

July 24, 2024

The Honorable City Council
Office of the City Clerk
Room 395, City Hall
Mail Stop 160

Attention: Councilmember Katy Yaroslavsky
Chairperson, Energy and Environment Committee

Honorable Members:

Subject: Response to the May 24, 2024, City Council Motion 24-0456 - Relative to
Strategies to Address PFAS in the City of Los Angeles

Motion 24-0456, dated May 24, 2024, instructed the Los Angeles Department of Water and Power (LADWP) and LA Sanitation and Environment (LASAN) to report back on the presence of Per-and poly-fluoroalkyl substances (PFAS), and to provide information on testing and actions to ensure safe, potable drinking water for the City of Los Angeles.

Recommendation

Instruct LADWP to continue and expand monitoring efforts of water supply sources and the water distribution system; to develop plans and water supply permit amendments to maintain safe potable water supply; to collaborate with regulatory agencies to identify PFAS sources in the environment and protect water supply sources; and to support the City Attorney's Office with any active or future claims.

Discussion

PFAS are a large group of man-made chemicals that have been widely used in industrial, commercial, and consumer products since the 1940s. Nearly 15,000 PFAS compounds exist according to the United States Environmental Protection Agency's (USEPA's) chemical database. In recent years, the ubiquity of PFAS, their persistence in the environment, and the health and environmental threats from PFAS have become a great environmental and public health concern. The strong carbon-fluorine bonds in PFAS do not

allow an easy and natural breakdown of the chemicals in the environment and can bioaccumulate in humans and animals, which has earned PFAS the nickname of “forever chemicals.”

Research links PFAS exposure to many human health effects. Public water supply agencies have never, and do not, produce or profit from PFAS chemicals. Rather, PFAS substances enter water sources and aquifers through industrial releases and from contact or runoff from commercial goods and clothing. Public water supply agencies have limited control over the amount of these substances they receive and must handle.

Monitoring and Testing for PFAS in LADWP Water Sources and Water Distribution System

LADWP is committed to providing safe, reliable, and high-quality water to the City of Los Angeles. This includes adhering to regulations imposed by federal and state agencies, monitoring the water supply sources and water distribution system via extensive water quality testing, and designing and operating water treatment facilities to remove any natural or man-made contaminants. LADWP began testing for PFAS in 2013 by participating in USEPA’s Unregulated Contaminant Monitoring Rule 3 (UCMR 3). Since that time LADWP has conducted 768 sampling events that yielded 14,840 individual analytical measurements from its water sources and water distribution system. Of these measurements, 92% were non-detectable. **Moreover, no regulated PFAS compounds have been detected in the water distribution system.** The testing, to date, demonstrates that PFAS is not yet pervasive in the City’s drinking water sources, and is isolated to a few locations. These testing activities can be grouped into three major categories:

Past and Ongoing PFAS Monitoring under Regulatory Programs and Orders

- UCMR 3 (2013)
 - LADWP conducted quarterly UCMR 3 sampling between 2013-2014 at 11 entry points to its distribution system.
- California Division of Drinking Water (CA-DDW) Sampling Orders
 - In 2019, CA-DDW mandated PFAS monitoring at well fields near airports and landfills. This order applied to the Erwin and Rinaldi-Toluca (RT) Well Fields
 - In 2022, DDW issued a second PFAS monitoring order, which mandated quarterly sampling at well fields near other water sources with confirmed PFAS detections. This order applied to the Pollock, Mission, and Manhattan Well Fields.
- UCMR 5 (2022)
 - In December 2023, LADWP began quarterly UCMR 5 sampling at seven entry points to its distribution system, which were selected as representative of the system. LADWP utilized EPA Methods 533

and 537.1. To date, all results are non-detectable.

Permit Application & Facility Design

- North Hollywood West (NHW) 97-005 Permit
- North Hollywood Central (NHC) for the RT Well Field 97-005 Permit
- Tujunga (TJ) 97-005 Permit
 - Beginning May 2023, LADWP detected elevated levels of PFAS in the TJ production wells¹. As a result, LADWP is in the process of amending the 97-005 permit step reports to address PFAS.

