05E	27	NA	NA	NA	NA	NA	NA
DWR	WCR0133653	NA	E0148212	NA	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0147445	NA	E068738	NA	38.12338	-121.39824	Centroid of Section	NA	03N	05E	11	NA	NA	NA	NA	NA	NA	NA
DWR	WCR1991-001325	NA	304396	Water Supply Irrigation - Agricultural	38.06084	-121.32456	Centroid of Section	NA	NA	03N	06E	21	NA	5/10/1954	NA	NA	NA	NA
DWR	WCR1977-007139	NA	36168	Water Supply Domestic	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	160	118	152	NA
DWR	WCR0326338	NA	56583	NA	38.10844	-121.34312	Centroid of Section	NA	NA	03N	05E	17	NA	NA	NA	NA	NA	NA
DWR	WCR0327484	NA	808993A	NA	37.99103	-121.40783	Centroid of Section	NA	NA	02N	05E	27	NA	NA	NA	NA	NA	NA
DWR	WCR1981-000923	NA	361189	Water Supply Industrial	38.09479	-121.47463	Centroid of Section	NA	NA	03N	06E	19	NA	5/17/1981	36	19	NA	NA
DWR	WCR1968-000472	NA	47098	Water Supply Domestic	38.06036	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	6/6/1968	188	156	174	NA
DWR	WCR1982-000249	NA	39309	Water Supply Domestic	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	8/6/1982	160	NA	NA	NA
DWR	WCR1982-000239	NA	E0905020	Monitoring	38.06036	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR1982-005735	NA	E136388	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-360-21	11/8/1992	NA	NA	NA	NA
DWR	WCR1986-002494	NA	179220	Monitoring	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	9/23/1986	51	NA	NA	NA
DWR	WCR1982-001993	NA	244611	Water Supply Domestic	38.07943	-121.3428	Centroid of Section	NA	NA	03N	06E	29	NA	5/14/1982	200	NA	NA	NA
DWR	WCR2005-000278	NA	E034801	Water Supply Domestic	38.07943	-121.3428	Centroid of Section	NA	NA	03N	06E	29	NA	5/14/1982	200	NA	NA	NA
DWR	WCR2011-003412	NA	#0140480	Other Unused	37.985	-121.474222	NA	NA	NA	02N	06E	32	NA	10/20/2011	NA	NA	NA	NA
DWR	WCR2013-007224	NA	#0182445	Other Unused	38.113889	-121.395278	NA	NA	NA	03N	05E	14	55-150-26	6/18/2013	NA	21	26	NA
DWR	WCR2010-005659	NA	#018205	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-480-14	10/12/2010	80	50	80	NA
DWR	WCR2012-002558	NA	#0162846	Other Unused	38.114444	-121.393889	NA	NA	NA	03N	05E	14	55-320-19	10/10/2012	NA	NA	NA	NA
DWR	WCR2021-001360	NA	NA	Monitoring	38.020124	-121.332112	NA	NA	NA	02N	06E	8	972-420-19	8/31/2020	NA	NA	NA	NA
DWR	WCR0112153	NA	39-274	Water Supply Industrial	37.97895	-121.38926	Centroid of Section	NA	NA	02N	05E	35	NA	NA	84	78	84	NA
DWR	WCR0128599	NA	E014551	NA	37.97895	-121.38926	Centroid of Section	NA	NA	02N	05E	35	NA	NA	NA	NA	NA	NA
DWR	WCR0219662	NA	39-280	Other Unknown	38.03567	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	NA	115	8	NA	NA
DWR	WCR0073002	NA	E0145198	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0199786	NA	E067309	NA	38.109	-121.39829	Centroid of Section	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0063126	NA	E014554	NA	37.97895	-121.38926	Centroid of Section	NA	NA	02N	05E	35	NA	NA	NA	NA	NA	NA
DWR	WCR0021156	NA	73504	Water Supply Domestic	38.07037	-121.30345	Centroid of Section	NA	NA	03N	06E	28	NA	7/15/1961	113	NA	NA	NA
DWR	WCR1955-000088	NA	16350	Other Not Specified	38.12346	-121.41747	Centroid of Section	NA	NA	03N	05E	10	NA	11/15/1955	55	NA	NA	NA
DWR	WCR0274285	NA	NA	NA	38.065	-121.36123	Centroid of Section	NA	NA	03N	06E	31	NA	NA	NA	NA	NA	NA
DWR	WCR0244716	NA	100072	Water Supply Irrigation - Agricultural	38.05027	-121.36084	Centroid of Section	NA										

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
DWR	WCR1966-000269	NA	44876A	Water Supply Domestic	38.10887	-121.37889	Centroid of Section	NA	NA	03N	05E	13	NA	8/6/1966	126	NA	NA	NA
DWR	WCR0203674	NA	E0154726	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR1987-000929	NA	44897A	Water Supply Domestic	38.109	-121.38629	Centroid of Section	NA	NA	02N	06E	14	NA	3/9/1987	NA	NA	NA	NA
DWR	WCR2001-000342	NA	E0145826	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR2000-000512	NA	723459	Water Supply Domestic	38.1255556	-121.4075	NA	NA	NA	03N	05E	11	25-100-6	1/11/2000	120	40	115	NA
DWR	WCR2008-007143	NA	0072443	Monitoring	37.99156	-121.34047	Centroid of Section	NA	NA	02N	06E	29	104-160-4	3/25/2008	55	40	55	NA
DWR	WCR2012-001594	NA	00145194	Other Unused	38.0208333	-121.3563889	NA	NA	NA	02N	06E	18	82-320-10	1/12/2012	NA	NA	NA	NA
DWR	WCR2008-000609	NA	940360	Monitoring	38.109	-121.38629	Centroid of Section	NA	NA	03N	05E	14	55-320-46	7/18/2008	50	40	50	NA
DWR	WCR2012-001216	NA	00150689	Injection	38.0255556	-121.3252778	NA	NA	NA	02N	06E	16	77-490-27	4/12/2012	59	56	58	NA
DWR	WCR2012-004882	NA	00156693	Other Unused	38.0213889	-121.3611111	NA	NA	NA	02N	06E	18	NA	7/11/2012	NA	NA	NA	NA
DWR	WCR2012-004227	NA	00156889	Other Unused	38.0216667	-121.3613889	NA	NA	NA	02N	06E	18	NA	7/10/2012	NA	NA	NA	NA
DWR	WCR2004-007565	NA	0020339	Water Supply Domestic	38.109	-121.38629	Centroid of Section	NA	NA	03N	05E	14	NA	11/30/2004	50	45	50	NA
DWR	WCR0058154	NA	E0145726	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0004185	NA	36118	NA	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	NA	NA	NA	NA	NA
DWR	WCR2021-000387	NA	E0101098	Monitoring	38.019119	-121.324271	NA	NA	NA	02N	06E	16	77-480-14	1/19/2023	NA	NA	NA	NA
DWR	WCR2021-000791	NA	NA	Cathodic Protection	38.029754	-121.331832	5 FT	NA	NA	02N	06E	8	7242016	3/8/2021	230	NA	NA	NA
DWR	WCR0091782	NA	8062	Water Supply Irrigation - Agricultural	38.10844	-121.34312	Centroid of Section	NA	NA	03N	05E	17	NA	4/8/1966	230	178	208	28
DWR	WCR0271600	NA	70109	Water Supply Domestic	38.06489	-121.34266	Centroid of Section	NA	NA	03N	05E	32	NA	5/16/1962	116	NA	NA	32
DWR	WCR0086041	NA	E022346	NA	38.06038	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0175752	NA	E0118204	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0214385	NA	E0101072	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR1989-004596	NA	288444	Monitoring	38.1	-121.32327	Centroid of Section	NA	NA	03N	05E	15	NA	6/1/1989	10	NA	NA	NA
DWR	WCR2004-000286	NA	780712	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-464-18	2/10/2004	84	NA	NA	NA
DWR	WCR1996-004083	NA	500624	Water Supply Domestic	38.10864	-121.36146	Centroid of Section	NA	NA	03N	05E	18	55-170-29	4/24/1996	280	144	155	NA
DWR	WCR1992-001163	NA	299330	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	79-350-16	8/17/1992	47	NA	NA	NA
DWR	WCR1992-009740	NA	4136396	Monitoring	38.02105	-121.32257	NA	NA	NA	02N	06E	16	77-360-21	11/10/1992	NA	NA	NA	NA
DWR	WCR0158118	NA	E021358	NA	38.109	-121.38629	Centroid of Section	NA	NA	03N	05E	14	NA	NA	NA	NA	NA	NA
DWR	WCR0212946	NA	E0080941	NA	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	NA	NA	NA	NA	NA	NA
DWR	WCR0271598	NA	97849	Water Supply Irrigation - Agricultural	38.065	-121.36123	Centroid of Section	NA	NA	03N	05E	31	NA	5/12/1981	176	114	154	23
DWR	WCR029107	NA	E0101098	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR1992-004795	NA	421295	Monitoring	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	82-320-10	12/10/1992	NA	NA	NA	NA
