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RB INYOKERN DATA CENTER

Application for Small Power Plant Exemption (SPPE)

Inyokern, Kern County, California

Docket Number – 26-SPPE-01

Appendix E Supplement - Section E.5



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MEMORANDUM

To: Kyle Mohr – Authorized Representative R&L Capital

July 7, 2026

From: Christine Halley, PE, Program
Manager/Regulatory Strategist

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Planner/Regulatory Specialist

Subject: Characterization of On-Site
Water Well for RB Inyokern
Data Center Project;
Response to DR-HYD-6



This technical memorandum has been prepared to support the R&L Capital's (Applicant) response to the California Energy Commission's (CEC) data request DR-HYD-6 regarding the proposed on-site well for the RB Inyokern Data Center (RBIDC) Project (Project). The CEC data request reads as follows:

“DR HYD-6. Please provide estimated on-site well yield and pumping capacity.”

The purpose of this memorandum is to respond to this request.

By way of background, the primary water supply is planned from the nearby community water system, i.e. Inyokern Community Services District. The proposed on-site well would be an emergency backup or supplemental source of water for the Project, not the Project's primary operational water supply.

According to the “Water and Sewer Service Will Serve” dated April 2, 2026, from Inyokern Community Services District, the Project's estimated water demand is as follows:

Demand Category		Estimated Demand
Average Day Demand		40,430 gallons per day, approximately 28.1 gpm
Maximum Day Demand		60,645 gallons per day, approximately 42.1 gpm
Peak Hour Demand		101,075 gallons per day, approximately 70.2 gpm
Estimated Fire Flow Requirement		3,000 gpm at 20 psi residual pressure for a minimum of 4 hours, approximately 720,000 gallons total

Table 1. Project Estimated Water Demand and Fire Flow Requirement

Source: Inyokern Community Services District, “Water and Sewer Service Will Serve,” dated April 2, 2026.

The on-site well may be called upon to meet maximum day demand over, say, a three day period. Three day period aligns with generally accepted practices for emergency response. Therefore, **the proposed on-site well would ideally be capable of supplying an estimated 45 to 50 gpm.¹**

1. Basis of Review and Limitations

This memorandum has been prepared to provide a preliminary characterization of the proposed on-site well for the RBIDC Project. By way of background, no water wells exist on the subject property at this time. The proposal is to drill a new water well for this purpose. Consequently, estimates of yield and pumping capacity are derived from published groundwater basin and nearby water well information.

The information summarized herein is based primarily on publicly available regional groundwater basin reports, available groundwater well records, and other published hydrogeologic sources. Primary reference materials reviewed include Indian Wells Valley Groundwater Authority documents, California Department of Water Resources (DWR) well completion records for mapped wells in the Project vicinity, available groundwater level information, and other published hydrogeologic materials relevant to the Indian Wells Valley Groundwater Basin.

The observations presented in this memorandum are preliminary. They are intended to support the response to the CEC's data request DR-HYD-6 regarding the estimated yield and pumping capacity of the proposed on-site well. The observations have not yet been verified by a site-specific hydrogeologic evaluation, exploratory drilling, geologic logging, water quality sampling, well development, or pump testing. As such, the discussion herein should be understood as a planning-level assessment based on available regional and nearby well data, not as a final design-level well capacity analysis.

Final well depth, casing design, screened interval, pump size, pumping capacity, and reliable yield will be confirmed during final engineering and well installation. Actual well performance may vary based on site-specific subsurface conditions, drilling results, aquifer materials encountered, water quality, well construction methods, and pump testing results. In addition, the physical ability to construct and operate a well should be distinguished from any applicable regulatory, permitting, allocation, fee, Indian Wells Valley Groundwater Authority (IWVGA) Groundwater Sustainability Plan (GSP) implementation, or adjudication-related requirements governing groundwater extraction within the Indian Wells Valley Groundwater Basin.

¹ Note that the referenced will-serve states a maximum day demand of only 42 gpm, however the "Water Supply Assessment, R&L Capital Inc., RB Inyokern Data Center" dated January 2026 by Quadknopf (TN # 269636) estimates average annual demand at 49.1 AFY = 31 gpm average day demand x 1.5 peaking factor = 47 gpm.