As part of the 97-005 permit process, all remediation wells and monitoring wells² within the two-year capture zone³ were sampled for 25 PFAS compounds under EPA Method 533.

Discretionary / Operational Monitoring

- Baseline sampling of all active groundwater sources in 2018-2019
- Pollock Well Field Operational Monitoring monthly
- NHW, RT, and TJ Well Fields Operational Monitoring
- LADWP's Water system source and entry points
 - LADWP has tested the distribution system's connections to the Metropolitan Water District of Southern California (MWD) sources.
 - LADWP has tested its surface water source entry points.

Standard test methods and laboratory instruments have advanced with the sensitivity and precision to detect at the low levels recommended for drinking water supplies. The first EPA method used to analyze PFAS in drinking water identified 14 different PFAS analytes. Currently, 29 analytes can be measured using a combination of the EPA Method 533 and 537.1 test methods. LADWP expects test methods to continue to evolve to detect the thousands of PFAS compounds.

Table 1 summarizes the PFAS test results for each of LADWP's water supply sources and its distribution system. Compared to other water suppliers and agencies in neighboring counties, to date, LADWP has had a very low number of PFAS detections, and the data shows PFAS is not prevalent. As mentioned in the previous section, there have been no

¹ Production wells are used to pump water into the distribution system. This water is generally treated or blended with other water sources prior to consumer consumption.

² Monitoring wells are located around production wells and monitor the water quality of groundwater approaching production wells and provide information on the locations of contaminants.

³ Capture zones analyses are developed for the centralized groundwater remediation projects that are under the CA-DDW Process Memo 97-005. A capture zone is the region that contributes the ground water extracted by the production well(s). For example, a two-year capture zone boundary indicates that any water particles within this boundary will be captured by the well field in two years.

detections of the regulated PFAS compounds in the water distribution system after treatment. While the new Maximum Contaminant Levels (MCLs)⁴ for six PFAS compounds become enforceable in April 2029, the tap water served in LADWP's distribution system is already below these standards.

Table 1. PFAS Sampling Results in LADWP's Water Supply

Sampling Source	Highest PFAS Detections (Analyte - Concentration (ng/L))	Total Number of Sample Locations	Number of Sample Locations with PFAS Detections	Number of Sample Locations with Regulated PFAS Levels Exceeding NL ^a or MCL
Water to Consumers				
Distribution System Entry Points	PFHxA (2.85) ^b PFBA (2.8) ^b	20	7 ^c	0
Groundwater Sources^d (Prior to All Blending and Treatment Processes)				
NHW Production Wells	PFHxS (3.2) ^e	12	1	1
Pollock Production Wells	PFOA (9.6) PFHxS (7)	2	2	2
RT Production Wells	-	15	0	0
Tujunga Production Wells	PFOA (38) PFOS (23)	12	12	10
Monitoring Wells^f (Informational)				
NHW Monitoring Wells	PFOA (13) PFOS (19) PFHxS (50)	10	4	2
RT Monitoring Wells	PFOA (9.9)	9	7	2
Tujunga Monitoring Wells	PFOA (26) PFOS (14) PFHxS (27)	12	12	10

Notes:

- NL – Notification Level. Notification levels are health-based advisory levels established by the CA-DDW for chemicals in drinking water that lack MCLs.
- These are unregulated PFAS compounds.
- Non-regulated PFAS were detected more than once at only one sample location (Pollock Well Field area) in the distribution system. All other detections were single occurrences observed at the MWD connection locations.
- Groundwater sources are further blended with surface water sources.
- This detection occurred in 2019, prior to the establishment of a NL for PFHxS.
- PFAS sampling from the monitoring wells are depth specific measurements, so the concentrations measured may not reflect the concentrations that will be produced by production wells in the future and, hence, may result in an overestimation.

⁴ MCLs are federally regulated maximum concentrations of compounds allowed in water delivered through public water systems.

Figure 1 provides an overview of the local groundwater well fields within the City of Los Angeles boundary, highlighting areas with PFAS detections. **Figures 2 through 5** show specific locations for PFAS monitoring and the detected PFAS data in greater detail.