DWR	WCR1990-003768	NA	321530	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	75-230-34	8/28/1990	76	NA	NA	NA
DWR	WCR1989-006975	NA	304332A	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-410-31	3/3/1989	NA	NA	NA	NA
DWR	WCR1990-000482	NA	326258	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-410-31	7/27/1990	72	NA	NA	NA
DWR	WCR1991-001396	NA	299400	Monitoring	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	77-280-2	10/18/1991	65	NA	NA	NA
DWR	WCR1990-006644	NA	340680D	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-410-31	8/5/1990	69	NA	NA	NA
DWR	WCR1989-002941	NA	295642	NA	38.06064	-121.34089	Centroid of Section	NA	NA	02N	06E	20	NA	NA	NA	NA	NA	NA
DWR	WCR2008-008872	NA	0014471	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	79-350-16	7/6/2008	50	NA	NA	NA
DWR	WCR2004-007678	NA	0021257	Monitoring	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	12/22/2004	40	25	40	NA
DWR	WCR2005-004187	NA	1077705	Water Supply Domestic	38.07943	-121.34828	Centroid of Section	NA	NA	03N	05E	29	55-220-41	11/11/2005	310	230	250	46
DWR	WCR2012-002938	NA	00162824	Other Unused	38.1138889	-121.3933333	NA	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2012-002946	NA	00162834	Other Unused	38.1138889	-121.3944444	NA	NA	NA	03N	05E	14	55-320-19	10/1/2012	NA	NA	NA	NA
DWR	WCR2015-013375	NA	805350	Water Supply Public	38.115276	-121.376389	Unknown	NA	NA	03N	05E	13	NA	9/30/2015	NA	285	325	38
DWR	WCR2005-004617	NA	739038	Monitoring	38.0544444	-121.3708333	NA	NA	NA	02N	05E	1	68-20-1	5/6/2005	966	220	240	NA
DWR	WCR2011-005833	NA	00140435	Other Unused	37.995	-121.3447222	NA	NA	NA	02N	06E	32	116-190-7	11/3/2011	NA	NA	NA	NA
DWR	WCR2011-003728	NA	001341390	Other Unused	38.018559	-121.32772	Centroid of Section	NA	NA	02N	06E	9	79-170-39	7/20/2011	120	NA	NA	NA
DWR	WCR0052483	NA	39319	Other Unknown	37.99155	-121.34047	Centroid of Section	NA	NA	02N	06E	29	NA	5/5/1948	318	NA	NA	NA
DWR	WCR0005099	NA	11059	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	097-410-373	7/18/2003	NA	30	40	38
DWR	WCR0196200	NA	NA	NA	38.05957	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	NA	NA	NA	NA	NA
DWR	WCR0056598	NA	E0095023	NA	38.06038	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	NA	NA	NA	NA	NA
DWR	WCR0087763	NA	E0145184	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR0269674	NA	E0145785	NA	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0131491	NA	E001805	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	21	NA	NA	NA	NA	NA	NA
DWR	WCR0205829	NA	35800	Water Supply Irrigation - Agricultural	38.02105	-121.36146	Centroid of Section	NA	NA	03N	05E	18	NA	12/17/1980	NA	NA	NA	18
DWR	WCR0218272	NA	9742	Water Supply Irrigation - Agricultural	38.06084	-121.32456	Centroid of Section	NA	NA	03N	06E	21	NA	5/17/1956	210	NA	NA	NA
DWR	WCR0288665	NA	0012831	NA	38.02131	-121.36041	Centroid of Section	NA	NA	02N	06E	18	NA	NA	NA	NA	NA	NA
DWR	WCR010011	NA	26493	Water Supply Irrigation - Agricultural	38.07896	-121.36118	Centroid of Section	NA	NA	02N	06E	30	NA	NA	NA	NA	NA	NA
DWR	WCR1982-005737	NA	00136390	Monitoring	38.02105	-121.32257	NA	NA	NA	02N	06E	16	77-360-21	11/9/1992	NA	NA	NA	NA
DWR	WCR1985-000904	NA	163747	NA	38.05022	-121.32341	Centroid of Section	NA	NA	02N	06E	4	NA	NA	NA	172	NA	NA
DWR	WCR1986-002496	NA	178222	Remediation	38.05957	-121.34107	Centroid of Section	NA	NA	02N	06E	8	NA	2/9/1986	51	NA	NA	NA
DWR	WCR1986-001026	NA	320861	Water Supply Domestic	38.06478	-121.32415	Centroid of Section	NA	NA	02N	06E	13	77-460-12	12/28/1986	222	128/198	NA	NA
DWR	WCR1991-010939	NA	434106	Other Unused	38.06038	-121.36022	Centroid of Section	NA	NA	02N	06E	19	100-270-2	11/7/1991	NA	NA	NA	NA
DWR	WCR1989-005135	NA	304157	Monitoring	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	NA	1/12/1989	71	NA	NA	NA
DWR	WCR1992-001612	NA	476338	Water Supply Domestic	38.02117	-121.34098	Centroid of Section	NA	NA	02N	06E	17	NA	4/10/1992	320	300	320	NA
DWR	WCR1990-000999	NA	117768	Monitoring	38.06038	-121.36022	Centroid of Section	NA	NA	02N	06E	19	NA	3/1/1989	29	NA	NA	NA
DWR	WCR2008-001667	NA	805160	Water Supply Irrigation - Agriculture	38.12338	-121.39824	Centroid of Section	NA	NA	03N	05E	11	25-190-11	NA	130	110	130	22
DWR	WCR2003-008728	NA	E011961	Monitoring	38.06064	-121.32257	Centroid of Section	NA	NA	02N	06E	21	97-410-31	7/18/2003	42	30	42	NA
DWR	WCR2006-002238	NA	1097272	Other Unused	38.05026	-121.34188	Centroid of Section	NA	NA	02N	06E	5	70-40-2	8/10/2006	NA	NA	NA	NA
DWR	WCR2010-000208	NA	00121096	Other Unused	38.02105	-121.32257	Centroid of Section	NA	NA	02N	06E	16	77-460-14	10/14/2010	NA	NA	NA	NA
DWR	WCR2020-012518	NA	NA	Monitoring	38.072067	-121.371912	NA	NA	NA	02N	06E	21	081-260-52	6/12/2018	55	40	55	30
DWR	WCR2005-002814	NA	1077646	Water Supply Domestic	38.05953	-121.36101	Centroid of Section	NA	NA	02N	06E	7	89-100-XX	8/24/2005	370	330	370	116
DWR	WCR2008-004637	NA	0078116	Monitoring	38.0433333	-121.3555556	NA	NA	NA									

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Interval	Static Water Level
GAMA	CA3901080_001_001	NA	NA	Municipal	NA	NA	NA	38.042388	-121.318	02N	06E	9	NA	NA	NA	193	265	NA
GAMA	CA3901012_021_021	NA	NA	Municipal	NA	NA	NA	38.018385	-121.332509	02N	06E	17	NA	NA	NA	170	236	NA
GAMA	CA3901012_022_022	NA	NA	Municipal	NA	NA	NA	38.039156	-121.343901	02N	06E	8	NA	NA	NA	70	164	NA
GAMA	CA3901012_023_023	NA	NA	Municipal	NA	NA	NA	38.039156	-121.333333	02N	06E	30	NA	NA	NA	NA	NA	NA
GAMA	CA3901390_001_001	NA	NA	Municipal	NA	NA	NA	38.114133	-121.377673	03N	05E	13	NA	NA	NA	210	220	NA
GAMA	CA3900637_002_002	NA	NA	Municipal	NA	NA	NA	38.054904	-121.457667	02N	05E	5	NA	NA	NA	0	0	NA
GAMA	CA3900701_001_001	NA	NA	Municipal	NA	NA	NA	38.057389	-121.457694	02N	05E	5	NA	NA	NA	0	0	NA
GAMA	CA3900663_001_001	NA	NA	Municipal	NA	NA	NA	38.04179	-121.344168	02N	06E	8	NA	NA	NA	172	208	NA
GAMA	CA3901248_001_001	NA	NA	Municipal	NA	NA	NA	38.11299	-121.388682	03N	05E	13	NA	NA	NA	110	170	NA
GAMA	CA3910092_001_001	NA	NA	Municipal	NA	NA	NA	38.023398	-121.330199	02N	06E	16	NA	NA	NA	240	316	NA
GAMA	CA3901248_010_010	NA	NA	Municipal	NA	NA	NA	38.11827	-121.39017	03N	05E	11	NA	NA	NA	NA	NA	NA
GAMA	CA3910012_037_037	NA	NA	Municipal	NA	NA	NA	38.042596	-121.333669	02N	06E	8	NA	NA	NA	113	203	NA
GAMA	CA3900724_002_002	NA	NA	Municipal	NA	NA	NA	38.052481	-121.326971	02N	06E	4	NA	NA	NA	156	156	NA
GAMA	CA3900558_001_001	NA	NA	Municipal	NA	NA	NA	38.04175	-121.344168	02N	06E	8	NA	NA	NA	0	44	NA
GAMA	CA3901248_002_002	NA	NA	Municipal	NA	NA	NA	38.113654	-121.391997	03N	05E	14	NA	NA	NA	110	170	NA
GAMA	CA3900779_001_001	NA	NA	Municipal	NA	NA	NA	38.032352	-121.333559	02N	06E	8	NA	NA	NA	0	0	NA
GAMA	CA3901127_001_001	NA	NA	Municipal	NA	NA	NA	38.01	-121.33	02N	06E	21	NA	NA	NA	NA	NA	NA
GAMA	CA3705006_001_001	NA	NA	Municipal	NA	NA	NA	38.050385	-121.329175	02N	06E	4	NA	NA	NA	0	0	NA
GAMA	CA3900660_001_001	NA	NA	Municipal	NA	NA	NA	38.057389	-121.457694	02N	05E	5	NA	NA	NA	NA	NA	NA
