DRINKING WATER SOURCE PROTECTION

NORTH HOLLYWOOD WEST WELL FIELD

(Step 3 of 97-005 Evaluation)

Prepared for

State Water Resources Control Board, Division of Drinking Water

Prepared by

Los Angeles Department of Water & Power

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List of Acronyms

µg/L	micrograms per liter
1,1-DCE	1,1-Dichloroethene
1,2,3-TCP	1,2,3-Trichloropropane
2IR	Second Interim Remedy
AOP	Advanced Oxidation Process
BOU	Burbank Operable Unit
CAO	Cleanup and Abatement Order
CPS	Cleanup Program Sites
DDW	Division of Drinking Water
DTSC	Department of Toxic Substances Control
EPA	United States Environmental Protection Agency
FFS	Focused Feasibility Study
ft	Feet
LADWP	Los Angeles Department of Water and Power
LUST	Underground Storage Tank
MCL	Maximum Contaminant Level
MW	Monitoring Well
ND	Non- detect
NDMA	N-Nitrosodimethylamine
NH	North Hollywood
NHOU	North Hollywood Operable Unit
NL	Notification Level
OU	Operable Unit
PCE	Tetrachloroethylene
PRP	Potentially Responsible Party

RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
RT	Rinaldi -Toluca
RWQCB	Regional Water Quality Control Board
SFB	San Fernando Basin
SFV	San Fernando Valley
TCE	Trichloroethylene
TJ	Tujunga
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
WDR	Waste Discharge Requirements

1. Introduction

This report documents the Drinking Water Source Protection (DWSP) Program for the North Hollywood West Well Field (NHW Well Field) developed by the Los Angeles Department of Water and Power (LADWP) in accordance with Step 3 of the State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW) Update of 97-005 Process Memo for Extremely Impaired Sources (DDW Process Memo 97-005) (March 25, 2015 Draft). The DWSP Program includes actions by LADWP and review and evaluation of third-party actions relating to the various remediation programs, cleanup actions, mitigation measures, and regulations applicable to the protection of the drinking water source for the NHW Well Field and associated Study Area (well field capture zones). A summary of currently operated and planned programs and regulations being used to control the origin and levels of groundwater contamination at and surrounding the NHW Well Field is provided.

The NHW Well Field is one of LADWP's production well fields within the San Fernando Basin (SFB) and is located along Vanowen Street just west of SR-170. The NHW Well Field comprises 14 production wells; however, production well NH-23 is non-operational and will be destroyed in the future. The well field setting and approximate NHW production well locations are shown in Figure 1.

The development of the DWSP Program is Step 3 of the eleven-step DDW process (refer to Table 1) for evaluating proposals, establishing appropriate permit conditions, and approving the use of an extremely impaired source for direct potable use (DDW, March 25, 2015 Draft).

LADWP developed the NHW Well Field DWSP Program to ensure the protection of its drinking water resource, i.e., groundwater extracted from the NHW Well Field. Groundwater in the vicinity of the well field is impaired by contamination and it is LADWP's objective to protect the well field from future contamination releases through the implementation of the DWSP Program.

The "NHW Well Field Study Area" referenced herein was delineated by an aggregated area comprising the modeled 2, 5 and 10-year captures developed for the NHW Well

Field based on LADWP's planned pumping plan (refer to the NHW Well Field 97-005 Step 2 report). The NHW Well Field Study Area is shown Figure 1.

To support the objective of protecting the well field, the DWSP Program includes the following elements:

- LADWP's evaluation of contamination source areas;
- Identification and evaluation of major clean-up projects within the NHW Well Field Study Area;
- A detailed evaluation of existing source protection programs; and
- A Communication Plan, which identifies LADWP personnel that will act as liaisons with appropriate agencies.

Important note: it is imperative that the precursor Step 1 and 2 reports for the NHW Well Field 97-005 Evaluation (i.e., Drinking Water Source Assessment and Contaminant Assessment [SA/CA, Step 1] and Full Characterization of the Raw Water Quality [Step 2]) are read prior to, or in conjunction with this report, "*as each step lies upon the findings and conclusions of the prior step*" (DDW Process Memo 97-005)