A general discussion of PFAS results by location is provided below:

- **Pollock Well Field**
 - Water supplied from the Pollock Well Field is further blended with surface water before entering the distribution system. The entry point to the distribution system for this blended water has not had any detections of regulated PFAS.
 - **TJ Well Field**
 - Tujunga Well Field has not been used to provide water into the distribution system since 2022 due to the construction of remediation facilities. The initial PFAS detections at the production wells began while the wells were out of service. Given the critical nature of this well field, four subsequent rounds of sampling have been conducted and have shown similar results. LADWP and CA-DDW are actively discussing and developing PFAS remediation strategies for the TJ Well Field before restarting well production.
 - **NHW Well Field**
 - Low levels of Perfluorohexanesulfonic acid (PFHxS) have been detected at an individual production well at the NHW Well Field. However, water supplied from this well is further blended with PFAS-free well sources and surface water before entering the distribution system. Operational PFAS monitoring is ongoing at the well field to ensure the distribution system remains protected from PFAS.
 - **Los Angeles Aqueduct Filtration Plant (LAAFP) Supply**
 - LADWP has not detected any regulated PFAS in its surface water supplies to the LAAFP.
 - **MWD Treated Supply**
 - MWD has been actively testing its treated water supply for PFAS and has not detected any regulated PFAS in its treated water. LADWP has also tested its distribution system's connections with MWD and has not detected any regulated PFAS.
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PFAS Action Plans & Strategies

The Water Quality Division oversees the development and implementation of PFAS prevention strategies for the LADWP. There are five main action plans, which are aligned with the USEPA's "PFAS Strategic Roadmap":

Focus Area One - Continue robust monitoring of water supply sources and the distribution system (*Restrict and Research*)

Focus Area Two - Identify sources of PFAS contamination in the groundwater aquifers and prevent migration (*Restrict, Remediate, and Holding Polluters Accountable*)

Focus Area Three - Develop Treatment Plans and Design/Construct Remediation Facilities to maintain a safe, potable water supply (*Remediate*)

Focus Area Four - Study drinking water treatment methods and methods to destroy the PFAS waste collected (*Research*)

Focus Area Five - Support efforts by the City Attorney's Office to pursue claims and recover costs (*Holding Polluters Accountable*)

I. Continue Robust Monitoring Programs for Water Supply Sources and the Water Distribution System:

The objective of the monitoring programs will be to reassure our customers that the water served is safe to use. Monitoring will also provide early detection of potential contamination concerns and changes in source water quality or contaminant plumes.

Monitoring wells are critical to monitoring groundwater flow paths and to understanding the quality of groundwater arriving at LADWP wells in future periods (2-, 5-, and 10 capture zones). This is the basis for developing future operational plans and remediation facilities. Sampling frequencies for the monitoring network depend on detections, measured concentrations, and years of travel time to arrive at LADWP's groundwater wells.

For the following groundwater remediation response actions: NHW, NHC, and TJ, LADWP has committed to sample PFAS compounds at these wellfields on an annual basis and will report the results through a Water Quality Surveillance Plan (WQSP) to CA-DDW. Currently, LADWP relies on contracted laboratories for all PFAS analytical needs. LADWP's Water Quality Lab (WQL) is working to procure

PFAS testing equipment and complete laboratory certification necessary for in-house PFAS analysis capabilities. LADWP's WQL anticipates obtaining necessary PFAS equipment and certifications by 2025.

LADWP is also preparing to fulfill the initial monitoring requirements of the recently released USEPA National Primary Drinking Water Regulation for PFAS. This includes quarterly sampling over the course of a year at all entry points to LADWP's water distribution system for the six regulated PFAS. Discretionary sampling for PFAS around well fields is also expanding to ensure that LADWP can work proactively to safeguard local water resources.

