

Exhibit A



TECHNICAL MEMORANDUM

To: Jason Sobaje – Vice President
Sobaje Property Group, Inc.

From: Henry Liang, PE – Principal Engineer | MKN
Xavier Vera, EIT – Assistant Engineer | MKN

Date: October 1st, 2024

Re: Fresno County Waterworks District 42 Supply and Demand Evaluation

1.0 Background

Waterworks District 42 (WWD 42) currently serves a community in Fresno County generally bounded by Nees Ave on the north, Dewolf on the west, Alluvial on the south, and Montana Ave on the east. The system currently serves approximately 100 parcels. Sobaje Property Group, Inc. (Sobaje) currently owns parcels adjacent to Montana Avenue within the WWD 42's service area and requested for Michael K. Nunley & Associates (MKN) to evaluate the water system's current water supply capacity and whether there is sufficient capacity to serve additional parcels.

1.1 Existing System Infrastructure

The existing system infrastructure was observed during a site visit including Fresno County WWD 42 staff, Sobaje Property Group, and MKN.

- System Layout:
 - Well No.1
 - Offline due to nitrate maximum contaminant level (MCL) exceedance
 - 10,000-gallon hydropneumatic tank offline due to leakage and damaged bottom from corrosion
 - Estimated 300-gallons per minute production capacity prior to going offline
 - Well No.3
 - Estimated 175-200 gallons per minute production capacity
 - 5,000-gallon hydropneumatic tank
 - Nitrates level approaching MCL of 10 mg/L
 - Well No.4
 - Estimated 250-300 gallons per minute production capacity

- Subject to PG&E power outages approximately once a month
- Well No.5
 - Estimated 250-370 gallons per minute production capacity
 - 10,000-gallon hydropneumatic tank
 - Nitrates level approaching MCL of 10 mg/L
- Distribution System Piping and Appurtenances
 - Mostly 8-inch asbestos cement piping constructed back in the 1970's
 - Several isolation valves are difficult to operate
 - Several fire hydrants are non-functional due to the isolation valves stuck closed

2.0 Supply and Demand Evaluation Methodology

The water supply and demand evaluation was based on historical water production information available and on-site observations.

2.1 Supply Capacity

The production capacities of the WWD 42 wells were determined based off the existing pump capabilities and estimated to have a total production capacity of 715 gpm (from Wells 3, 4, & 5 only). With no hydrogeological studies and pump testing results available, the sustainable yields of the wells are unknown and are constrained to existing pumps maximum flowrates.

2.2 Existing and Additional Demands

WWD 42 provided MKN with water consumption data from the past three fiscal years (2021-2022 to 2023-2024). This data, along with on-site flow meter readings collected at each well site during early morning hours in the summer to capture a conservative peak-hour demand, was used to assess the existing water demands.

The additional demands required to service the sixteen (16) Sobaje parcels were estimated using the average consumption data per service connection from existing system users, which looked at the total system water production divided by the number of connections. This approach was considered the most realistic, as the current users are billed at a flat rate rather than by consumption quantities. Typically, water usage estimates would follow the State Water Resources Control Board (SWRCB) and Department of Water Resources' (DWR) recommendation of 55 gallons per capita per day for indoor water use efficiency, applied to the projected population of the new development. However, due to the flat-rate billing structure and high water use for irrigation by current users, these standard estimates would likely underrepresent actual consumption, as there is little incentive to conserve water under the flat-rate system.

Fire flow suppression and storage requirements were provided by the Fresno County Department of Development Services (County). The County mandates 1,000 gallons per minute for the existing system, with an additional 1,000 gallons per minute required if the Sobaje parcels are connected to the WWD 42

system. The County would also require 120,000 gallons of storage capacity to serve both the existing system and the Sobaje properties.

2.3 System Evaluation

To ensure compliance with the DWR supply regulations, several key scenarios were analyzed to verify that the existing water system meets both supply and reliability requirements. The following scenarios were evaluated:

- Average Day Demand (ADD)
- Max Day Demand (MDD)
- Max Day Demand plus Fire Flow
- Peak Hour Demand (PHD)
- Firm Well Capacity Scenarios (assumes the largest producing well is offline)

These scenarios were assessed to determine whether the existing system has the capacity to serve the additional Sobaje parcels.

3.0 Supply and Demand Evaluation

3.1 Fresno County Waterworks District 42 Supply and Demand Evaluation

The following table summarizes the WWD 42 water system supply capacity compared to existing and future water demands.

Table 3-1: WWD 42 Supply and Demand Evaluation

Scenario	Demands			WWD 42 Supply ⁽²⁾		Surplus/Deficit	
	Sobaje Parcels ⁽¹⁾	WWD 42	Total Demand	Total	Firm ⁽³⁾	Total	Firm ⁽³⁾
ADD	30	200	230	715	440	485	210
MDD	69	450	519	715	440	196	-79
MDD + Fire Flow ⁽⁴⁾	1,069	1,450	2,519	715	440	-1,804	-2,079
PHD	103	675	778	715	440	-63	-338

Notes:

1. Projected demands assumptions based average use of existing service connections.
2. Supplies per WWD 42.
3. Firm well capacity represents supply available when largest well is offline.
4. Fire flow demand of 1,000 gpm with 120,000 gallons of storage per Fresno County Development Services.



The evaluation of the system revealed that WWD 42 lacks the supply capacity within its current infrastructure to adequately serve the additional Sobaje parcels. The analysis shown in Table **3-2** indicated deficiencies in the existing system when comparing the existing Maximum Day Demand (MDD) against its available firm well capacity, as well as when assessing MDD plus Fire Flow against its total well capacity. Incorporating the additional Sobaje parcels would exacerbate the existing deficit in supply, further compromising the systems ability to meet demands. Due to insufficient supply, water quality concerns, and aging infrastructure, it is not recommended that the Sobaje parcels be served by the existing WWD 42 system.