2. Regional Groundwater Basin Setting

The Project site is located within the Indian Wells Valley Groundwater Basin, DWR Basin No. 6-054, in the South Lahontan Hydrologic Region. The basin underlies portions of Kern, Inyo, and San Bernardino counties, with approximately 73 percent of the overlying land located in Kern County. The IWVGA GSP² identifies the basin as covering approximately 381,708 acres and notes that unincorporated communities within the basin include Inyokern and Pearsonville.

Per the referenced GSP, the Indian Wells Valley Groundwater Basin is a closed, internally drained desert basin located east of the southern Sierra Nevada. Surface water flow from the surrounding mountain ranges drains toward China Lake, a large normally dry lake, or playa, located in the central northeastern portion of the basin. The basin's surrounding bedrock highlands and topographic setting control recharge patterns, with the GSP noting that the low-permeability bedrock of the surrounding mountain ranges limits recharge from beyond the watershed boundary, except for subflow from Rose Valley. **Figure 1** shows the Bulletin 118 groundwater basin boundary and the general distribution of known groundwater production wells within the basin.

The regional aquifer system is primarily contained within unconsolidated basin-fill deposits. The GSP describes a complex distribution of well-sorted to poorly sorted deposits formed by alluvial fan movement, Owens River-related deposition, mountain stream reworking, and lacustrine deposition. The GSP further states that water-bearing alluvial deposits may locally extend to depths of approximately 2,000 feet, and that these sediments consist mainly of gravel and sand in alluvial fans near the mountains, grading to silt and clay beneath the playa. The GSP identifies the principal unconsolidated units as alluvium, lacustrine deposits and playa deposits; alluvium is described as having relatively high permeability, while lacustrine and playa deposits are generally lower-permeability fine-grained units.

The 2020 IWVGA GSP includes a hydrogeologic conceptual model, geologic map and regional cross-sections that illustrate the basin's geologic and hydrogeologic framework. As shown in **Figure 2**, the GSP geologic map identifies the locations of regional Cross Section A-A' and Cross Section B-B' within the Indian Wells Valley. The corresponding cross-sections, shown in **Figures 3 and 4**, depict the relationship between surrounding bedrock highlands, basin-fill alluvial deposits, lower-permeability lacustrine and playa deposits, and deeper water-bearing zones within the basin.

² [IWVGB GSP Jan 2020](#)