GAMA	CA3901098_001_001	NA	NA	Municipal	NA	NA	NA	38.11	-121.30	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	CA3901205_007_007	NA	NA	Municipal	NA	NA	NA	38.045556	-121.318944	02N	06E	4	NA	NA	NA	NA	NA	NA
GAMA	CA3901499_007_007	NA	NA	Municipal	NA	NA	NA	38.114144	-121.486002	03N	06E	12	NA	NA	NA	NA	NA	NA
GAMA	CA3901493_001_001	NA	NA	Municipal	NA	NA	NA	38.023901	-121.313694	02N	06E	34	NA	NA	NA	195	275	NA
GAMA	CA3900616_002_002	NA	NA	Municipal	NA	NA	NA	37.988607	-121.404526	02N	05E	27	NA	NA	NA	0	0	NA
GAMA	CA3900573_001_001	NA	NA	Municipal	NA	NA	NA	38.03	-121.33	02N	06E	9	NA	NA	NA	NA	NA	NA
GAMA	CA3901133_001_001	NA	NA	Municipal	NA	NA	NA	38.01	-121.32	02N	06E	21	NA	NA	NA	NA	NA	NA
GAMA	CA3901280_001_001	NA	NA	Municipal	NA	NA	NA	38.023334	-121.311471	02N	06E	3	NA	NA	NA	0	0	NA
GAMA	CA3900779_001_001	NA	NA	Municipal	NA	NA	NA	38.03	-121.34	02N	06E	8	NA	NA	NA	0	0	NA
GAMA	CA3901360_008_008	NA	NA	Municipal	NA	NA	NA	38.054716	-121.457736	02N	05E	5	NA	NA	NA	NA	NA	NA
GAMA	CA3900616_001_001	NA	NA	Municipal	NA	NA	NA	37.999338	-121.407095	02N	05E	27	NA	NA	NA	0	0	NA
GAMA	CA3901205_001_001	NA	NA	Municipal	NA	NA	NA	38.045556	-121.318944	02N	06E	4	NA	NA	NA	0	0	NA
GAMA	CA3902063_002_002	NA	NA	Municipal	NA	NA	NA	38.113664	-121.391997	03N	05E	14	NA	NA	NA	0	0	NA
GAMA	CA3901249_001_001	NA	NA	Municipal	NA	NA	NA	38.113463	-121.395553	03N	05E	14	NA	NA	NA	0	0	NA
GAMA	CA3900796_001_001	NA	NA	Municipal	NA	NA	NA	38.01772	-121.444653	02N	06E	12	NA	NA	NA	159	159	NA
GAMA	CA3900566_002_002	NA	NA	Municipal	NA	NA	NA	38.054694	-121.457666	02N	05E	5	NA	NA	NA	100	120	NA
GAMA	CA3901286_001_001	NA	NA	Municipal	NA	NA	NA	38.04	-121.32	02N	06E	9	NA	NA	NA	0	0	NA
GAMA	81668	NA	NA	Domestic	NA	NA	NA	38.112489	-121.390451	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	81708	NA	NA	Domestic	NA	NA	NA	38.112489	-121.390451	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	81721	NA	NA	Domestic	NA	NA	NA	38.061419	-121.326136	03N	05E	33	NA	NA	NA	NA	NA	NA
GAMA	108054	NA	NA	Municipal	NA	NA	NA	38.052324	-121.468759	02N	05E	6	NA	NA	NA	NA	NA	NA
GAMA	81670	NA	NA	Domestic	NA	NA	NA	38.110887	-121.454885	03N	05E	17	NA	NA	NA	20	NA	NA
GAMA	81705	NA	NA	Domestic	NA	NA	NA	38.108903	-121.385519	03N	05E	18	NA	NA	NA	NA	NA	NA
GAMA	81707	NA	NA	Domestic	NA	NA	NA	38.098037	-121.356629	03N	05E	19	NA	NA	NA	200	NA	NA
GAMA	81702	NA	NA	Domestic	NA	NA	NA	38.130023	-121.360037	03N	05E	18	NA	NA	NA	104	NA	NA
GAMA	81703	NA	NA	Domestic	NA	NA	NA	38.112925	-121.357703	03N	05E	18	NA	NA	NA	NA	NA	NA
GAMA	81730	NA	NA	Domestic	NA	NA	NA	37.975774	-121.390575	03N	05E	31	NA	NA	NA	129	174	NA
GAMA	81704	NA	NA	Domestic	NA	NA	NA	38.107805	-121.360916	03N	05E	18	NA	NA	NA	100	NA	NA
GAMA	81719	NA	NA	Domestic	NA	NA	NA	38.083985	-121.320171	03N	05E	28	NA	NA	NA	170	NA	NA
GAMA	77994	NA	NA	Domestic	NA	NA	NA	38.052983	-121.422609	02N	05E	4	NA	NA	NA	NA	NA	NA
GAMA	81701	NA	NA	Domestic	NA	NA	NA	38.11019	-121.343208	03N	05E	17	NA	NA	NA	NA	NA	NA
GAMA	81709	NA	NA	Domestic	NA	NA	NA	38.097842	-121.340031	03N	05E	20	NA	NA	NA	NA	NA	NA
GAMA	81708	NA	NA	Domestic	NA	NA	NA	38.099792	-121.366288	03N	05E	19	NA	NA	NA	180	NA	NA
GAMA	78503	NA	NA	Domestic	NA	NA	NA	38.044917	-121.440917	02N	05E	5	NA	NA	NA	02N	NA	NA
GAMA	81687	NA	NA	Domestic	NA	NA	NA	38.115236	-121.378848	03N	05E	13	NA	NA	NA	NA	NA	NA
GAMA	78505	NA	NA	Domestic	NA	NA	NA	37.878633	-121.403232	02N	05E	35	NA	NA	NA	NA	NA	NA
GAMA	03N06E18000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0963	-121.4666	03N	05E	19	NA	NA	NA	NA	NA	NA
GAMA	03N06E17000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0926	-121.3326	03N	05E	17	NA	NA	NA	NA	NA	NA
GAMA	03N06E11400M	NA	NA	Water Supply, Other	NA	NA	NA	38.1218	-121.3878	03N	05E	12	NA	NA	NA	NA	NA	NA
GAMA	03N06E28000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0783	-121.3284	03N	05E	28	NA	NA	NA	NA	NA	NA
GAMA	03N06E18A000M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.461	03N	05E	17	NA	NA	NA	NA	NA	NA
GAMA	03N06E24000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.3924	03N	05E	35	NA	NA	NA	NA	NA	NA
GAMA	03N06E08F000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0385	-121.3436	02N	05E	8	NA	NA	NA	NA	NA	NA
GAMA	03N06E18M000M	NA	NA	Water Supply, Other	NA	NA	NA	38.1036	-121.365	03N	05E	18	NA	NA	NA	NA	NA	NA
GAMA	03N06E24C000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0096	-121.3787	02N	05E	24	NA	NA	NA	NA	NA	NA
GAMA	03N06E27P000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.4153	03N	05E	34	NA	NA	NA	NA	NA	NA
GAMA	03N06E26Q000M	NA	NA	Water Supply, Other	NA	NA	NA	37.9844	-121.3924	02N	05E	35	NA	NA	NA	NA	NA	NA
GAMA	03N06E02R000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0422	-121.3878	02N	05E	11	NA	NA	NA	NA	NA	NA
GAMA	03N06E14B000M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.3924	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	03N06E10B000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0926	-121.4107	03N	05E	12	NA	NA	NA	NA	NA	NA
GAMA	03N06E26C000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0819	-121.397	03N	05E	26	NA	NA	NA	NA	NA	NA
GAMA	03N06E36L000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0602	-121.3787	03N	05E	36	NA	NA	NA	NA	NA	NA
GAMA	03N06E28B000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0819	-121.3375	03N	05E	29	NA	NA	NA	NA	NA	NA
GAMA	03N06E02B000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0313	-121.3146	02N	05E	9	NA	NA	NA	NA	NA	NA
GAMA	03N06E20L000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0024	-121.3421	02N	05E	20	NA	NA	NA	NA	NA	NA
GAMA	03N06E05C000M	NA	NA	Water Supply, Other	NA	NA	NA	38.053	-121.4519	02N	05E	5	NA	NA	NA	NA	NA	NA
GAMA	03N06E04H000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0494	-121.3878	02N	05E	2	NA	NA	NA	NA	NA	NA
GAMA	03N06E03C000M	NA	NA	Water Supply, Other	NA	NA	NA	38.1252	-121.3787	03N	05E	12	NA	NA	NA	NA	NA	NA
GAMA	03N06E14L000M	NA	NA	Water Supply, Other	NA	NA	NA	38.1036	-121.397	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	03N06E26R000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.3878	03N	05E	36	NA	NA	NA	NA	NA	NA
GAMA	03N06E21L000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0891	-121.4336	03N	05E							

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Corroded Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
GAMA	03N06E27G001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0763	-121.4107	03N	05E	27	NA	NA	NA	NA	NA	NA
GAMA	03N06E29L001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0747	-121.4519	03N	05E	29	NA	NA	NA	NA	NA	NA
GAMA	03N06E230002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0963	-121.4016	03N	05E	23	NA	NA	NA	NA	NA	NA
GAMA	03N06E13C001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.3787	03N	05E	13	NA	NA	NA	NA	NA	NA
GAMA	03N06E16A001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.4244	03N	05E	16	NA	NA	NA	NA	NA	NA
GAMA	03N06E12K001M	NA	NA	Water Supply, Other	NA	NA	NA	38.118	-121.3741	03N	05E	12	NA	NA	NA	NA	NA	NA