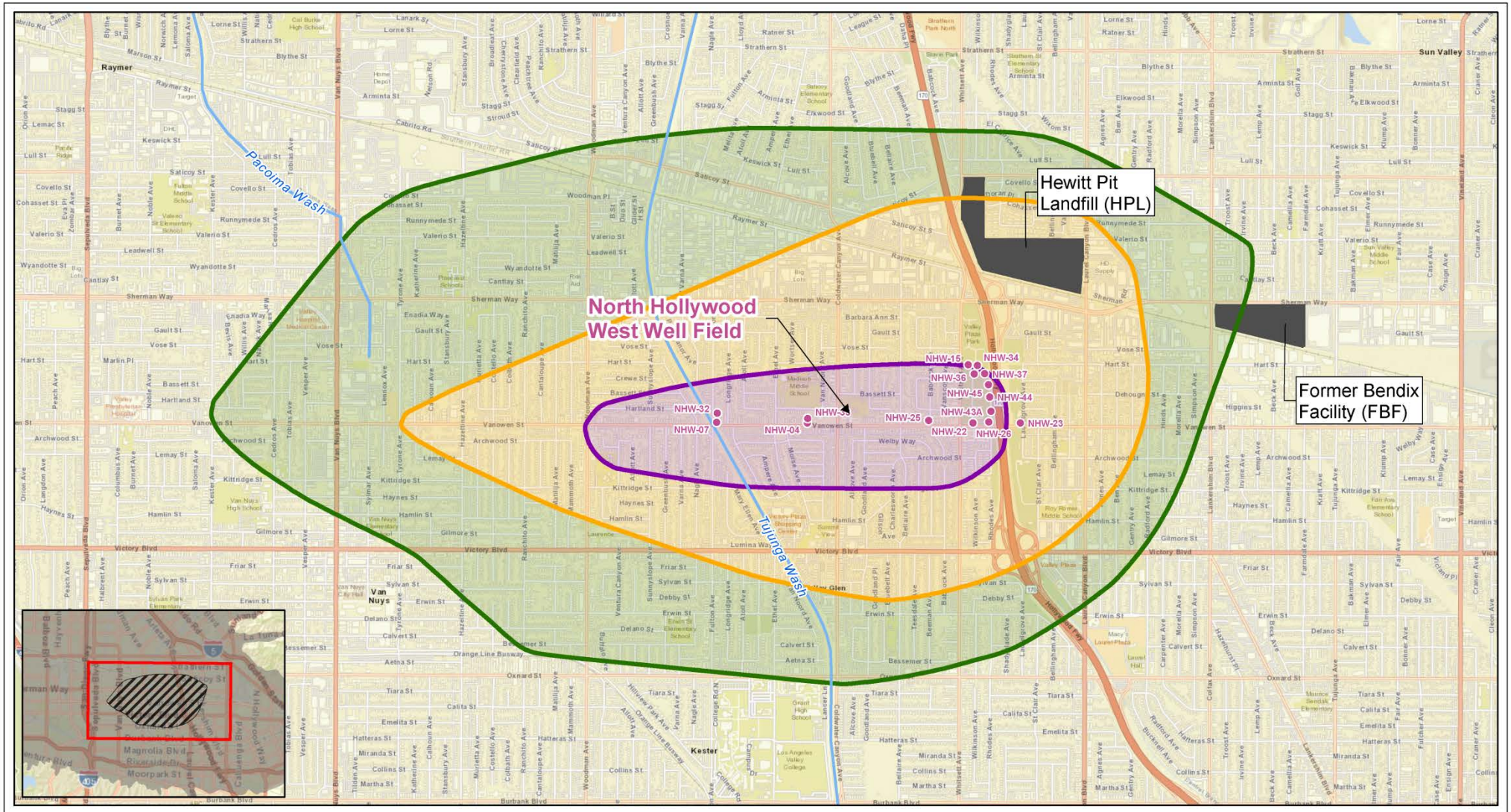
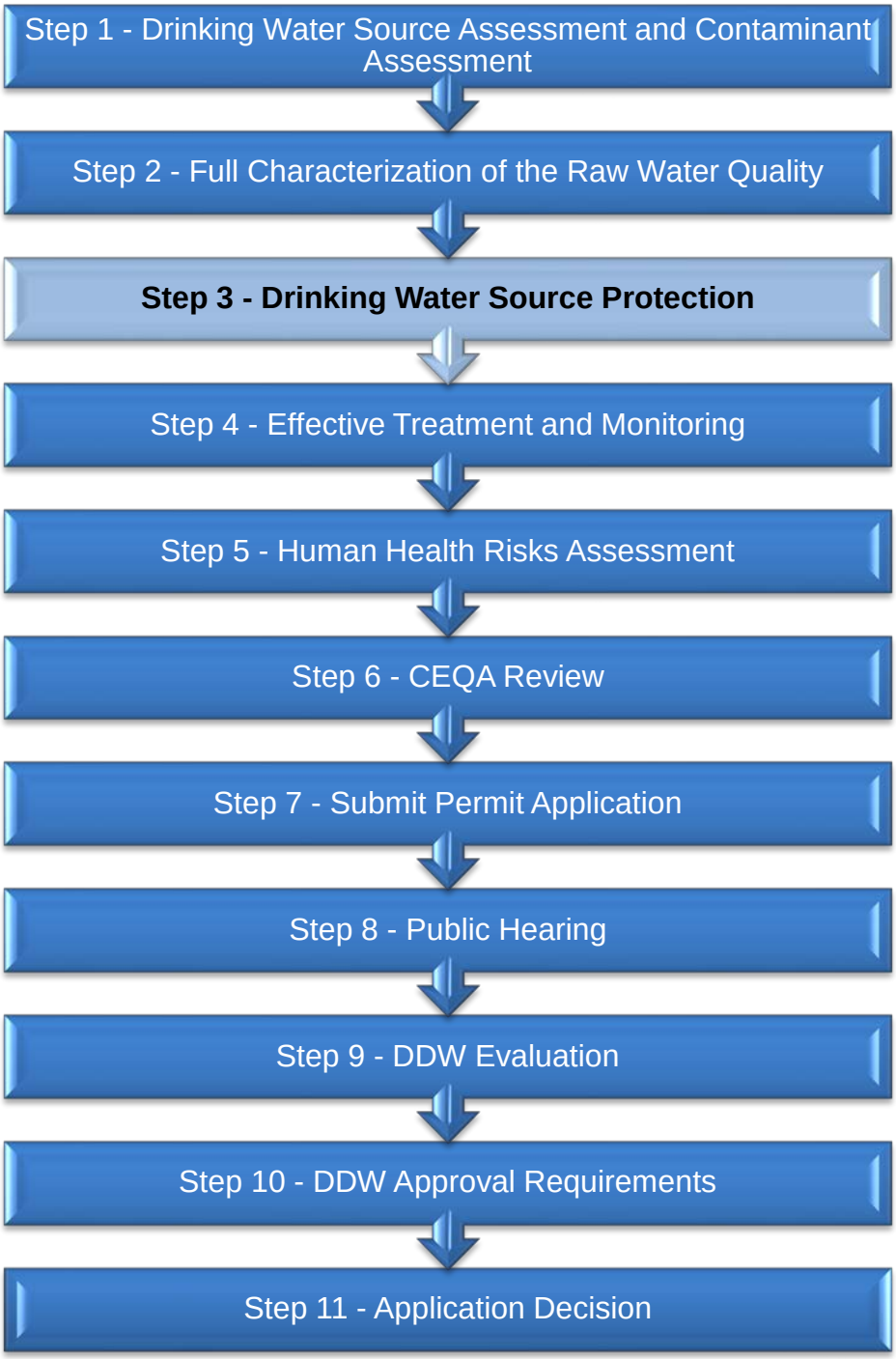