II. Identify Sources of PFAS Contamination to Protect and Prevent Migration to Water Supply Sources:

Thus far, the detections of PFAS in LADWP's water supply sources have been limited and those detections have been at low threshold levels. However, there are nearby sites predominantly situated within the City of Los Angeles boundary that have reported PFAS levels that are tens to hundreds of times higher than the levels at LADWP assets. If those sites are not properly monitored, contained, and remediated, it could lead to a significant operational and remediation issue for LADWP and its groundwater supply. Since the most efficient way to remediate PFAS is at the source and before it enters the water supply, LADWP intends to conduct widespread water quality testing and modeling to identify sources of PFAS contamination and to attempt to prevent them from entering into LADWP's water supply sources. This effort will require strong support and collaboration from regulatory agencies such as the Los Angeles Regional Water Quality Control Board (Los Angeles Regional Board), Department of Toxic Substances Control (DTSC), and USEPA. These agencies have the legal authority to issue orders for necessary monitoring, which includes sampling and testing, and/or remediation by potentially responsible parties.

III. Develop Treatment Plans and Design/ Construct Remediation Facilities:

LADWP is committed to providing safe, high-quality water for the entire community. This includes the development of provisional and long-term plans to mitigate PFAS in the potable water supply. These plans require approval by the Los Angeles Regional Board and CA-DDW. Currently, LADWP has three groundwater well fields with detections of those PFAS compounds with an established MCL, Notification Level, or Response Level.

- At the Pollock Well Field, LADWP is using a blending operation to meet the enforcement levels. This is successful because of the large ratio of surface

water that blends with the Pollock Well Field. If concentrations in the Pollock wells water were to increase, a new treatment train may be needed.

- At the NHW Field, one PFAS compound has been detected below the regulatory levels at an individual well with limited operations. Water supplied from the well field is effectively blended with the majority of the production wells and surface water that are PFAS-free. If PFAS concentrations in the North Hollywood West wells were to increase, a new treatment train may be needed.
- At the TJ Field, which is LADWP's largest groundwater well field, LADWP is in the process of obtaining a provisional water supply permit from CA-DDW to address PFAS and other contaminants. LADWP has also conducted bench-scale testing on various PFAS-removing adsorbents to evaluate and determine which alternative single-use adsorbents will most efficiently remove PFAS given the water quality conditions at the Tujunga Well Field. A small scale PFAS optimization unit is being planned at the TJ Field Groundwater Remediation Facility based on the results of the bench testing. The efforts will include field testing of the PFAS-removal medias over the next 12-18 months during the operations of the facility. The results will guide the design of a future long-term treatment solution.

IV. Research Studies:

Given the breadth of research needs on PFAS including analytical testing, treatment, and destruction, it will be important for LADWP to leverage the external research at peer utilities and water treatment industry research organizations. LADWP staff will seek active roles in this research by submitting proposals, funding research, and serving on the research advisory committees. LADWP is collaborating on PFAS treatment research projects with the Water Research Foundation and local universities. LADWP is also pursuing an agreement with Orange County Sanitation and Orange County Water Districts to conduct research on emerging PFAS destruction technologies for enhanced PFAS removal in groundwater and drinking water treatment.

V. Support of Legal Claims:

On April 19, 2024, following approval of the City Council, the City Attorney's Office initiated litigation (Case No. 24STCV09939) against more than two dozen chemical companies, including 3M, DuPont, and Carrier, seeking accountability for contaminating City property and resources. LADWP has supported, and will continue to support and assist, the City Attorney's Office's efforts. As LADWP continues to evaluate and monitor the impacts of PFAS in its water sources, it may incur

significant capital and operational costs associated with treatment, which may give rise to additional legal claims or damages.

If you have any questions or if further information is required, please contact me at (213) 367-1338, or have your staff contact Mr. Paul Habib, Director of Legislative and Intergovernmental Affairs, at (213) 367-3846.