GAMA	03N06E320001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0819	-121.4748	03N	05E	32	NA	NA	NA	NA	NA	NA
GAMA	03N06E38M002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0623	-121.3833	03N	05E	38	NA	NA	NA	NA	NA	NA
GAMA	03N06E30F001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0763	-121.3604	03N	05E	30	NA	NA	NA	NA	NA	NA
GAMA	03N06E21B002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0963	-121.3192	03N	05E	21	NA	NA	NA	NA	NA	NA
GAMA	03N06E120001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.3467	03N	05E	12	NA	NA	NA	NA	NA	NA
GAMA	03N06E30J001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0747	-121.3512	03N	05E	29	NA	NA	NA	NA	NA	NA
GAMA	03N06E20C006M	NA	NA	Water Supply, Other	NA	NA	NA	38.0963	-121.3421	03N	05E	20	NA	NA	NA	NA	NA	NA
GAMA	03N06E36D001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0674	-121.3833	03N	05E	36	NA	NA	NA	NA	NA	NA
GAMA	03N06E28L001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.397	02N	05E	28	NA	NA	NA	NA	NA	NA
GAMA	02N06E15D0002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0241	-121.3101	02N	05E	15	NA	NA	NA	NA	NA	NA
GAMA	03N06E12M001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0313	-121.3833	02N	05E	12	NA	NA	NA	NA	NA	NA
GAMA	03N06E28R000M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.3878	03N	05E	38	NA	NA	NA	NA	NA	NA
GAMA	03N06E13C001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.4153	03N	05E	13	NA	NA	NA	NA	NA	NA
GAMA	03N06E27K001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0747	-121.4107	03N	05E	27	NA	NA	NA	NA	NA	NA
GAMA	03N06E23D001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0963	-121.4016	03N	05E	23	NA	NA	NA	NA	NA	NA
GAMA	03N06E15C004M	NA	NA	Water Supply, Other	NA	NA	NA	38.0963	-121.3604	03N	05E	15	NA	NA	NA	NA	NA	NA
GAMA	03N06E20E001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0927	-121.3467	03N	05E	20	NA	NA	NA	NA	NA	NA
GAMA	02N06E35K001M	NA	NA	Water Supply, Other	NA	NA	NA	37.8736	-121.3924	02N	05E	35	NA	NA	NA	NA	NA	NA
GAMA	02N06E07P001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0278	-121.3604	02N	05E	18	NA	NA	NA	NA	NA	NA
GAMA	03N06E26H001M	NA	NA	Water Supply, Other	NA	NA	NA	37.8916	-121.3878	02N	05E	26	NA	NA	NA	NA	NA	NA
GAMA	03N06E17F002M	NA	NA	Water Supply, Other	NA	NA	NA	38.026	-121.3238	03N	05E	21	NA	NA	NA	NA	NA	NA
GAMA	03N06E10R001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1144	-121.4061	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	03N06E15A001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.4061	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	03N06E27N001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.4199	03N	05E	27	NA	NA	NA	NA	NA	NA
GAMA	03N06E32N002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0586	-121.4565	03N	05E	5	NA	NA	NA	NA	NA	NA
GAMA	03N06E23E002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0927	-121.4016	03N	05E	23	NA	NA	NA	NA	NA	NA
GAMA	03N06E36E001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0638	-121.3833	03N	05E	36	NA	NA	NA	NA	NA	NA
GAMA	03N06E21K002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0819	-121.3192	03N	05E	21	NA	NA	NA	NA	NA	NA
GAMA	03N06E21Q001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0855	-121.3192	03N	05E	28	NA	NA	NA	NA	NA	NA
GAMA	03N06E35K001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0602	-121.3924	03N	05E	35	NA	NA	NA	NA	NA	NA
GAMA	03N06E26H002M	NA	NA	Water Supply, Other	NA	NA	NA	37.8916	-121.3878	02N	05E	26	NA	NA	NA	NA	NA	NA
GAMA	03N06E21Q001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0819	-121.3469	03N	05E	21	NA	NA	NA	NA	NA	NA
GAMA	02N06E20J001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0024	-121.3329	02N	05E	20	NA	NA	NA	NA	NA	NA
GAMA	02N06E16H001M	NA	NA	Water Supply, Other	NA	NA	NA	38.023	-121.3186	02N	05E	16	NA	NA	250	NA	NA	NA
GAMA	02N06E01C001M	NA	NA	Water Supply, Other	NA	NA	NA	38.053	-121.3787	02N	05E	1	NA	NA	NA	NA	NA	NA
GAMA	03N06E44A002M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.4244	03N	05E	15	NA	NA	NA	NA	NA	NA
GAMA	03N06E34L001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0602	-121.4153	03N	05E	34	NA	NA	NA	NA	NA	NA
GAMA	03N06E15C003M	NA	NA	Water Supply, Other	NA	NA	NA	38.0963	-121.3604	03N	05E	15	NA	NA	NA	NA	NA	NA
GAMA	03N06E20H001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0927	-121.3329	03N	05E	21	NA	NA	NA	NA	NA	NA
GAMA	03N06E28A001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.3467	03N	05E	29	NA	NA	NA	NA	NA	NA
GAMA	02N06E09K001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0313	-121.3192	02N	05E	9	NA	NA	NA	NA	NA	NA
GAMA	03N06E36K001M	NA	NA	Water Supply, Other	NA	NA	NA	37.8736	-121.3741	02N	05E	36	NA	NA	NA	NA	NA	NA
GAMA	03N06E08B001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0385	-121.3192	02N	05E	8	NA	NA	NA	NA	NA	NA
GAMA	03N06E16E001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0133	-121.3146	03N	05E	21	NA	NA	NA	NA	NA	NA
GAMA	02N06E06C001M	NA	NA	Water Supply, Other	NA	NA	NA	38.053	-121.3604	02N	05E	6	NA	NA	NA	NA	NA	NA
GAMA	03N06E18C002M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.4702	03N	05E	18	NA	NA	NA	NA	NA	NA
GAMA	03N06E32G001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0638	-121.4666	03N	05E	32	NA	NA	NA	NA	NA	NA
GAMA	03N06E32G001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.4666	03N	05E	31	NA	NA	NA	NA	NA	NA
GAMA	03N06E29P002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.3421	03N	05E	32	NA	NA	NA	NA	NA	NA
GAMA	03N06E08N001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1144	-121.4565	03N	05E	17	NA	NA	NA	NA	NA	NA
GAMA	03N06E11E001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1216	-121.4016	03N	05E	11	NA	NA	NA	NA	NA	NA
GAMA	03N06E19K001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1038	-121.4107	03N	05E	19	NA	NA	NA	NA	NA	NA
GAMA	02N06E17A001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0241	-121.3329	02N	05E	17	NA	NA	NA	NA	NA	NA
GAMA	03N06E26A002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0819	-121.3878	03N	05E	25	NA	NA	NA	NA	NA	NA
GAMA	03N06E21Q001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0819	-121.3833	02N	05E	24	NA	NA	NA	NA	NA	NA
GAMA	03N06E27D001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0819	-121.3101	03N	05E	27	NA	NA	NA	NA	NA	NA
GAMA	02N06E08P003M	NA	NA	Water Supply, Other	NA	NA	NA	38.0277	-121.3421	02N	05E	17	NA	NA	NA	NA	NA	NA
GAMA	03N06E15A001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1038	-121.4061	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	03N06E04L001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0494	-121.3604	02N	05E	4	NA	NA	NA	NA	NA	NA
GAMA	03N06E05D001M	NA	NA	Water Supply, Other	NA	NA	NA	38.053	-121.3467	02N	05E	5	NA	NA	NA	NA	NA	NA
GAMA	03N06E24C003M	NA	NA	Water Supply, Other	NA	NA	NA	38.026	-121.3787	03N	05E	24	NA	NA	NA	NA	NA	NA
GAMA	03N06E08L001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0313	-121.3421	02N	05E	8	NA	NA	NA	NA	NA	NA