Figure 1 North Hollywood West Well Field Setting

Table 1 Eleven Step 97-005 Evaluation Process for an Extremely Impaired Drinking Water Source



2. Background

The LADWP is planning to remediate groundwater contamination and restore production of groundwater at the NHW Well Field by extracting and treating impacted groundwater and using it as a source of potable water supply (Hazen, 2016a; 2016b; 2017). In 2017, LADWP selected an interim remedial action (IRA), which plans to use a groundwater pump and treatment system to reduce the toxicity, mobility, and volume of contaminated groundwater through treatment. Human health will be protected by capturing and removing contaminated groundwater from the NHW Well Field area through hydraulic control and treating the contaminated groundwater aboveground to permanently remove 1,4-dioxane, as well as other contaminants from groundwater (Hazen, 2017). This Step 3 report forms part of the overall NHW Well Field 97-005 Evaluation for the NHW Remediation Project. Further information relating to groundwater contamination sources, the source water quality and the LADWP's IRA at NHW Well Field are provided in the precursor Step 1 (SA/CA) and 2 (Full Characterization of the Raw Water Quality) reports for the NHW Well Field 97-005 Evaluation.

In addition, since the early 1980s, the United States Environmental Protection Agency (EPA), Los Angeles Regional Water Quality Control Board (LARWQCB), California Department of Toxic Substances Control (DTSC), and other parties have overseen and conducted extensive investigative work in the SFB. This includes work associated with interim remedies for contaminated groundwater and considerable site-specific investigations and remediation activities. Many parties have installed monitoring networks both on-site and off-site at facilities across the SFB, with extensive groundwater sampling to characterize water quality at and/or near contaminated sites. Some potentially responsible parties (PRPs) are implementing source removal and site-specific cleanups and/or are involved with implementation of groundwater remedies in various Operable Units (OUs) defined within the SFB, including the North Hollywood OU, Burbank OU, and Glendale OU). Groundwater monitoring and cleanup activities

applicable to the NHW Well Field Study Area are discussed further in subsequent sections of this report.

3. Evaluation of Contamination Source Areas

Step 1 and Step 2 of the 97-005 evaluation process includes identification of contaminant sources and characterization of water quality within the NHW Well Field Study Area. These reports include a review of available information and data obtained from the following environmental databases to identify the origin of known contaminants in groundwater and any potential contamination sources currently or historically present in the NHW Well Field Study Area:

- GeoTracker, the RWQCB database. This database provides regulatory data for the following type of sites/facilities:
  - Leaking Underground Storage Tanks (LUST) cleanup sites
  - Cleanup Program Sites (CPS, also known as Site Cleanups, or SC)
  - Military sites (consisting of Military Underground Storage Tanks [UST]), Military Privatized sites, and Military Cleanup sites, formerly known as DoD non-UST)
  - Land Disposal sites (Landfills)
  - Permitted UST facilities
  - Waste Discharge Requirement (WDR) sites
- EnviroStor, the DTSC database. This database provides information on permits and corrective actions at hazardous waste facilities, as well as site cleanup projects.

The information and data obtained from these resources were used to develop the NHW Well Field DWSP Program.

In the next section (Section 4), the major clean-up projects within the NHW Well Field Study Area (Figure 1) are described.

4. Major Source and Contamination Clean-Up Projects

This section provides background information, including remedial actions, pertaining to clean-up projects associated with significant contamination source areas within the NHW Well Field Study Area. These source areas are shown in Figure 1.

The SA/CA (97-005 Step 1) identified four major clean-up sites in the SFB based on the occurrence of identified groundwater contamination, the relative locations of these sites, and three of the LADWP's Well Fields[1]. Of these four sites, two are located within the NHW Well Field Study Area as shown in Figure 1:

- Hewitt Pit Landfill (HPL), also referred to as the Hewitt Site and Hewitt Landfill; and
- Former Bendix Facility.

These two sites are not intended to represent a complete list of the sites that could be past, present, or future sources of contamination to groundwater within the NHW Well Field Study Area. Additional work is underway by the RWQCB, EPA, and LADWP to evaluate these and other sites that may also contribute to the groundwater contamination in this NHW Well Field Study Area.