Sincerely,



Janisse Quiñones
Chief Executive Officer and Chief Engineer

PH:fc

Enclosure

c/enc: Councilmember Tim McOsker, Vice Chairperson, Energy and Environment
Committee
Councilmember Nithya Raman, Energy and Environment Committee
Councilmember Bob Blumenfield, Energy and Environment Committee
Councilmember Kevin de Leon, Energy and Environment Committee
Mr. Paul Habib

bc/enc: Anselmo Collins
Jonathan Leung
Kaushal Parbhoo

Figure 1. San Fernando, Sylmar and Central Basin Well Fields

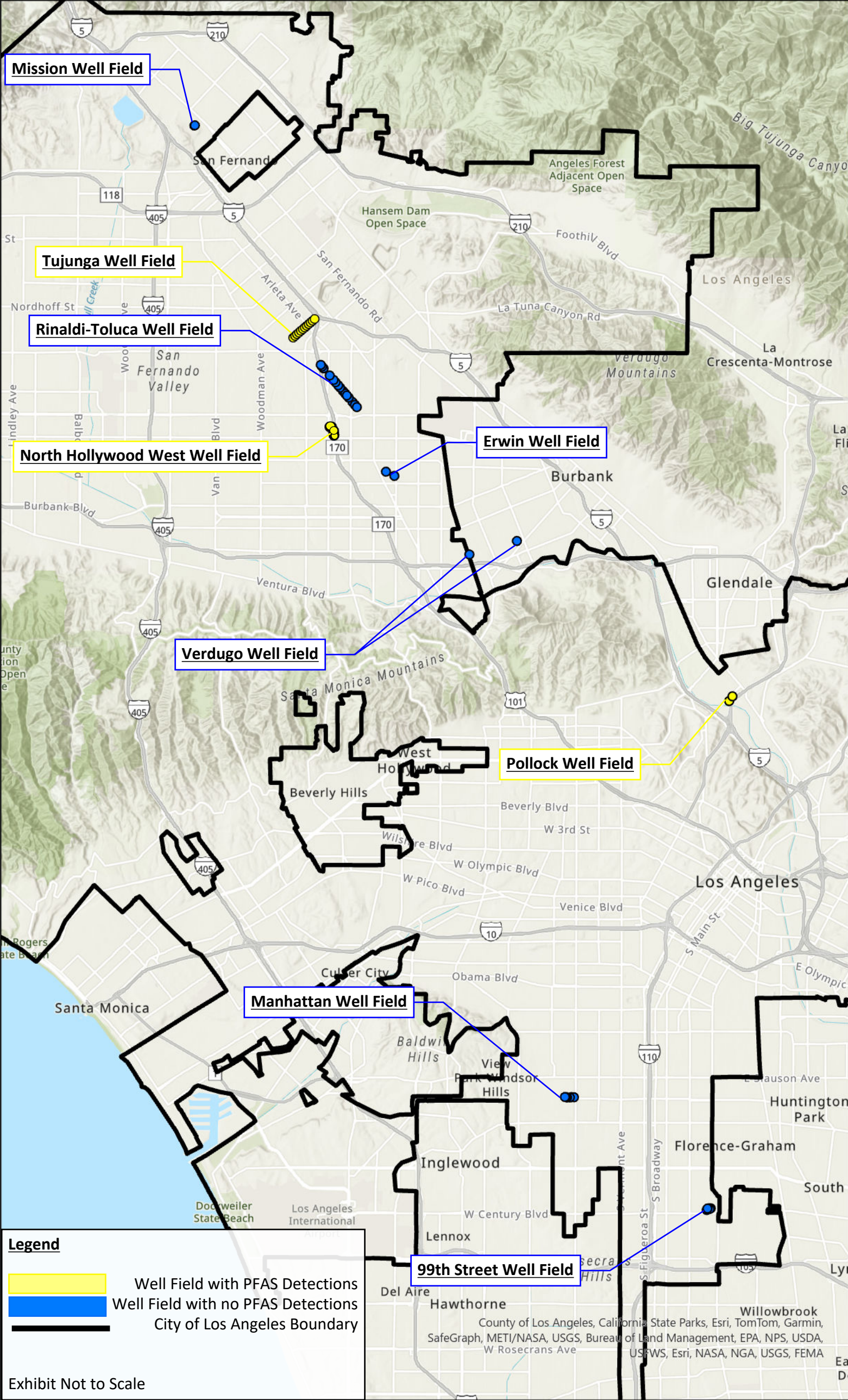


Figure 2. North Hollywood West - Well Field, Monitoring Wells, and Capture Zones

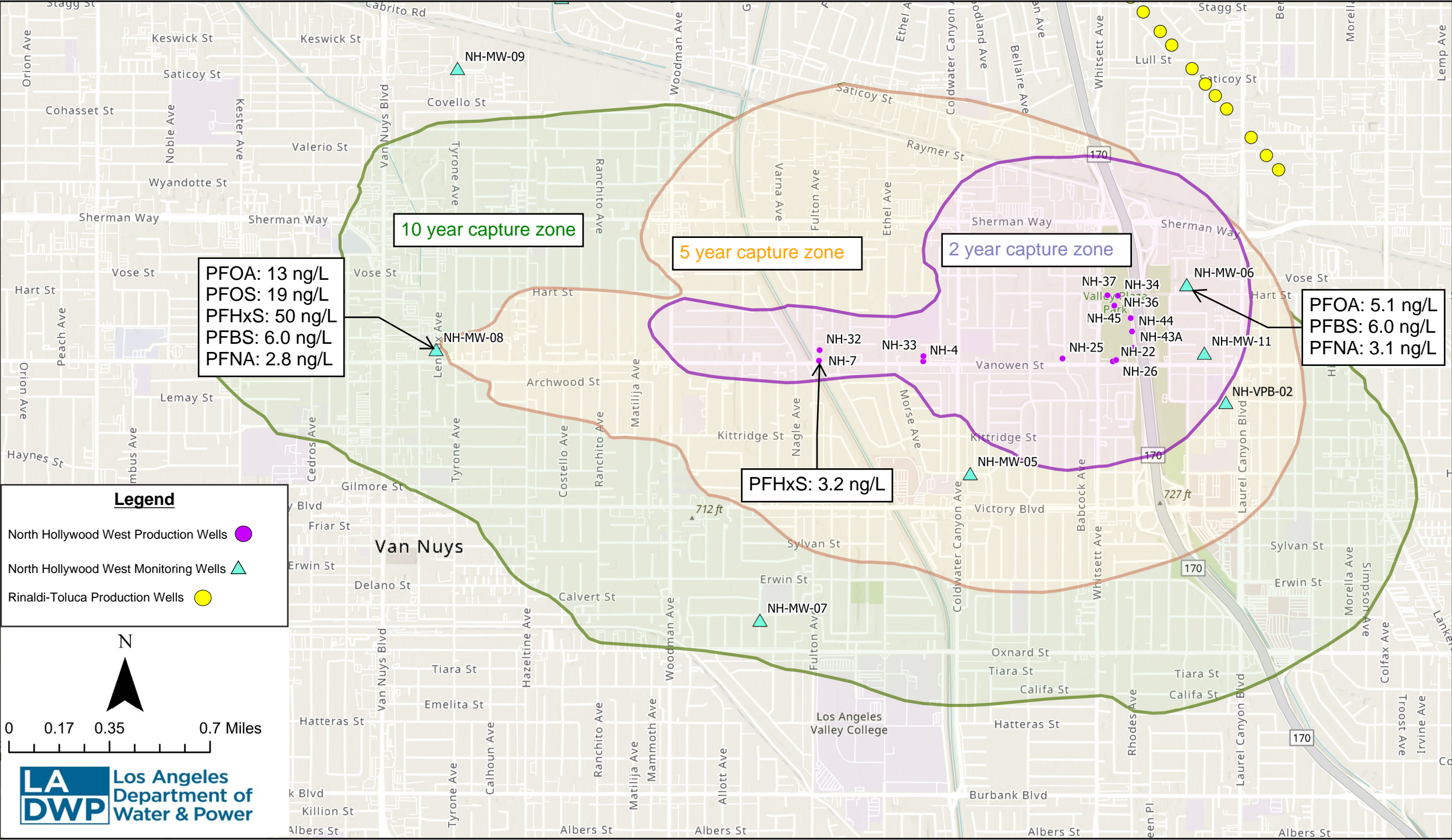


Figure 3. Pollock Well Field