GAMA	03N06E10H002M	NA	NA	Water Supply, Other	NA	NA	NA	38.1216	-121.4061	03N	05E	11	NA	NA	NA	NA	NA	NA
GAMA	03N06E32M001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0602	-121.4565	03N	05E	32	NA	NA	NA	NA	NA	NA
GAMA	03N06E09P002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0277	-121.397	03N	05E	26	NA	NA	NA	NA	NA	NA
GAMA	03N06E33P001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0586	-121.4336	02N	05E	4	NA	NA	NA	NA	NA	NA
GAMA	03N06E18C001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1108	-121.3604	03N	05E	18	NA	NA	NA	NA	NA	NA
GAMA	03N06E20Q002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0855	-121.3375	03N	05E	29	NA	NA	NA	NA	NA	NA
GAMA	03N06E28A001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.3329	03N	05E	29	NA	NA	NA	NA	NA	NA
GAMA	03N06E17J001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1038	-121.3329	03N	05E	16	NA	NA	NA	NA	NA	NA
GAMA	03N06E23L001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0891	-121.397	03N	05E	23	NA	NA	NA	NA	NA	NA
GAMA	03N06E20M002M	NA	NA	Water Supply, Other	NA	NA	NA	38.0024	-121.3467	02N	05E	20	NA	NA	NA	NA	NA	NA
GAMA	03N06E19P001M	NA	NA	Water Supply, Other	NA	NA	NA	38.0711	-121.3604	03N	05E	19	NA	NA	NA	NA	NA	NA
GAMA	03N06E19H001M	NA	NA	Water Supply, Other	NA	NA	NA	38.1072	-121.4061	03N	05E	14	NA	NA	NA	NA	NA	NA

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level	
GAMA	T0607700612-MW-4	NA	NA	Monitoring	NA	NA	NA	38.0207871	-121.3565766	02N	06E	18	NA	NA	NA	NA	NA	NA	
GAMA	T0607700615-EW-10	NA	NA	Monitoring	NA	NA	NA	38.1140152	-121.3593411	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700615-MW-12A	NA	NA	Monitoring	NA	NA	NA	38.1140152	-121.3593877	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700615-MW-20B	NA	NA	Monitoring	NA	NA	NA	38.1144866	-121.3540332	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700718-MW-5D	NA	NA	Monitoring	NA	NA	NA	37.8851443	-121.3449712	02N	06E	29	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-MW-13A	NA	NA	Monitoring	NA	NA	NA	38.1142679	-121.350939	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-MW-16	NA	NA	Monitoring	NA	NA	NA	38.1135497	-121.350524	03N	05E	14	NA	NA	NA	19.25	NA	NA	
GAMA	T0607700828-MW-5	NA	NA	Monitoring	NA	NA	NA	38.0288907	-121.3302737	02N	06E	8	NA	NA	NA	42.83	NA	NA	
GAMA	T0607736979-MW-10A	NA	NA	Monitoring	NA	NA	NA	38.11364	-121.3503063	03N	05E	14	NA	NA	NA	10	35	NA	
GAMA	T0607736979-MW-5A	NA	NA	Monitoring	NA	NA	NA	38.1148726	-121.3502626	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607736979-MW-9B	NA	NA	Monitoring	NA	NA	NA	38.0108638	-121.3521026	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700134-A-S-3	NA	NA	Monitoring	NA	NA	NA	38.0255674	-121.33382	02N	06E	17	NA	NA	NA	NA	NA	NA	
GAMA	T0607700035-MW-6	NA	NA	Monitoring	NA	NA	NA	38.0107486	-121.3207508	02N	06E	21	NA	NA	66.11	NA	NA	NA	
GAMA	T1000007741-MW-P-NA	NA	NA	Monitoring	NA	NA	NA	38.0446683	-121.417976	02N	05E	3	NA	NA	NA	NA	17	NA	
GAMA	T1000010860-MW-6B	NA	NA	Monitoring	NA	NA	NA	38.0207742	-121.3341418	02N	06E	17	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-MW-00A	NA	NA	Monitoring	NA	NA	NA	38.0107414	-121.3232324	02N	06E	21	NA	NA	NA	41.5	61.5	NA	
GAMA	T0607700257-MW-8	NA	NA	Monitoring	NA	NA	NA	38.0556366	-121.3496068	02N	06E	20	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-EW-5	NA	NA	Monitoring	NA	NA	NA	38.1136921	-121.3543434	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700134-VW-2	NA	NA	Monitoring	NA	NA	NA	38.0206922	-121.3336615	02N	06E	17	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-MW-10A	NA	NA	Monitoring	NA	NA	NA	38.0129984	-121.3251154	02N	06E	21	NA	NA	NA	46	76	NA	
GAMA	SL205132997-GEW-01	NA	NA	Monitoring	NA	NA	NA	38.0115249	-121.3210146	02N	06E	21	NA	NA	NA	30	80	NA	
GAMA	T0607700741-MW-3B	NA	NA	Monitoring	NA	NA	NA	38.0211713	-121.31479	02N	06E	16	NA	NA	NA	63.5	69.5	NA	
GAMA	T0607700815-EW-8	NA	NA	Monitoring	NA	NA	NA	38.1138367	-121.3541865	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-MW20A	NA	NA	Monitoring	NA	NA	NA	38.1144847	-121.3540323	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700906-MW-7	NA	NA	Monitoring	NA	NA	NA	38.0211464	-121.3566912	02N	06E	18	NA	NA	NA	NA	NA	NA	
GAMA	T0607736979-MW-12A	NA	NA	Monitoring	NA	NA	NA	38.11546	-121.3541021	03N	05E	14	NA	NA	NA	10	35	NA	
GAMA	T0607736979-MW-7B	NA	NA	Monitoring	NA	NA	NA	38.1146355	-121.3545452	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700659-MW-3	NA	NA	Monitoring	NA	NA	NA	38.0263231	-121.3232341	02N	06E	9	NA	NA	NA	47.9	NA	NA	
GAMA	T0607700134-VW-1	NA	NA	Monitoring	NA	NA	NA	38.020675	-121.3335447	02N	06E	17	NA	NA	NA	NA	NA	NA	
GAMA	T0607700170-MW-13	NA	NA	Monitoring	NA	NA	NA	38.1158756	-121.4854966	03N	05E	13	NA	NA	NA	21.19	NA	NA	
GAMA	T0607700441-MW-1-NA	NA	NA	Monitoring	NA	NA	NA	38.0050284	-121.3524501	02N	05E	19	NA	NA	NA	NA	NA	NA	
GAMA	T0607700441-MW-4	NA	NA	Monitoring	NA	NA	NA	38.0051881	-121.3523536	02N	06E	19	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-MW9A	NA	NA	Monitoring	NA	NA	NA	38.1136694	-121.3565416	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-GEW-01	NA	NA	Monitoring	NA	NA	NA	38.0107113	-121.3211371	02N	06E	21	NA	NA	NA	30.5	80.5	NA	
GAMA	SL205132997-MW-11	NA	NA	Monitoring	NA	NA	NA	38.0115436	-121.3170613	02N	06E	21	NA	NA	NA	48	78	NA	
GAMA	T0607700504-MW-19	NA	NA	Monitoring	NA	NA	NA	38.0191368	-121.3239749	02N	06E	16	NA	NA	NA	39.5	25	40	NA
GAMA	T0607700815-MW17	NA	NA	Monitoring	NA	NA	NA	38.1142361	-121.3505704	03N	05E	14	NA	NA	NA	48.1	40	45	NA
GAMA	T0607736979-MW-3B	NA	NA	Monitoring	NA	NA	NA	38.1148666	-121.3523666	03N	05E	14	NA	NA	NA	35	45	NA	
GAMA	T0607700002-E-7	NA	NA	Monitoring	NA	NA	NA	38.0043513	-121.3486719	02N	06E	20	NA	NA	NA	5	20	NA	NA
GAMA	T0607700612-MW-12	NA	NA	Monitoring	NA	NA	NA	38.0217433	-121.354952	02N	06E	18	NA	NA	NA	NA	NA	NA	
GAMA	T0607700812-MW-9	NA	NA	Monitoring	NA	NA	NA	38.0210417	-121.3566889	02N	06E	18	NA	NA	NA	NA	NA	NA	
GAMA	T0607700657-MW-2B	NA	NA	Monitoring	NA	NA	NA	38.0205366	-121.3501263	02N	06E	20	NA	NA	NA	NA	NA	NA	
GAMA	T0607700074-MW-12	NA	NA	Monitoring	NA	NA	NA	38.0212127	-121.31468	02N	06E	16	NA	NA	NA	NA	30	50	NA
GAMA	T0607700074-VW-3	NA	NA	Monitoring	NA	NA	NA	38.0211822	-121.314779	02N	06E	16	NA	NA	NA	NA	40	65	NA
GAMA	T0607700879-MW-13	NA	NA	Monitoring	NA	NA	NA	38.021367	-121.3251525	02N	06E	16	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-MW-101	NA	NA	Monitoring	NA	NA	NA	38.0110881	-121.321128	02N	06E	21	NA	NA	NA	NA	73.2	NA	NA
GAMA	T0607700815-MW-15A	NA	NA	Monitoring	NA	NA	NA	38.1130474	-121.3548519	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607736979-MW-9C	NA	NA	Monitoring	NA	NA	NA	38.1135671	-121.3521016	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700504-MW-6	NA	NA	Monitoring	NA	NA	NA	38.0190568	-121.3236206	02N	06E	16	NA	NA	NA	87.74	NA	NA	
GAMA	T0607700828-MW-4	NA	NA	Monitoring	NA	NA	NA	38.0203073	-121.3319874	02N	06E	8	NA	NA	NA	43.1	NA	NA	