In addition, the North Hollywood Operable Unit (NHOU), which comprises approximately four-square miles of contaminated groundwater underlying an area of mixed industrial, commercial, and residential land use in the community of North Hollywood (EPA, 2009), is included in the NHW Well Field DWSP Program. The NHOU is being addressed through federal, state, municipal and PRP actions,

These three major clean-up projects are discussed in the sections that follow.

4.1. Hewitt Pit Landfill (HPL)

The HPL is located at 7245 and 7361 Laurel Canyon Boulevard, North Hollywood, California. The location of the HPL is shown in Figure 1. The HPL was first developed as a sand and gravel mining operation in October 1923. In 1962, mining ceased, and

[1]NHW, Rinaldi-Toluca and Tujunga Well Fields

landfill operations began using the sand and gravel pit for waste disposal until it was capped and closed in 1975 (Golder Associates, 2016). Landfill operations were conducted by Los Angeles By-Products Company under a lease agreement with the owners at the time, “ConRock” (GC Environmental, Inc. [GCE], 2005). Additional mergers led to the present ownership, CalMat Company (CalMat) doing business as (DBA) Vulcan Materials Company, Inc. (GC Environmental, Inc. [GCE], 2005).

The depth of the original mining pit was approximately 130 feet below ground surface (GCE, 2005). The landfill was not equipped with a liner or leachate collection and removal system. A landfill gas control system consisting of extraction wells and a flare was installed during the mid-1970s, triggered by complaints of gas migration after the landfill was closed and capped (LeRoy Crandall and Associates, 1987). Over the years, the system has been replaced or rebuilt to control landfill gas migration (Golder Associates [Golder], 2014).

To assess the thickness of the cap material at the northern leg of the landfill, GCE drilled 19 soil borings in 2005. Based on boring logs, the cap soil consisted of silty sand and sand mixture. The thickness of the cap varied between 5 feet and 9 feet near the perimeter of the landfill, and greater than 30 feet near the crest of the landfill (GCE, 2005). Currently, quarterly landfill cover inspections are conducted at the HPL (Golder, 2020).

Groundwater samples were first collected in 1987 from two monitoring wells installed at the HPL in late 1984 at the request of the City of Los Angeles Landfill Monitoring Task (LeRoy Crandall and Associates, 1987). These samples were collected for the Soil Waste Water Quality Assessment Test – Water (SWAT) for the Hewitt Landfill as required by Assembly Bill No. 3525 (Calderon Act). Trichloroethene (TCE) and tetrachloroethene (PCE) were recorded at concentrations of 71 µg/L and 6 µg/L, respectively, from groundwater samples collected from a well located in the southeast corner of the HPL site. A second well, located to the northwest of the HPL site, had reported TCE and PCE concentrations of 45 µg/L and 200 µg/L, respectively (LeRoy Crandall and Associates, 1987). The current maximum contaminant level (MCL) for TCE and PCE is 5 µg/L.

As part of the SWAT, one additional monitoring well was installed proximate to the well located in the southeast corner of the Hewitt site. Two more rounds of SWAT sampling and testing were conducted in April 1988, and February 1989 (Law Environmental, Inc., 1989). Only one well was sampled once (1995) between February 1989 and 2006, with limited groundwater sampling occurring between 2006 and 2013 (Golder, 2014).

In 2014, the RWQCB issued an investigative order requiring the initiation of a groundwater monitoring program, as well as a Cleanup and Abatement Order (CAO) on September 8, 2015 (CAO NO. R4-2015-0147). A CAO requires responsible parties to laterally and vertically delineate the extent of on-site and off-site contamination and to remediate.

As discussed in the Hewitt Pit Conceptual Site Model (CSM) report (Golder, 2016), the following chemicals have been identified as the primary and secondary contaminants of potential concern (COPCs) in groundwater beneath the HPL:

- **Primary COPCs:** 1,4-dioxane, PCE, TCE, N-Nitrosodimethylamine (NDMA), N-Nitrosodiethylamine (NDEA), and 1,2,3-TCP.
- **Secondary COPCs:** the following VOCs: 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), vinyl chloride (VC), 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethane (1,2-DCA) and 1,2-dichloropropane (1,2-DCP), and; Tertiary Butyl Alcohol (TBA) and perchlorate.

RWQCB provided approval to re-inject/discharge under the General WDR No. R4-2014-0187 on September 16, 2016. A pilot test system was started on December 12, 2016 and was shut down on December 13, 2016. A total of 10,320 gallons of water were extracted and treated during the start-up commissioning of the pilot test. However, the treated groundwater was contained onsite in a 20,000-gallon frac tank, with no discharge via the re-injection well.

Subsequently, between January 17, 2017 and April 26, 2017, CalMat performed a groundwater pump, treat, and reinjection pilot test. Monthly monitoring was performed for the duration of pilot testing with a total of six monitoring events completed during the test period. In addition, two quarterly monitoring events (first and second quarters of

2017) were conducted during pilot testing, and two after (third and fourth quarters of 2017) the pilot test was completed. As of July 2020, no remediation activities have been performed since the completion of the aforementioned 2017 pilot test with the exception of leachate recovery and continued operation of the landfill gas recovery system (CalMat, 2020).