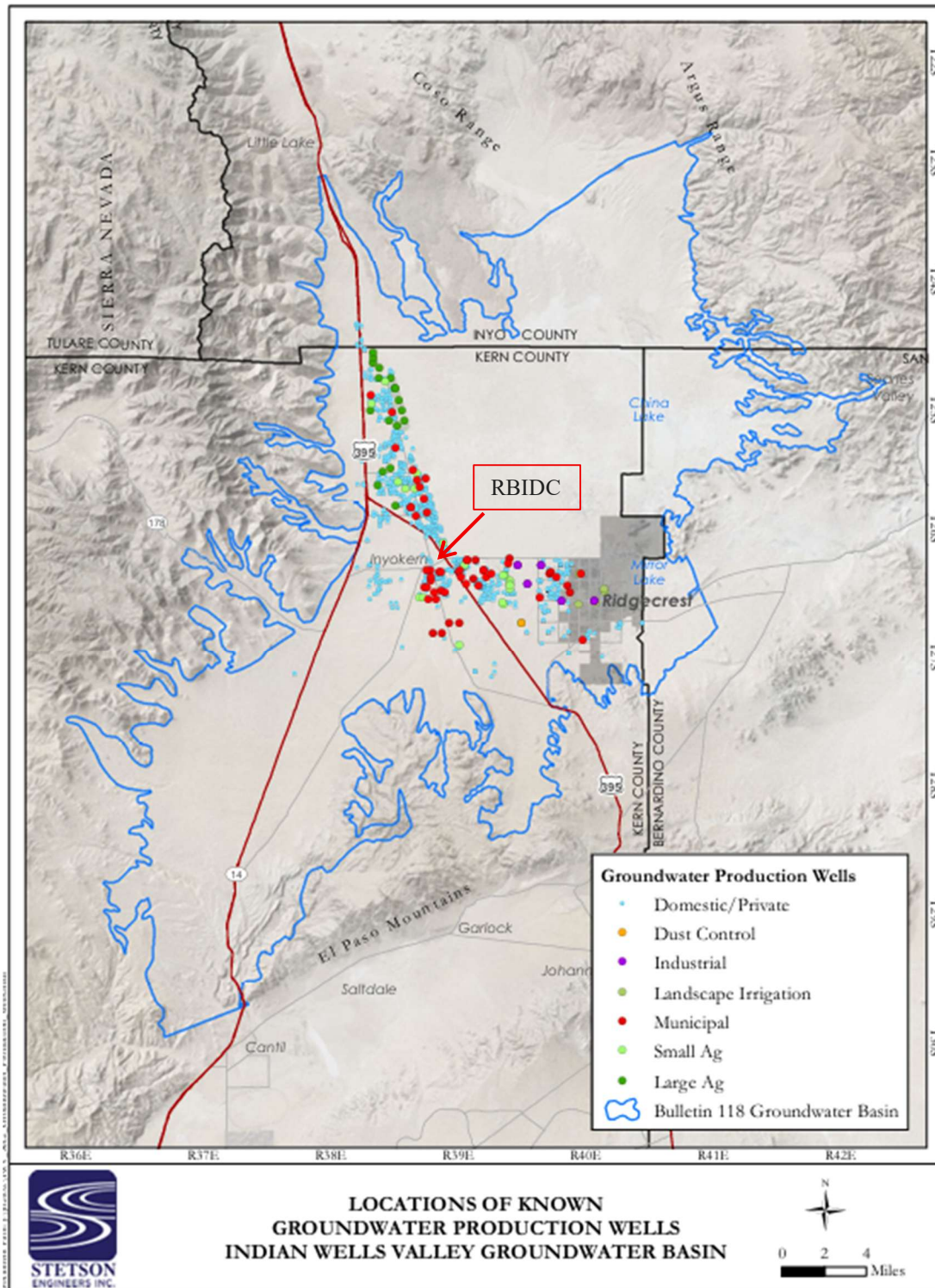


Figure 1. Indian Wells Valley Groundwater Basin Boundary and Known Groundwater Production Wells
Source: IWVGA 2020 Groundwater Sustainability Plan, Figure 3-8.