GAMA	SL205132997-GEW-0A	NA	NA	Monitoring	NA	NA	NA	38.01104	-121.3211932	02N	06E	21	NA	NA	NA	30.5	80.5	NA	
GAMA	SL205132997-GEW-01	NA	NA	Monitoring	NA	NA	NA	38.0122951	-121.3213134	02N	06E	21	NA	NA	NA	30	90	NA	
GAMA	SL205132997-MW-00A	NA	NA	Monitoring	NA	NA	NA	38.0106627	-121.3239789	02N	06E	21	NA	NA	NA	56	70	NA	
GAMA	SL205132997-MW-02A	NA	NA	Monitoring	NA	NA	NA	38.0105248	-121.323958	02N	06E	21	NA	NA	NA	110	130	NA	
GAMA	SL205132997-MW-20A	NA	NA	Monitoring	NA	NA	NA	38.0094823	-121.3211762	02N	06E	21	NA	NA	NA	110	125	NA	
GAMA	SL205132997-MW-3A	NA	NA	Monitoring	NA	NA	NA	38.0108128	-121.3183219	02N	06E	21	NA	NA	NA	107	127	NA	
GAMA	SL205132997-MW-3B	NA	NA	Monitoring	NA	NA	NA	38.011436	-121.3181401	02N	06E	16	NA	NA	NA	102	102	NA	
GAMA	T0607700002-E-10	NA	NA	Monitoring	NA	NA	NA	38.0047701	-121.3500536	02N	06E	20	NA	NA	NA	8	25	NA	NA
GAMA	T0607700002-E-6	NA	NA	Monitoring	NA	NA	NA	38.0044454	-121.3502115	02N	06E	20	NA	NA	NA	4.5	19.5	NA	NA
GAMA	T0607700002-MW-2	NA	NA	Monitoring	NA	NA	NA	38.0044394	-121.3503148	02N	06E	20	NA	NA	NA	8.5	28.5	NA	NA
GAMA	T0607700074-MW-7	NA	NA	Monitoring	NA	NA	NA	38.0213377	-121.315343	02N	06E	16	NA	NA	NA	15.8	74.5	NA	NA
GAMA	T0607700074-VW-11	NA	NA	Monitoring	NA	NA	NA	38.0212293	-121.314714	02N	06E	16	NA	NA	NA	NA	45	69	NA
GAMA	T0607700074-MW-1A	NA	NA	Monitoring	NA	NA	NA	38.0211489	-121.314486	02N	06E	16	NA	NA	NA	60.5	61.5	NA	NA
GAMA	T0607700074-MW-13	NA	NA	Monitoring	NA	NA	NA	38.0212292	-121.314807	02N	06E	16	NA	NA	NA	NA	30	50	NA
GAMA	T0607700074-MW-2	NA	NA	Monitoring	NA	NA	NA	38.0211474	-121.31454	02N	06E	16	NA	NA	NA	60	76	NA	NA
GAMA	T0607700505-MW-3	NA	NA	Monitoring	NA	NA	NA	38.0213419	-121.322502	02N	06E	16	NA	NA	NA	NA	NA	NA	NA
GAMA	T0607700658-MW-4	NA	NA	Monitoring	NA	NA	NA	38.0206989	-121.321973	02N	06E	9	NA	NA	NA	45.23	NA	NA	NA
GAMA	T0607700504-MW-12A	NA	NA	Monitoring	NA	NA	NA	38.0192504	-121.3242926	02N	06E	16	NA	NA	NA	74.9	NA	NA	NA
GAMA	T0607700504-MW-7	NA	NA	Monitoring	NA	NA	NA	38.019543	-121.32239	02N	06E	16	NA	NA	NA	54.9	NA	NA	NA
GAMA	T0607700828-MW-1	NA	NA	Monitoring	NA	NA	NA	38.0201267	-121.3332128	02N	06E	8	NA	NA	NA	44.31	NA	NA	NA
GAMA	T0607700828-MW-8	NA	NA	Monitoring	NA	NA	NA	38.0209927	-121.3322707	02N	06E	8	NA	NA	NA	110.4	NA	NA	NA
GAMA	T0607700310-MW10	NA	NA	Monitoring	NA	NA	NA	38.0553485	-121.4583194	02N	05E	5	NA	NA	NA	27.5	NA	NA	NA
GAMA	T0607700659-MW-6	NA	NA	Monitoring	NA	NA	NA	38.020505	-121.4591872	02N	06E	9	NA	NA	NA	15.8	NA	NA	NA
GAMA	T0607700659-MW-6	NA	NA	Monitoring	NA	NA	NA	38.0203238	-121.3221617	02N	06E	9	NA	NA	NA	48.35	NA	NA	NA
GAMA	T0607700718-MW-1	NA	NA	Monitoring	NA	NA	NA	37.8846448	-121.345012	02N	06E	32	NA	NA	NA	25.38	NA	NA	NA
GAMA	T0607700718-MW-8	NA	NA	Monitoring	NA	NA	NA	37.8845569	-121.346089	02N	06E	32	NA						

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level	
GAMA	T0607700612-MW-11	NA	NA	Monitoring	NA	NA	NA	38.0212294	-121.3544328	02N	06E	18	NA	NA	NA	NA	NA	NA	
GAMA	T0607700612-MW-5	NA	NA	Monitoring	NA	NA	NA	38.0210845	-121.356375	02N	06E	18	NA	NA	NA	NA	NA	NA	
GAMA	T0607700612-MW-8	NA	NA	Monitoring	NA	NA	NA	38.0210874	-121.3562853	02N	06E	18	NA	NA	NA	NA	NA	NA	
GAMA	T0607700615-EW-5	NA	NA	Monitoring	NA	NA	NA	38.1138764	-121.3849531	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700615-MW-13A	NA	NA	Monitoring	NA	NA	NA	38.1136402	-121.3968134	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700615-MW-16	NA	NA	Monitoring	NA	NA	NA	38.1136317	-121.3946654	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700615-MW-14	NA	NA	Monitoring	NA	NA	NA	38.1140594	-121.3941789	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700615-MW-8A	NA	NA	Monitoring	NA	NA	NA	38.1142462	-121.3841863	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700658-MW-4D	NA	NA	Monitoring	NA	NA	NA	38.0297157	-121.321973	02N	06E	9	NA	NA	67.35	NA	NA	NA	
GAMA	T0607700718-MW-10S	NA	NA	Monitoring	NA	NA	NA	37.894191	-121.3459877	02N	06E	32	NA	NA	14.88	NA	NA	NA	
GAMA	T0607700718-MW-7D	NA	NA	Monitoring	NA	NA	NA	37.8949099	-121.3456712	02N	06E	29	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-MW19A	NA	NA	Monitoring	NA	NA	NA	38.1136116	-121.3961356	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-MW16	NA	NA	Monitoring	NA	NA	NA	38.1141989	-121.3950076	03N	05E	14	NA	NA	24.56	5	25	NA	
GAMA	T0607700815-MW14	NA	NA	Monitoring	NA	NA	NA	38.1136535	-121.3947079	03N	05E	14	NA	NA	23.4	NA	NA	NA	
GAMA	T0607700828-MW-3	NA	NA	Monitoring	NA	NA	NA	38.0202909	-121.3321758	02N	06E	8	NA	NA	44.67	NA	NA	NA	
GAMA	T0607700828-MW-7	NA	NA	Monitoring	NA	NA	NA	38.0203697	-121.331669	02N	06E	9	NA	NA	44.33	NA	NA	NA	
GAMA	T0607700906-MW-4	NA	NA	Monitoring	NA	NA	NA	38.0211027	-121.3567688	02N	06E	18	NA	NA	NA	NA	NA	NA	
GAMA	T0607736979-MW-11A	NA	NA	Monitoring	NA	NA	NA	38.114607	-121.3928578	03N	05E	14	NA	NA	NA	40	90	NA	
GAMA	T0607736979-MW-13S	NA	NA	Monitoring	NA	NA	NA	38.11596	-121.3938036	03N	05E	14	NA	NA	27.2	40	90	NA	
GAMA	T0607736979-MW-4B	NA	NA	Monitoring	NA	NA	NA	38.1147051	-121.3932231	03N	05E	14	NA	NA	NA	43	48	NA	
GAMA	T0607736979-MW-4C	NA	NA	Monitoring	NA	NA	NA	38.1143728	-121.3927546	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700718-MW-8S	NA	NA	Monitoring	NA	NA	NA	37.8942354	-121.3452812	02N	06E	32	NA	NA	14.86	NA	NA	NA	
GAMA	T1000007741-MW-P-3	NA	NA	Monitoring	NA	NA	NA	38.0448008	-121.4189507	02N	05E	3	NA	NA	NA	10	20	NA	
GAMA	T1000007741-MW-P-2	NA	NA	Monitoring	NA	NA	NA	38.0441066	-121.4182196	02N	05E	3	NA	NA	NA	9	19	NA	
GAMA	T1000007741-MW-P-4	NA	NA	Monitoring	NA	NA	NA	38.0438994	-121.4180116	02N	05E	3	NA	NA	NA	9	19	NA	
GAMA	T1000010960-MW-6B	NA	NA	Monitoring	NA	NA	NA	38.0207678	-121.3341418	02N	06E	17	NA	NA	NA	NA	NA	NA	
GAMA	T0607700674-MW-5	NA	NA	Monitoring	NA	NA	NA	38.0233927	-121.3148833	02N	06E	16	NA	NA	NA	36	61	NA	
GAMA	T0607736979-EW-1	NA	NA	Monitoring	NA	NA	NA	38.1146848	-121.3942082	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607736979-EW-4	NA	NA	Monitoring	NA	NA	NA	38.1150165	-121.3937546	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-PZ-013A	NA	NA	Monitoring	NA	NA	NA	38.0107722	-121.3201953	02N	06E	21	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-W-1A	NA	NA	Monitoring	NA	NA	NA	38.0110385	-121.321546	02N	06E	21	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-W-2A	NA	NA	Monitoring	NA	NA	NA	38.0105751	-121.3218182	02N	06E	21	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-CHMW-1	NA	NA	Monitoring	NA	NA	NA	38.0106816	-121.3212509	02N	06E	21	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-GEW-0A	NA	NA	Monitoring	NA	NA	NA	38.0105159	-121.3206693	02N	06E	21	NA	NA	NA	28	83	NA	
GAMA	SL205132997-GEW-0A	NA	NA	Monitoring	NA	NA	NA	38.0107392	-121.3207874	02N	06E	21	NA	NA	NA	28	83	NA	
GAMA	SL205132997-GEW-0A	NA	NA	Monitoring	NA	NA	NA	38.0117826	-121.3211276	02N	06E	21	NA	NA	NA	30	80	NA	
GAMA	SL205132997-GEW-0A	NA	NA	Monitoring	NA	NA	NA	38.0128069	-121.3214904	02N	06E	21	NA	NA	NA	30	80	NA	