As part of the CAO, CalMat designed an onsite remedy that includes 8 extraction wells and 12 injection wells with a target remedial pumping rate of 460 gallons per minute, which was approved by RWQCB on February 7, 2018 (CalMat, 2019). Treatment will include an advanced oxidation treatment system (Golder, 2017). As of April 30, 2020, CalMat reported that "*the full system procurement and construction is ongoing and anticipated to begin operation during the second quarter or early in the third quarter 2020*" (CalMat, 2020).

PCE, TCE and 1,4-dioxane isoconcentration contour maps (Golder, 2019) illustrating the interpreted extent of contamination beneath the HPL site as well as off-site, are provided in Appendix A for reference. Appendix A also includes a figure showing the locations of all HPL groundwater monitoring, piezometer, extraction, and leachate wells; as well as groundwater elevation contours figures for both the A- and B-Zone (Golder, 2019). Groundwater samples are collected at the HPL (on-site and off-site) at quarterly intervals from 47 monitoring wells screened in various aquifer units of the SFB including the A- and B-Zones. Two additional off-site NHOU wells are sampled on an annual basis (Golder, 2020).

4.2. Former Bendix Facility

The Former Bendix Facility (FBF) is located at 11600 Sherman Way in North Hollywood, in the eastern part of the SFB, and is bordered by Sherman Way to the north, Metrolink right-of-way to the south, Lankershim Boulevard to the west, and commercial buildings to the east. The location of the Former Bendix Facility is shown in Figure 1.

During the period from 1941 to 1992, the facility was used by the Bendix Corporation and later by AlliedSignal/Bendix Electrodynamics (Bendix was purchased by

AlliedSignal, now known as Honeywell International, Inc.) for the manufacture of hydraulic and pneumatic valves (MWH, 2004). Activities at the facility included, but were not limited to, chrome plating, degreasing with chlorinated solvents, and chemical storage. Site investigations began in the late 1980's and groundwater monitoring began in 1991. Groundwater contaminants observed at this site include TCE, PCE, Cr(VI), and 1,4 dioxane.

A Soil Vapor Extraction (SVE) system was operated from 2001 to 2013 to remove VOCs from soil at the site. Soil contaminated with hexavalent chromium (Cr[VI]) was excavated between 1994 and 2000. The next phase of remediation was a groundwater extraction, treatment, and re-injection system.

In late February 2003, the RWQCB issued a CAO (No. R4-2003-0037), which required the assessment of emerging chemicals and heavy metals in the unsaturated zones beneath the site. In 2007, the RWQCB approved a waste discharge permit (WDR), Order No. R4-2007-0019, for reinjecting treated water. On-site groundwater treatment to date has included ion-exchange to remove hexavalent chromium, advanced oxidation process (AOP) to remove 1,4-dioxane, and liquid phase granular activated carbon (GAC) to remove VOCs. Treated groundwater is reinjected into the aquifer beneath the site after treatment.

Delivery of reductant solution (treated water dosed with calcium polysulfide solution) began on site on March 11, 2009. In January of 2016, the RWQCB approved a WDR for injection of 5.2 million gallons of 1.5% calcium polysulfide solution and 10.4 million gallons of chase water into two injection wells over the course of nine months. In addition to the on-site injection events, the off-site plume was treated by injecting reductant in March 2017. Cr(VI) has since been non-detect near this location, which had previously indicated elevated Cr(VI) detections prior to calcium polysulfide injection.

Groundwater samples are collected at the FBF quarterly, semi-annually, or annually at 51 monitoring wells and one extraction well screened in various aquifer units of the SFB including the A-, B-, and Deeper Zones. From system startup through fourth quarter 2019, approximately 543 million gallons of water have been extracted, treated, and

reinjected (Stantec, 2020). As of May 2020, activities anticipated for the second quarter 2020 include continuing operation and maintenance of the on-site remediation system and quarterly monitoring per WDR requirements. Isoconcentration contour maps from 2019 for Cr(VI), 1,1-DCE, 1,2-DCA, carbon tetrachloride, PCE, TCE and 1,4-dioxane (Wood, 2020) are provided in Appendix B for reference. These maps illustrate the interpreted extent of contamination beneath the site as well as off-site. Appendix B also includes a site plan and sample locations figure, as well as a groundwater elevation contour figure (Wood, 2020).

4.3. North Hollywood Operable Unit (NHOU)

The NHOU is one of two geographically-defined operable units within the San Fernando Valley Area 1 Superfund Site. The NHOU comprises approximately 4 square miles of contaminated groundwater underlying the community of North Hollywood. The location of the NHOU is shown in Figure 2.

The North Hollywood Operable Unit First Interim Remedy (NHOU1IR), located east of the North Hollywood Well Field, commenced operation in December 1989 to contain impacted groundwater from the Honeywell International Inc. (formerly Bendix), Lockheed and other PRPs facilities and properties. The NHOU1IR was designed to extract up to 2,000 gallons per minute of groundwater and remove VOCs from the upper zone of the SFB prior to treatment and disinfection for potable use by the City. VOCs were removed from contaminated groundwater by utilizing an aeration facility.