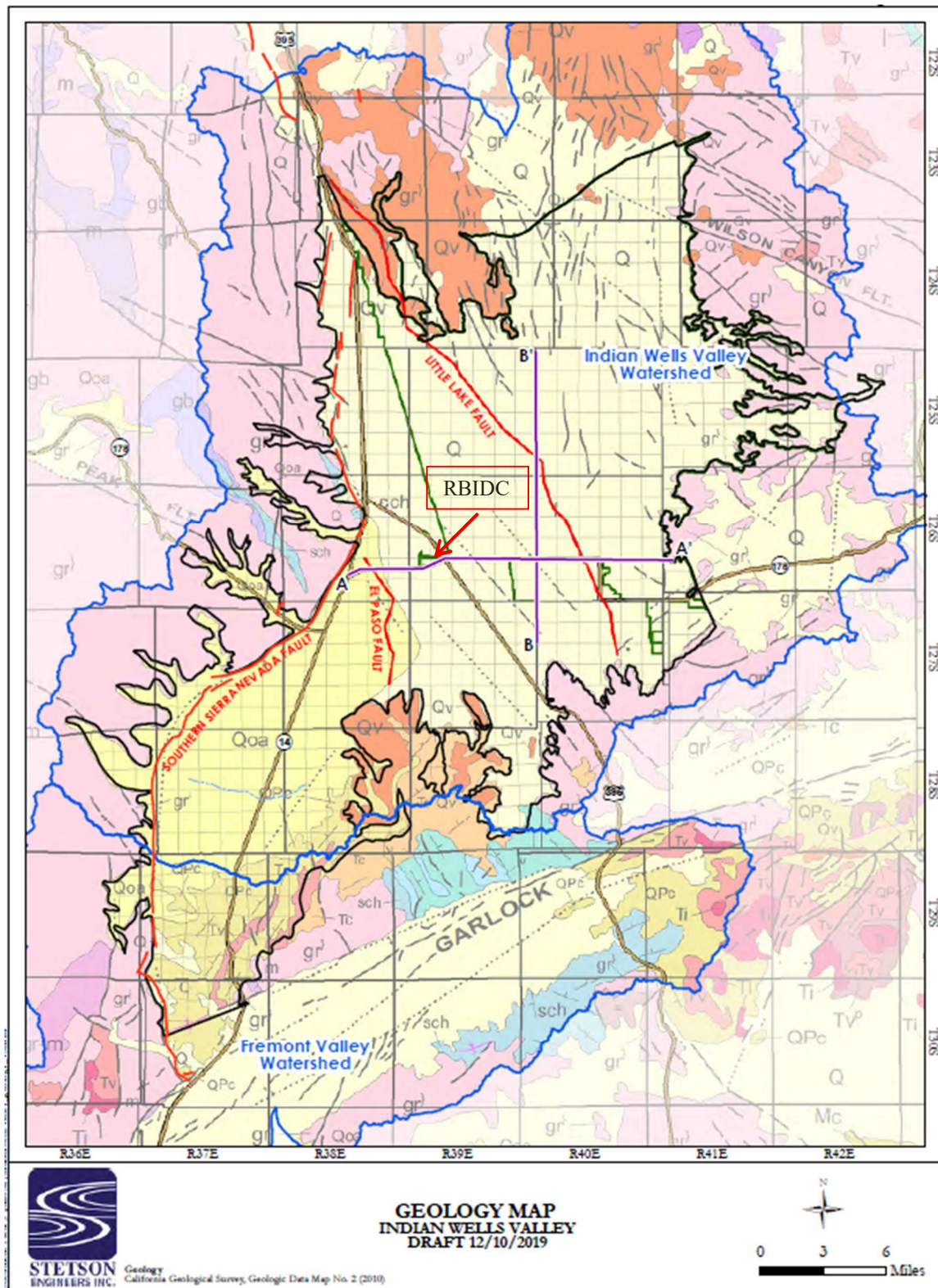


Figure 2. Geologic Map Showing Cross-Section A-A' and B-B' Locations, Indian Wells Valley
Source: IWVGA 2020 Groundwater Sustainability Plan, Figure 3-4a.