GAMA	SL205132997-EW-1A	NA	NA	Monitoring	NA	NA	NA	38.0104241	-121.3217533	02N	06E	21	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-W-1A	NA	NA	Monitoring	NA	NA	NA	38.0104436	-121.3217537	02N	06E	21	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-W-3A	NA	NA	Monitoring	NA	NA	NA	38.0106414	-121.3214892	02N	06E	21	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-MW-00A	NA	NA	Monitoring	NA	NA	NA	38.0098032	-121.3229547	02N	06E	21	NA	NA	NA	43	58	NA	
GAMA	SL205132997-MW-02B	NA	NA	Monitoring	NA	NA	NA	38.0103343	-121.3241541	02N	06E	21	NA	NA	NA	41	61	NA	
GAMA	SL205132997-MW-01A	NA	NA	Monitoring	NA	NA	NA	38.01217	-121.3213073	02N	06E	21	NA	NA	NA	44	64	NA	
GAMA	SL205132997-MW-10A	NA	NA	Monitoring	NA	NA	NA	38.0110047	-121.3213909	02N	06E	21	NA	NA	NA	43	63	NA	
GAMA	SL205132997-MW-10A	NA	NA	Monitoring	NA	NA	NA	38.0103054	-121.3269599	02N	06E	21	NA	NA	NA	51	78	NA	
GAMA	SL205132997-MW-10B	NA	NA	Monitoring	NA	NA	NA	38.0111425	-121.3265709	02N	06E	21	NA	NA	NA	60	80	NA	
GAMA	SL205132997-MW-11A	NA	NA	Monitoring	NA	NA	NA	38.0116206	-121.3269949	02N	06E	21	NA	NA	NA	60	80	NA	
GAMA	SL205132997-MW-20A	NA	NA	Monitoring	NA	NA	NA	38.0107191	-121.3228603	02N	06E	21	NA	NA	NA	91.5	94	NA	
GAMA	SL205132997-MW-20A	NA	NA	Monitoring	NA	NA	NA	38.0117146	-121.3205633	02N	06E	21	NA	NA	NA	89.4	100.4	NA	
GAMA	SL205132997-MW-20B	NA	NA	Monitoring	NA	NA	NA	38.0128664	-121.327214	02N	06E	21	NA	NA	NA	110	131	NA	
GAMA	SL205132997-MW-21A	NA	NA	Monitoring	NA	NA	NA	38.0104181	-121.3222697	02N	06E	21	NA	NA	NA	109	129	NA	
GAMA	SL205132997-MW-21A	NA	NA	Monitoring	NA	NA	NA	38.0129574	-121.3150018	02N	06E	21	NA	NA	NA	115	145	NA	
GAMA	SL205132997-MW-30A	NA	NA	Monitoring	NA	NA	NA	38.0106828	-121.3205531	02N	06E	21	NA	NA	NA	126	152	NA	
GAMA	SL205132997-MW-131A	NA	NA	Monitoring	NA	NA	NA	38.0105669	-121.3216735	02N	06E	21	NA	NA	NA	NA	NA	NA	
GAMA	SL205132997-PZ-013A	NA	NA	Monitoring	NA	NA	NA	38.0106915	-121.3201583	02N	06E	21	NA	NA	NA	NA	NA	NA	
GAMA	T0607700504-MW-15	NA	NA	Monitoring	NA	NA	NA	38.0192319	-121.3240152	02N	06E	16	NA	NA	45.43	NA	NA	NA	
GAMA	T0607700504-MW-20	NA	NA	Monitoring	NA	NA	NA	38.0106424	-121.3243917	02N	06E	16	NA	NA	59.94	56	56	NA	
GAMA	T0607700504-MW-21	NA	NA	Monitoring	NA	NA	NA	38.0191631	-121.3244487	02N	06E	16	NA	NA	59.96	55	60	NA	
GAMA	T0607700504-MW-25	NA	NA	Monitoring	NA	NA	NA	38.0196133	-121.3236385	02N	06E	16	NA	NA	39.5	NA	NA	NA	
GAMA	T0607700504-MW-4B	NA	NA	Monitoring	NA	NA	NA	38.0191133	-121.3241475	02N	06E	16	NA	NA	45.06	NA	NA	NA	
GAMA	T0607700504-MW-5	NA	NA	Monitoring	NA	NA	NA	38.0192324	-121.3236581	02N	06E	16	NA	NA	57.72	56	56	NA	
GAMA	T0607700504-VW-3	NA	NA	Monitoring	NA	NA	NA	38.0192643	-121.3242173	02N	06E	16	NA	NA	39.09	NA	NA	NA	
GAMA	T0607700504-VW-4C	NA	NA	Monitoring	NA	NA	NA	38.0191811	-121.3239878	02N	06E	16	NA	NA	NA	43	NA	NA	
GAMA	T0607700815-CW11	NA	NA	Monitoring	NA	NA	NA	38.1134899	-121.395567	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-MW12A	NA	NA	Monitoring	NA	NA	NA	38.1134047	-121.3957833	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-MW14A	NA	NA	Monitoring	NA	NA	NA	38.1133464	-121.3953593	03N	05E	14	NA	NA	NA	NA	NA	NA	
GAMA	T0607700815-MW2	NA	NA	Monitoring	NA	NA	NA	38.1139081	-121.395267	03N	05E	14	NA	NA	23.95	NA	NA	NA	
GAMA	T0607700815-MW5	NA	NA	Monitoring	NA	NA	NA	38.1139002	-121.3948777	03N	05E	14	NA	NA	24.1	NA	NA	NA	
GAMA	T0607700002-E-2	NA	NA	Monitoring	NA	NA	NA	38.0043327	-121.3490654	02N	06E	20	NA	NA	NA	NA	28	NA	
GAMA	T0607700002-E-11	NA	NA	Monitoring	NA	NA	NA	38.0043395	-121.3501899	02N	06E	20	NA	NA	NA	NA	24	NA	
GAMA	T0607700002-E-2	NA	NA	Monitoring	NA	NA	NA	38.0043327	-121.3498621	02N	06E	20	NA	NA	NA	NA	21	NA	
GAMA	T0607700002-E-8	NA	NA	Monitoring	NA	NA	NA	38.0045477	-121.3498581	02N	06E	20	NA	NA	NA	NA	4	22	NA
GAMA	T0607700002-MW-3	NA	NA	Monitoring	NA	NA	NA	38.0041286	-121.3497833	02N	06E	20	NA	NA	NA	9.5	22	NA	
GAMA	T0607700002-MW-4	NA	NA	Monitoring	NA	NA	NA	38.004049	-121.3500952	02N	06E	20	NA	NA	NA	8.5	28.5	NA	
GAMA	T0607700002-PR-2	NA	NA	Monitoring	NA	NA	NA	38.0042091	-121.3495991	02N	06E	20	NA	NA	NA	8	28	NA	
GAMA	T0607700828-MW-10	NA	NA	Monitoring	NA	NA	NA	38.0289598	-121.3302724	02N	06E	8	NA	NA	110.32	NA	NA	NA	
GAMA	T0607700828-MW-2	NA	NA	Monitoring	NA	NA	NA	38.029227	-121.3323681</										

Table 2.7-2 Water Well Information

Data Source	WCR Number	Wells from GAMA	Legacy Log Number	Planned Use or Former Use	LAT (DWR)	LONG (DWR)	LAT & LONG Accuracy (DWR)	LAT (GAMA)	LONG (GAMA)	T	R	S	APN	Date Work Ended	Total Completed Depth	Top Of Perforated Interval	Bottom of Perforated Interval	Static Water Level
GAMA	T0607700716-MW-10	NA	NA	Monitoring	NA	NA	NA	37.8842017	-121.3460007	02N	06E	32	NA	NA	NA	20.6	NA	NA
GAMA	T0607700250-MW-1	NA	NA	Monitoring	NA	NA	NA	38.0212919	-121.3224539	02N	06E	16	NA	NA	NA	NA	NA	NA
GAMA	T1000010960-MW-2	NA	NA	Monitoring	NA	NA	NA	38.0206373	-121.3351552	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T1000010960-MW-4	NA	NA	Monitoring	NA	NA	NA	38.0207729	-121.3340005	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T1000010960-MW-6	NA	NA	Monitoring	NA	NA	NA	38.0207759	-121.3341418	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T1000010960-MW-1	NA	NA	Monitoring	NA	NA	NA	38.020175	-121.3361148	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T1000007741-MWP-P	NA	NA	Monitoring	NA	NA	NA	38.0444867	-121.4184426	02N	05E	3	NA	NA	NA	9	19	NA
GAMA	T1000007741-MWP-P	NA	NA	Monitoring	NA	NA	NA	38.0445234	-121.4175541	02N	05E	3	NA	NA	NA	9	19	NA
GAMA	T1000007741-MWP-P	NA	NA	Monitoring	NA	NA	NA	38.0446036	-121.4179185	02N	05E	3	NA	NA	NA	9	19	NA
GAMA	T1000007741-MWP-P	NA	NA	Monitoring	NA	NA	NA	38.0438859	-121.418385	02N	05E	3	NA	NA	NA	9	19	NA
GAMA	T0607700035-MW-5	NA	NA	Monitoring	NA	NA	NA	38.0108359	-121.321253	02N	06E	21	NA	NA	NA	68.24	NA	NA
GAMA	T0607700074-MW-23	NA	NA	Monitoring	NA	NA	NA	38.0212594	-121.314536	02N	06E	16	NA	NA	NA	60	75	NA
GAMA	T0607700067-MW-5R	NA	NA	Monitoring	NA	NA	NA	38.0051701	-121.3504588	02N	06E	19	NA	NA	NA	NA	NA	NA
GAMA	T0607700418-MW-6	NA	NA	Monitoring	NA	NA	NA	38.0216972	-121.3609028	02N	06E	18	NA	NA	NA	NA	NA	NA
GAMA	T0607700504-MW-17	NA	NA	Monitoring	NA	NA	NA	38.0102594	-121.3243717	02N	06E	16	NA	NA	NA	39.59	25	40
GAMA	T0607700815-EW2	NA	NA	Monitoring	NA	NA	NA	38.1138285	-121.3941527	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	T0607700658-MW-7	NA	NA	Monitoring	NA	NA	NA	38.029474	-121.3224928	02N	06E	9	NA	NA	NA	48.05	NA	NA
GAMA	T0607736979-EW-3	NA	NA	Monitoring	NA	NA	NA	38.1149638	-121.3938917	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	T1000010960-MW-4	NA	NA	Monitoring	NA	NA	NA	38.0207733	-121.3341418	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T1000010960-MW-5	NA	NA	Monitoring	NA	NA	NA	38.0207727	-121.3341418	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	SL2051320997-MW-130	NA	NA	Monitoring	NA	NA	NA	38.0104635	-121.3216203	02N	06E	21	NA	NA	NA	NA	NA	NA