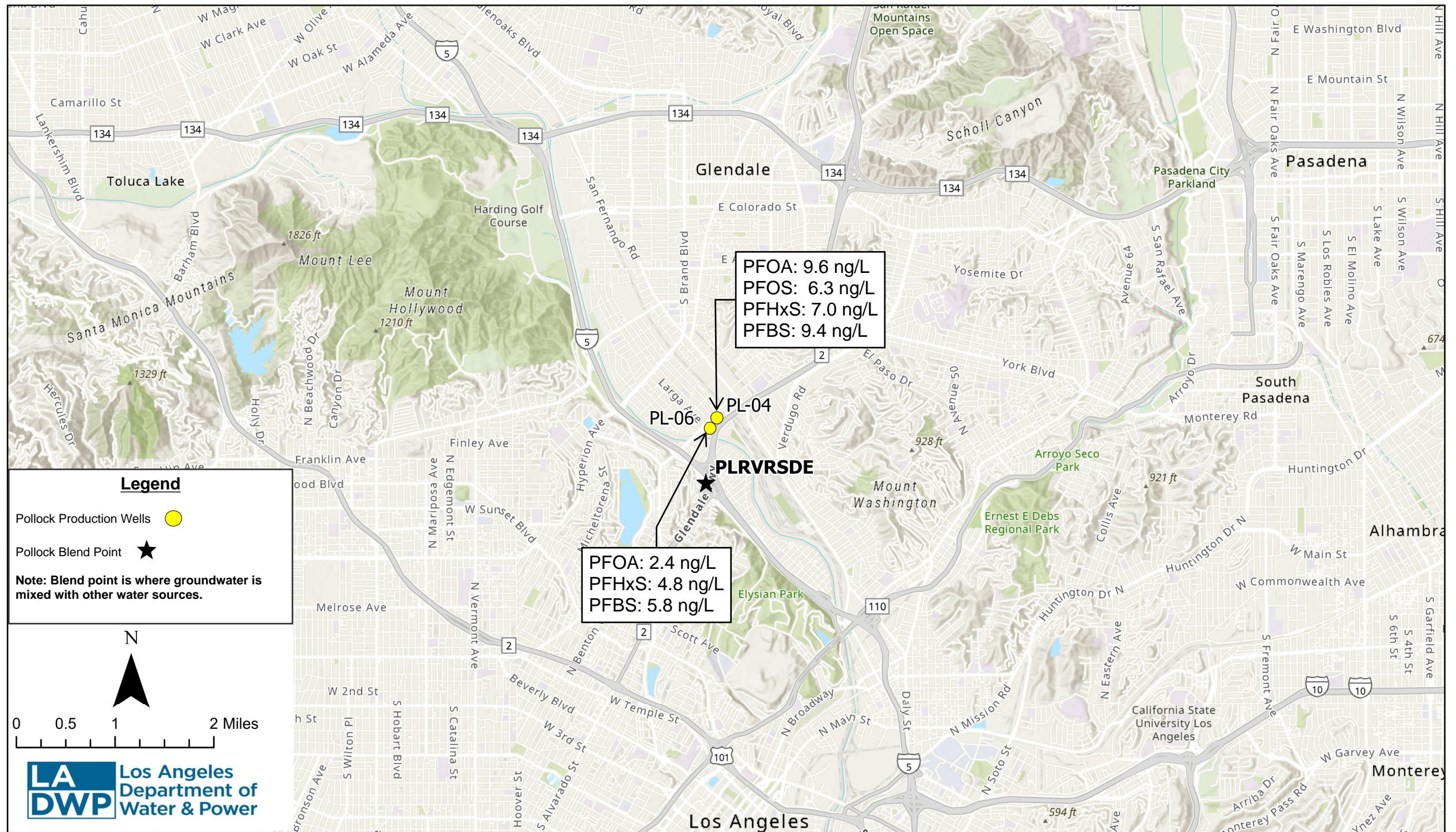


Figure 4. Rinaldi-Toluca - Well Field, Monitoring Wells, and Capture Zones

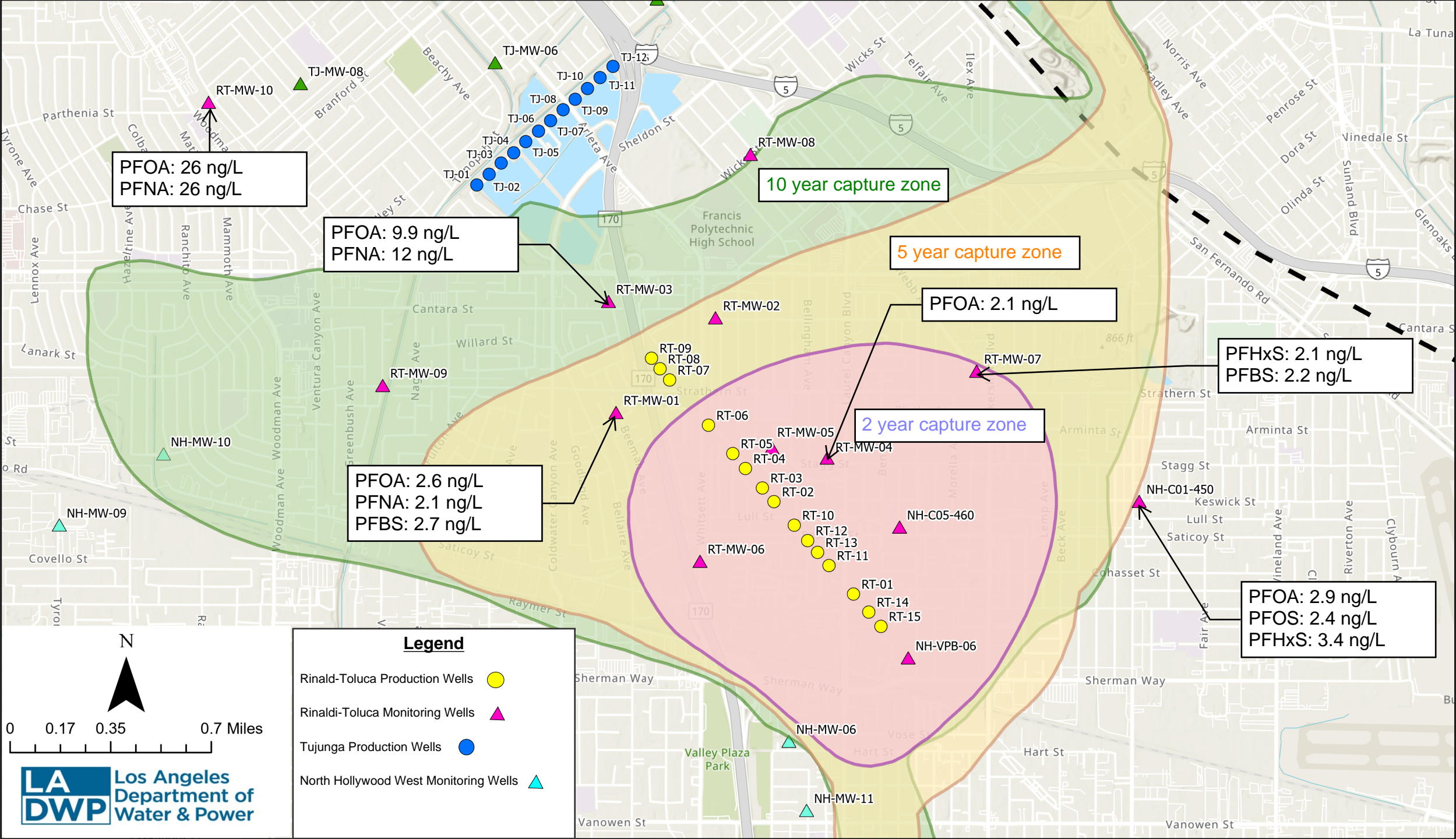


Figure 5. Tujunga - Well Field, Monitoring Wells, and Capture Zones