The NHOU1IR was designed to focus on the area containing the highest concentrations of groundwater contamination within the NHOU. However, in 2009, it was determined by the EPA that the NHOU1IR was "*no longer capable of fully containing the groundwater plume…new contaminants have been discovered in the aquifer*" (EPA, 2009). LADWP is currently working with the EPA and Honeywell on installing the NHOU Second Interim Remedy (2IR) that will replace the NHOU1R treatment system to meet Remedial Action Objectives (RAOs) described in the 2009 Record of Decision (ROD) and treat for emerging chemicals of concern (i.e., 1,4-dioxane and Cr(VI) in addition to VOCs). The planned total treatment capacity of the NHOU2IR will be approximately 8,500 acre-feet

per year. Phase 1B of the NHOU-2IR is expected to be operational by the fourth quarter of 2021 and will have a treatment capacity of 1,500 acre-feet per year. All costs associated with the design, construction, operation and maintenance of the NHOU-2IR will be paid by the applicable PRPs.

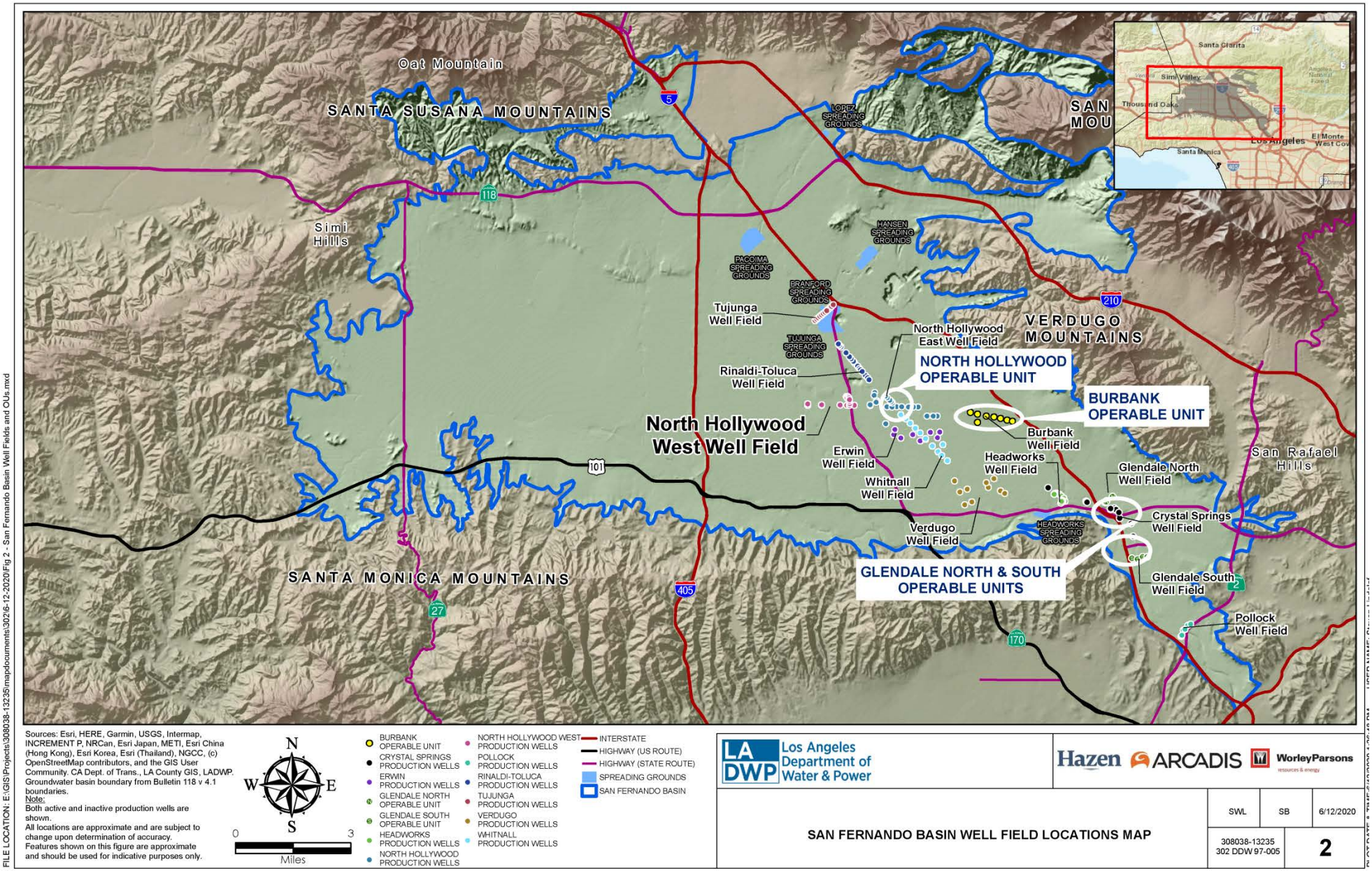


Figure 2 San Fernando Basin Well Field Locations Map

5. Additional Existing Source Protection Programs

There are various existing source protection programs and permitting regulations that govern the management and handling of the hazardous materials, storage tanks, and hazardous waste within the NHW Well Field Study Area. These programs aim to prevent contaminants from reaching the soil and groundwater. In the following subsections, current and key source protection programs, as well as associated goals and requirements, are described.

5.1. Storage Tanks

Aboveground Petroleum Storage Tanks

Above Ground Storage Tanks (ASTs) are tanks or other containers that are above ground, partially buried, bunkered, or in a subterranean vault. These can include floating fuel systems. In order to prevent contamination of drinking water sources (groundwater and surface water used as public drinking water supplies), facilities with ASTs have to comply with the requirements dictated by the Aboveground Petroleum Storage Act (APSA). The aboveground storage of petroleum statute was originally adopted in California in 1989 and administered by the SWRCB and RWQCBs. Assembly Bill 1130 (January 1, 2008) transferred the responsibility for the implementation, enforcement, and administration of aboveground storage of petroleum to Unified Program Agencies (UPAs). The CAL Fire-Office of the State Fire Marshal has oversight responsibility of APSA.