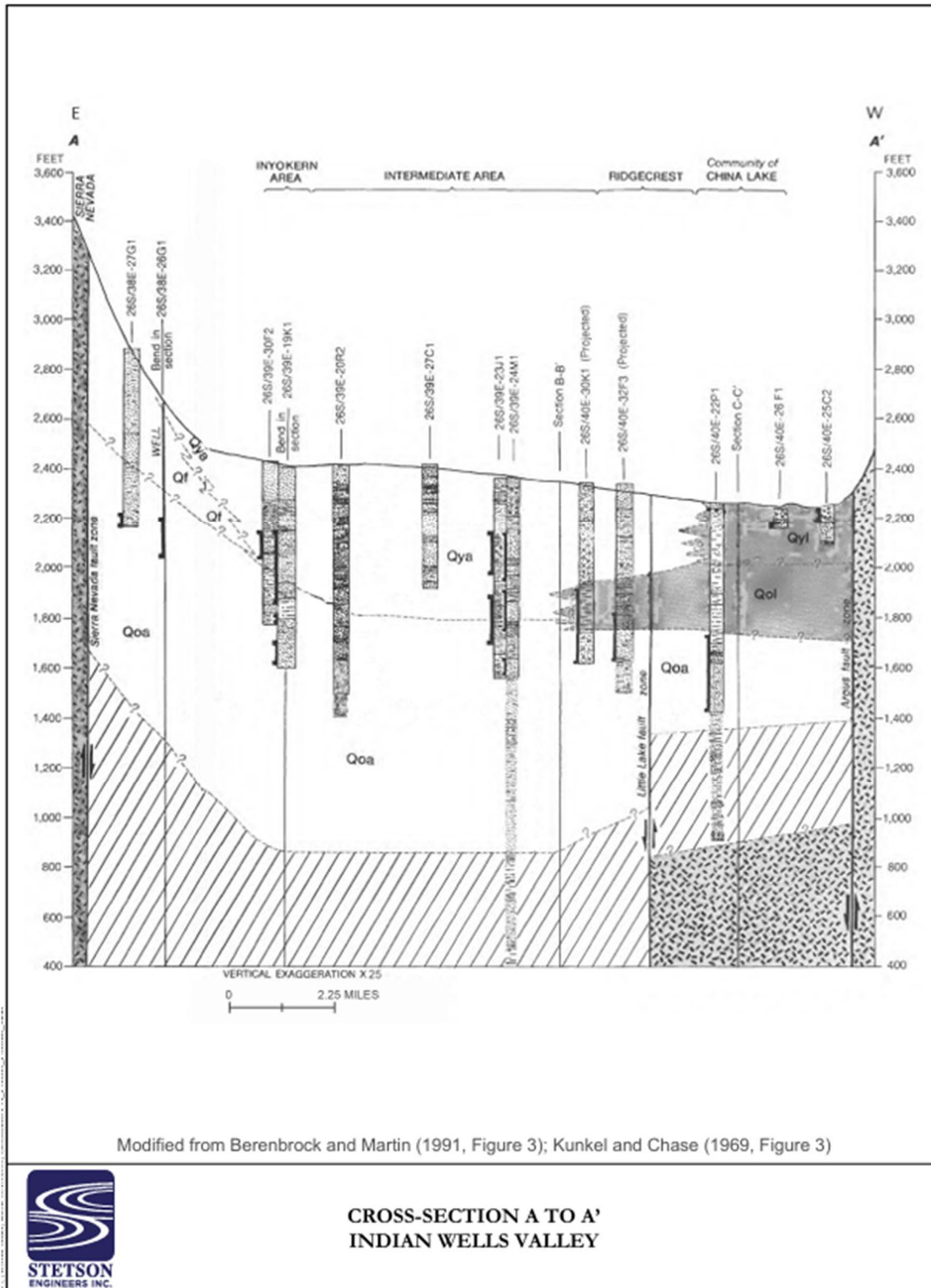


Figure 3. Regional Cross-Section A-A', Indian Wells Valley Groundwater Basin
Source: IWVGA 2020 Groundwater Sustainability Plan, Figure 3-5a.