GAMA	T0607700278-MW-9	NA	NA	Monitoring	NA	NA	NA	38.0209175	-121.3245175	02N	06E	16	NA	NA	NA	NA	NA	NA
GAMA	T0607736979-MW-2	NA	NA	Monitoring	NA	NA	NA	38.1147667	-121.3945901	03N	05E	14	NA	NA	NA	53	25	NA
GAMA	T0607700134-MW-4	NA	NA	Monitoring	NA	NA	NA	38.0205496	-121.3339041	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T0607700718-MW-3	NA	NA	Monitoring	NA	NA	NA	37.8848014	-121.3446772	02N	06E	32	NA	NA	NA	25.09	NA	NA
GAMA	T0607700815-MW10A	NA	NA	Monitoring	NA	NA	NA	38.1137081	-121.3830865	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	T0607700134-MW-2	NA	NA	Monitoring	NA	NA	NA	38.0207243	-121.3335154	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T0607700078-MW-2	NA	NA	Monitoring	NA	NA	NA	38.0205814	-121.3254144	02N	06E	16	NA	NA	NA	NA	NA	NA
GAMA	T0607700134-A5-2	NA	NA	Monitoring	NA	NA	NA	38.0205847	-121.3336461	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T0607700441-MW-2	NA	NA	Monitoring	NA	NA	NA	38.0205196	-121.3245681	02N	06E	16	NA	NA	NA	NA	NA	NA
GAMA	T0607700658-MW-5D	NA	NA	Monitoring	NA	NA	NA	38.0205173	-121.3205052	02N	06E	9	NA	NA	NA	61.85	NA	NA
GAMA	SL2051320997-CHMW	NA	NA	Monitoring	NA	NA	NA	38.010473	-121.3208383	02N	06E	21	NA	NA	NA	NA	NA	NA
GAMA	SL2051320997-MW-114	NA	NA	Monitoring	NA	NA	NA	38.0125215	-121.3175666	02N	06E	21	NA	NA	NA	52	82	NA
GAMA	T0607700002-MW-1	NA	NA	Monitoring	NA	NA	NA	38.0209313	-121.3903453	02N	06E	19	NA	NA	NA	39	NA	NA
GAMA	T0607700658-MW-4D	NA	NA	Monitoring	NA	NA	NA	38.0203304	-121.322137	02N	06E	9	NA	NA	NA	55.9	NA	NA
GAMA	T0607736979-MW-8A	NA	NA	Monitoring	NA	NA	NA	38.1141055	-121.3933769	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	T0607700418-MW-10	NA	NA	Monitoring	NA	NA	NA	38.0559918	-121.458189	02N	05E	5	NA	NA	NA	20.2	NA	NA
GAMA	T0607700504-MW-5C	NA	NA	Monitoring	NA	NA	NA	38.0201344	-121.3245681	02N	06E	16	NA	NA	NA	44.4	NA	NA
GAMA	T0607700441-MW-10	NA	NA	Monitoring	NA	NA	NA	38.005311	-121.3520431	02N	06E	19	NA	NA	NA	NA	NA	NA
GAMA	T0607700035-MW-14	NA	NA	Monitoring	NA	NA	NA	38.0106255	-121.3200631	02N	06E	21	NA	NA	NA	39.41	NA	NA
GAMA	T0607700134-MW-3	NA	NA	Monitoring	NA	NA	NA	38.0209847	-121.3336752	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T0607700002-PR-1	NA	NA	Monitoring	NA	NA	NA	38.0201027	-121.3468364	02N	06E	20	NA	NA	NA	NA	28	NA
GAMA	SL2051320997-MW-203	NA	NA	Monitoring	NA	NA	NA	38.0107591	-121.3228603	02N	06E	21	NA	NA	NA	NA	101	111
GAMA	SL2051320997-MW-003	NA	NA	Monitoring	NA	NA	NA	38.0114075	-121.3234617	02N	06E	21	NA	NA	NA	NA	50	70
GAMA	T0607700074-M5-3A	NA	NA	Monitoring	NA	NA	NA	38.0211713	-121.314179	02N	06E	16	NA	NA	NA	NA	59	61
GAMA	T0607700078-MW-5	NA	NA	Monitoring	NA	NA	NA	38.020968	-121.3252787	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T0607700515-MW17	NA	NA	Monitoring	NA	NA	NA	38.1135392	-121.3946878	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	T0607700504-MW-23	NA	NA	Monitoring	NA	NA	NA	38.0196573	-121.3236258	02N	06E	16	NA	NA	NA	59.5	NA	NA
GAMA	T0607700278-MW-11	NA	NA	Monitoring	NA	NA	NA	38.0207397	-121.3252736	02N	06E	16	NA	NA	NA	NA	NA	NA
GAMA	T0607736979-MW-7A	NA	NA	Monitoring	NA	NA	NA	38.1148474	-121.3934862	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	SL2051320997-MW-10	NA	NA	Monitoring	NA	NA	NA	38.0142729	-121.3182027	02N	06E	16	NA	NA	NA	NA	45	65
GAMA	SL2051320997-GEW-01	NA	NA	Monitoring	NA	NA	NA	38.0130551	-121.3216655	02N	06E	21	NA	NA	NA	30.5	80.5	NA
GAMA	SL2051320997-MW-10B	NA	NA	Monitoring	NA	NA	NA	38.0201943	-121.3218693	02N	06E	21	NA	NA	NA	NA	57	NA
GAMA	SL2051320997-MW-209	NA	NA	Monitoring	NA	NA	NA	38.0121294	-121.3219284	02N	06E	21	NA	NA	NA	110	130	NA
GAMA	T10000010960-MW-6	NA	NA	Monitoring	NA	NA	NA	38.0207768	-121.3341418	02N	06E	17	NA	NA	NA	NA	NA	NA
GAMA	T10000007741-MWP-P	NA	NA	Monitoring	NA	NA	NA	38.0442543	-121.4183843	02N	05E	3	NA	NA	NA	9	19	NA
GAMA	T0607700504-MW-14	NA	NA	Monitoring	NA	NA	NA	38.0105495	-121.3241036	02N	06E	16	NA	NA	NA	45.11	NA	NA
GAMA	SL2051320997-MW-09	NA	NA	Monitoring	NA	NA	NA	38.0118823	-121.3255866	02N	06E	21	NA	NA	NA	NA	90	70
GAMA	T0607700612-MW-2R	NA	NA	Monitoring	NA	NA	NA	38.0209414	-121.35639	02N	06E	18	NA	NA	NA	NA	NA	NA
GAMA	T0607736979-MW-8B	NA	NA	Monitoring	NA	NA	NA	38.1141159	-121.3933819	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	T0607700658-MW-1	NA	NA	Monitoring	NA	NA	NA	38.0209071	-121.3245681	02N	06E	16	NA	NA	NA	NA	50.7	NA
GAMA	T0607700418-MW-7	NA	NA	Monitoring	NA	NA	NA	38.0215131	-121.3606206	02N	06E	18	NA	NA	NA	NA	NA	NA
GAMA	T0607700815-MW18A	NA	NA	Monitoring	NA	NA	NA	38.1138278	-121.3954056	03N	05E	14	NA	NA	NA	NA	NA	NA
GAMA	SL0-ESJB-01U	NA	NA	Municipal	NA	NA	NA	38.0602778	-121.5026667	03N	04E	35	NA	NA	NA	70	40	80
GAMA	ESJ-V-STK1-3	NA	NA	Municipal	NA	NA	NA	38.0214742	-121.3474272	02N	06E	8	NA	NA	NA	613	560	NA
GAMA	SL0-ESJB-41	NA	NA	Domestic	NA	NA	NA	38.0520278	-121.351351	02N	06E	5	NA	NA	NA	173	133	173
GAMA	ESJ-V-WELL30	NA	NA	Municipal	NA	NA	NA	38.0441567	-121.3233333	02N	06E	4	NA	NA	NA	540	192	398
GAMA	ESJ-V-STK1-2	NA	NA	Monitoring	NA	NA	NA	38.0546111	-121.3709722	02N	05E	1	NA	NA	NA	956	520	540
GAMA	ESJ-V-STK1-3	NA	NA	Monitoring	NA	NA	NA	38.0546111	-121.3709722	02N	05E	1	NA	NA	NA	956	360	393
GAMA	ESJ-10	NA	NA	Municipal	NA	NA	NA	38.0505555	-121.3423056	02N	06E	5	NA	NA	NA	500	156	354
GAMA	ESJ-V-STK1-5	NA	NA	Monitoring	NA	NA	NA	38.0546111	-121.3709722	02N	05E	1	NA	NA	NA	956	58	68
GAMA	ESJ-V-STK1-1	NA	NA	Monitoring	NA	NA	NA	38.0546111	-121.3709722	02N	05E	1	NA	NA	NA	956	880	880
GAMA	ESJ-V-STK5-3	NA	NA	Municipal	NA	NA	NA	38.0209028	-121.3427472	02N	06E	8	NA	NA	NA	613	210	232
GAMA	ESJ-15	NA	NA	Municipal	NA	NA	NA	38.0194167	-121.3325833	02N	06E	17	NA	NA	NA	258	170	236
GAMA	ESJ-V-STK1-4	NA	NA	Monitoring	NA	NA	NA	38.0546111	-121.3709722	02N	05E	1	NA	NA	NA	956	220	240
GAMA	380307121210401	NA	NA	Water Supply, Other	NA	NA	NA	38.0526278	-121.351351	02N	06E	5	NA	NA	NA	173	NA	NA
GAMA	380312121301001	NA	NA	Water Supply, Other	NA	NA	NA	38.0505555	-121.3423056	02N	06E	5	NA	NA	NA	500	156	354
GAMA	38031612121501	NA	NA	Water Supply														

Table 7.2-1. Injectate compositions

Component	Injectate 1 (Mass %)	Injectate 2 (Mass %)
CO ₂	99.21%	99.88%
H ₂	0.05%	0.01%
N ₂	0.64%	0.00%
H ₂ O	0.02%	0.00%
CO	0.03%	0.00%
Ar	0.03%	0.00%
O ₂	0.00%	0.00%
SO ₂ +SO ₃	0.00%	0.00%
H ₂ S	0.00%	0.01%
CH ₄	0.00%	0.04%
NO _x	0.00%	0.00%
NH ₃	0.00%	0.00%
C ₂ H ₆	0.00%	0.05%
Ethylene	0.00%	0.00%
Total	100.00%	100.00%

Table 7.2-2. Simplified four component composition for Injectate 1 and Injectate 2

Injectate 1	
Component	Mass %
CO ₂	99.213%
N ₂	0.643%
SO ₂ +SO ₃	0.003%
H ₂ S	0.001%

Injectate 2	
Component	Mass %
CO ₂	99.884%
CH ₄	0.039%
C ₂ H ₆	0.053%
H ₂ S	0.014%

Table 7.2-3. Injectate properties range over project life at downhole conditions for Injectate 1 and Injectate 2

Injectate property at downhole conditions	Injectate 1	Injectate 2
Viscosity, cp	0.022 – 0.054	0.022 – 0.056
Density, lb/ft ³	9.1 - 40.6	9.1 – 41.5
Compressibility factor, Z	0.81 - 0.67	0.80 – 0.66