APSA regulates facilities with aggregate aboveground petroleum storage capacities of 1,320 gallons or more, which include aboveground storage containers or tanks with petroleum storage capacities of 55 gallons or greater. These facilities typically include large petroleum tank facilities, aboveground fuel tank stations and vehicle repair shops with aboveground petroleum storage tanks. APSA does not regulate non-petroleum products. Facilities with total petroleum storage quantities at or above 10,000 gallons are inspected at least once every three years by a UPA and have reporting and fee requirements, while facilities with petroleum storage quantities equal to or greater than 1,320 gallons but less than 10,000 gallons have reporting and fee requirements only.

Underground Storage Tanks (USTs)

In 1988, the EPA published technical requirements for Underground Storage Tanks (USTs) containing petroleum or hazardous substances defined under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Technical requirements include leak detection, leak prevention, and corrective action for all USTs containing regulated substances. In 1988, the EPA also published financial responsibility requirements for underground storage tank owners and operators to demonstrate financial responsibility for taking corrective action, as well as compensating third parties for bodily injury and property damage from releases of tanks containing petroleum. This regulation also included requirements for State program approval.

The federal regulations concerning USTs are contained in 40 Code of Federal Regulations (CFR) Part 280, 40 CFR Part 281, and 40 CFR Parts 282.50-282.105. The list of hazardous substances is provided in 40 CFR Part 302.4.

Spill Prevention, Control, and Countermeasure (SPCC) Regulation

One of the EPA's top priorities is to prevent, prepare for, and respond to oil spills that occur in and around inland waters of the United States. The EPA is the lead federal response agency for these types of spills. The U.S. Coast Guard is the lead response agency for spills in coastal waters and deep-water ports.

The EPA's oil spill prevention program includes the Spill Prevention, Control, and Countermeasure (SPCC) and the Facility Response Plan (FRP) rules. The SPCC rule assists facilities to prevent discharge of oil into navigable waters or adjoining shorelines. The FRP rule requires certain facilities to submit a response plan and prepare to respond to 'worst-case oil discharge' or 'threat of a discharge'.

5.2. Hazardous Waste Management

The Resource Conservation and Recovery Act (RCRA) regulations establish basic hazardous waste management standards for persons who produce hazardous waste, called hazardous waste generators. These standards are found in title 40 of the Code

of Federal Regulations (CFR) in part 262 and at 40 CFR §261.5. The generator regulations ensure that hazardous waste is appropriately identified and handled safely to protect human health and the environment, while minimizing interference with daily business operations.

Table 2 below provides a summary of the requirements for each class of hazardous waste generator. Generators are responsible for all applicable requirements in 40 CFR part 262 for small quantity generators (SQGs) and large quantity generators (LQGs) and 40 CFR §261.5 for conditionally exempt small quantity generators (CESQGs).

Table 2 Requirements for Hazardous Waste Generators

Requirement	Conditionally Exempt Small Quantity Generators	Small Quantity Generators	Large Quantity Generators
Accumulation Requirements Manage hazardous waste in compliance with certain technical standards	None	Basic requirements with technical standards for tanks or containers **§§262.34(d)(2) and (3)**	Full compliance for management of tanks, containers, drip pads, or containment buildings **§262.34(a)**
Accumulation Time Limits Determine amount of time hazardous waste is allowed to accumulate on site	None	≤ 180 days or ≤ 270 days (if transporting greater than 200 miles) **§§262.34(d)(2) and (3)**	≤ 90 days **§262.34(b)**
Air Emissions Control hazardous air emissions from tanks and containers	Not required	Not required	Required **Part 265 subparts AA, BB and CC from §262.34(a)(1)(i)**
Biennial Report Report data from off-site shipments of waste during the previous calendar year	Not required	Not required	Required **§262.41**

Requirement	Conditionally Exempt Small Quantity Generators	Small Quantity Generators	Large Quantity Generators
Closure Close equipment, structures, soils and units by meeting specified performance standards and disposal and decontamination requirements	Not required	Required - tanks only **§265.201(f)**	Required - General **§§265.111(a)** and **265.114** from **§262.34(a)(1)(iv)** - Unit specific **Part 265, subparts I, J, W, and DD**
Contingency Plan and Emergency Procedures Develop procedures to follow during an unplanned major event.	Not required	Basic plan required **§262.34(d)(5)(i-iv)**	Full plan required **Part 265 subpart D** from **§262.34(a)(4)**
EPA ID Number Acquire a unique EPA identification number that identifies genera tors by site	Not required	Required **§262.12**	Required **§262.12**
Exception and Additional Reporting Report if any required copies of signed manifests are not received back Provide information on quantities and disposition of wastes upon request	Not required	Required **§§262.42(b)** and **262.43**	Required **§§262.42** and **262.43**
Facility Type Send off-site shipments to appropriate facilities for management	Facilities noted in **§§261.5(f)(3) and (g)(3)**	RCRA permitted/interim status facility **Parts 264/265, 266/267 and 270**	RCRA permitted/interim status facility **Parts 264/265, 266/267 and 270**