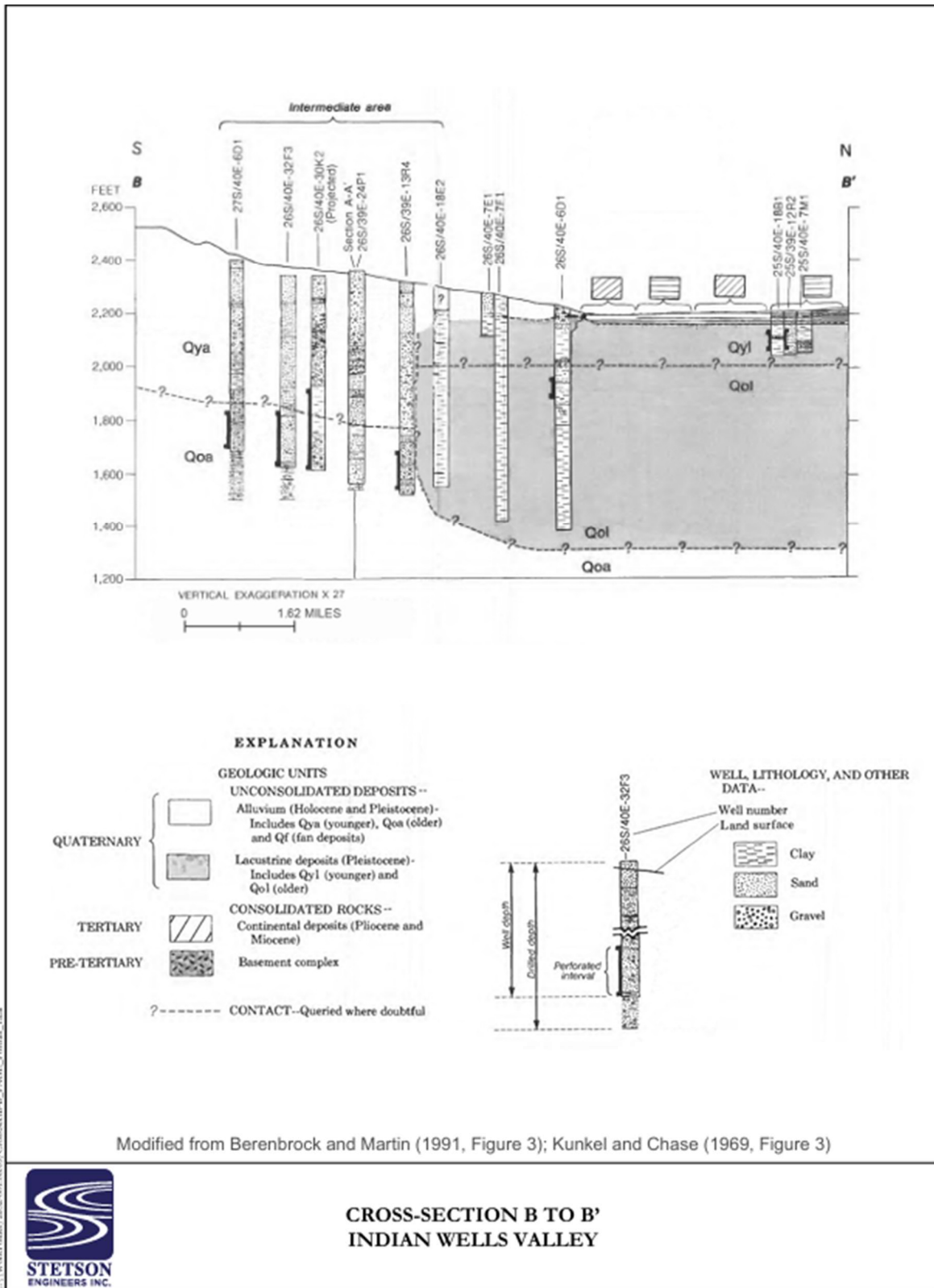


Figure 4. Regional Cross-Section B-B', Indian Wells Valley Groundwater Basin
Source: IWVGA 2020 Groundwater Sustainability Plan, Figure 3-5b.

For purposes of characterizing the proposed on-site well, the regional basin setting indicates that the Project site is located within a thick basin-fill aquifer system where groundwater has been developed in the surrounding Inyokern area. The regional hydrogeologic setting supports the use of nearby well completion records as a reasonable planning-level basis for evaluating the proposed on-site well.

3. Nearby Groundwater Well Data

Figure 5 shows the mapped locations of the nearby wells reviewed for this memorandum relative to the Project site. As summarized in **Table 2**, available DWR Well Completion Reports³ for these mapped wells indicate that groundwater has been developed for both domestic and public water supply uses in the surrounding Inyokern area. The reviewed domestic wells are generally completed to depths ranging from approximately 310 to 400 feet below ground surface, with reported static water levels ranging from approximately 160 to 282 feet below ground surface. Reported yields for these domestic wells range from approximately 20 to 40 gallons per minute.

The reviewed public water supply wells are substantially deeper and report higher estimated yields than the nearby domestic wells. “Well F” is completed to approximately 596 feet below ground surface and reports an estimated yield of approximately 300 gallons per minute, while “Well H” is completed to approximately 900 feet below ground surface and reports an estimated yield of approximately 2,000 gallons per minute. These records indicate that higher-capacity wells in the Project vicinity are associated with deeper well construction and broader screened intervals.

Well	Location (Lat/Long)	Ground Elevation	Use	Date Work Completed	Total Depth	Static Water Level	Screened / Perforated Interval	Reported Yield / Pump Capacity	Source
Well A	35.646856, -117.809214	2,434 ft	Domestic water supply	02/14/2024	400 ft	282 ft bgs	240–360 ft; 380–400 ft	30 gpm	DWR WCR 2024-001795
Well B	35.657043, -117.800034	2,415 ft	Domestic water supply	05/07/2007	320 ft completed; 355 ft boring	245 ft bgs	Approx. 228.5–318.5 ft	30± gpm	DWR WCR No. 1098177
Well C	35.647915, -117.790322	2,431 ft	Domestic water supply	09/03/1999	380 ft completed; 385 ft boring	262 ft bgs	Approx. 318–380 ft	30± gpm	DWR WCR No. 395975
Well D	35.669338, -117.812936	2,386 ft	Domestic water supply	08/15/2012	400 ft	212 ft bgs	220–400 ft	20 gpm	DWR WCR No. e015881
Well E	35.670710, -117.813340	2,383 ft	Domestic water supply	01/15/2022	310 ft	160 ft bgs	180–310 ft	40 gpm	DWR WCR 2022-005191
Well F	35.644018, -117.813824	2,444 ft	Public water supply	04/10/2018	596 ft completed; 605 ft boring	292 ft bgs	240–596 ft	300 gpm	DWR WCR 2018-008518
Well G	35.645194, -117.784209	2,437 ft	Domestic water supply	04/12/2008	400 ft completed; 405 ft boring	278 ft bgs	Approx. 338–398 ft	25 gpm	DWR WCR No. 1098157
Well H	35.655418, -117.820794	2,408 ft	Public water supply	07/13/2021	900 ft completed; 1,100 ft boring	259.25 ft bgs	360–440 ft; 540–560 ft; 620–700 ft; 780–800 ft; 820–880 ft	2,000 gpm	DWR WCR 2021-009163

Table 2. Nearby Mapped Wells and Available DWR Well Completion Report Data
Source: California Department of Water Resources Well Completion Reports and mapped well location data.

³ [Well Completion Reports](#)

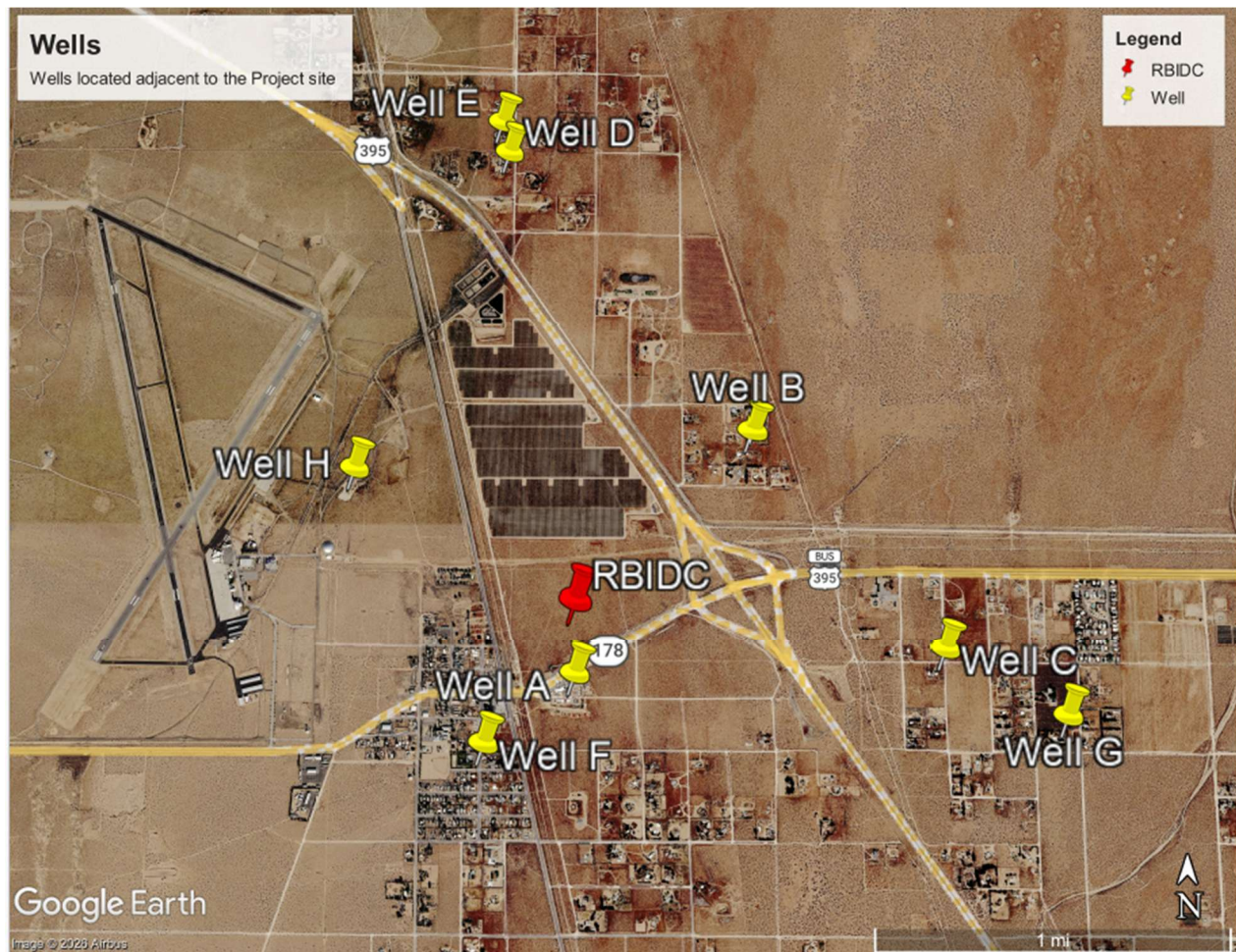


Figure 5. Nearby Mapped Wells Relative to the RBIDC Project Site

Source: California Department of Water Resources Well Completion Report Map Application, GeoTracker database, and Google Earth.

4. Preliminary Characterization of Proposed On-Site Well

The proposed on-site well would ideally be capable of supplying an estimated 45-50 gpm sustained over at least a 3 day period.

Based on the nearby public water supply well records summarized in **Table 2**, a conservative planning-level characterization of the proposed on-site emergency backup well would assume a total well depth of approximately 600 to 900 feet below ground surface. Static groundwater levels would likely be on the order of approximately 250 to 300 feet below ground surface, subject to confirmation through site-specific drilling and testing.

The reported yield/pumping capacity for similarly completed wells (see **Table 2**) suggests observed pumping capacity on the order of 300 to 2,000 gallons per minute. This is more than adequate to satisfy the estimated 45 to 50 gpm flow rate from the Project on-site well. We observe from this reasonable expectation that the proposed on-site well is likely to satisfy the projected yield.

5. Regulatory and Operational Considerations

The proposed on-site groundwater well is understood to be an emergency backup or supplemental source of water for the Project, not the Project's primary operational water supply. The Project's primary water supply is anticipated to be provided by Inyokern Community Services District. Accordingly, the proposed on-site well should be characterized as a redundancy measure to support emergency water supply over several days during interruptions or other emergency conditions.

Use of the proposed on-site well would be subject to applicable well permitting and basin management requirements, including Kern County well permitting requirements, IWVGA GSP implementation requirements, pumping verification or reporting requirements, basin fees or allocation requirements, and any applicable adjudication-related requirements. Because the well has not yet been constructed or tested, final design and operation should be supported by site-specific well construction records, geologic logs, water quality data and pump testing results.

Conclusion

Available regional groundwater basin information and nearby DWR Well Completion Reports support a planning-level conclusion that an on-site well is technically feasible in the Project vicinity. Nearby domestic wells demonstrate that groundwater has been developed at moderate depths, while nearby public water supply wells demonstrate that higher-capacity production has been achieved through deeper well construction and broader screened intervals.

For planning purposes, the proposed on-site well should be characterized as a deeper production well more comparable to nearby public water supply wells than to nearby domestic wells. A preliminary well depth range of approximately 600 to 900 feet below ground surface and a preliminary pumping capacity range of approximately 300 to 2,000 gallons per minute may be used for planning-level characterization.

Final well depth, casing design, screened interval, pump size, pumping capacity, and reliable yield should be confirmed through site-specific hydrogeologic evaluation, well drilling, geologic logging, well development, water quality review, and pump testing. Once available, the final well design and pump testing results will be provided as a supplemental filing to support the Applicant's response to CEC data request DR-HYD-6.