Requirement	Conditionally Exempt Small Quantity Generators	Small Quantity Generators	Large Quantity Generators
Land Disposal Restrictions Meet standards for placing on the land and associated requirements for certifications, notifications, and waste analysis plans	Not required	Required **Part 268** from **§262.34(d)(4)**	Required **Part 268** from **§262.34(a)(4)**
Manifest Tracking hazardous waste shipments using the **multiple-copy manifest** (required by Department of Transportation [DOT] and EPA)	Not required	Required **Part 262 subpart B**	Required **Part 262 subpart B**
On-Site Accumulation Quantity Determine amount of hazardous waste generators are allowed to "accumulate" on site without a permit	≤1,000 kg ≤1 kg acute ≤100 kg of acute spill residue or soil **§§261.5(f)(2) and (g)(2)**	≤6,000 kg **§262.34(d)(1)**	No limit
Personnel Training Ensure appropriate personnel complete classroom or on-the-job training to become familiar with proper hazardous waste management and emergency procedures for the wastes handled at the facility	Not required	Basic training required **§262.34(d)(5)(iii)**	Required **§265.16** from **§262.34(a)(4)**

Requirement	Conditionally Exempt Small Quantity Generators	Small Quantity Generators	Large Quantity Generators
Pre-Transport Requirements Package and label hazardous waste for shipment off site to a Resource Conservation and Recovery Act (RCRA) facility for treatment, storage, or disposal	Yes (if required by DOT)	Required **§§262.30-262.33**	Required **§§262.30-262.33**
Preparedness and Prevention Develop procedures to follow in the event of an emergency.	Not required	Required **Part 265 subpart C** from **§262.34(d)(4)**	Full plan required **Part 265 subpart C** from **§262.34(a)(4)**
Quantity Limits The amount of hazardous waste generated per month determines how a generator is categorized and what regulations must be complied with	≤100 kg/month ≤1 kg/month of acute hazardous waste ≤100 kg/month of acute spill residue or soil **§§261.5(a) and (e)**	>100 <1,000 kg/month **§262.34(d)**	≥1,000 kg/month >1 kg/month of acute hazardous waste >100 kg/month of acute spill residue or soil **§262.34(a)**
Recordkeeping Maintain records of manifests, biennial reports, exception reports and waste testing	Not required	Required **§262.40(a), (c), and (d)**	Required **§262.40**
Waste Minimization Certify steps taken to reduce or eliminate the generation of hazardous waste	None	Good faith effort required **§262.27**	Program in place required **§262.27**

5.3. Hazardous Material

The Hazardous Materials Management Program ensures compliance with statutory provisions and regulations relating to hazardous materials inventories and emergency plans, which address emergency responses to hazardous materials releases or threatened releases and avoidance of accidents involving certain hazardous materials. The California Health and Safety Code, Section 25502; the California Code of Regulations, Title 19, Section 2620-2734; and, the Los Angeles County Code, Title 32, Section 103.2.2.3 grant authority to the Fire Department to administer the Hazardous Materials Inventories and Emergency Plans in incorporated cities and the unincorporated areas of Los Angeles County.

Businesses that handle significant quantities of hazardous materials are subject to the requirements of the Hazardous Materials Management Program and are required by state law to prepare, submit, and implement hazardous business plans for emergency response to releases or threatened releases of hazardous materials. These business plans must include the facility's inventory of hazardous materials handled, an emergency response plan for actual or threatened releases, an employee-training program, and a facility map displaying the locations of reportable hazardous materials. The chemical inventories are to be updated and submitted annually, and the overall business plans are to be reviewed and submitted every three years or as often as significant changes in business operation require. These requirements are specified in the California Health and Safety Code, Sections 25503.5, 25504, 25505, 25509 & 25510, and in Title 19 of the California Code of Regulations, Sections 2729-2734.

5.4. Water and Wastewater

Clean Water Act and Porter/Cologne Act: Surface Water Discharge

In accordance with the Clean Water Act (CWA), and California's Porter Cologne Water Quality Control Act, National Pollutant Discharge Elimination System (NPDES) permits are required for certain facilities that discharge wastewater to surface water. In addition, the RWQCB issue WDRs for activities that have the potential to impact surface water or groundwater but are not required to have NPDES permits by the CWA. The purpose of

these permits is to prevent groundwater and surface water pollution via water discharge from industrial activities.

Clean Water Act and Porter/Cologne Act: Stormwater Discharge-General Permit

Certain facilities that discharge stormwater associated with industrial activities are required to comply with the provisions of the ‘General Stormwater Permit for Discharges Associated with Industrial Activities’, including implementation of a Stormwater Pollution Prevention Plan (SWPPP). SWPPPs identify proper handling, storage, record keeping, training, inspection and spill response procedures for hazardous materials and waste managed onsite.

Clean Water Act: Wastewater Discharge to Publicly Owned Treatment Works (POTW)

Facilities that discharge industrial wastewater to the local publicly owned treatment works (POTW) are generally required to obtain an industrial wastewater discharge permit. Frequently, facilities must prepare a Pollution Prevention Plan (PPP) as a part of their industrial wastewater discharge permit. PPPs are intended to identify proper handling, storage, record keeping, training, inspection, and spill response procedures to prevent hazardous materials and waste from becoming discharged to the sewer in industrial wastewater.

6. Communication Plan

The LADWP Source Protection and Groundwater Remediation Group is in continuous communication with the EPA and RWQCB for the purposes of discussing groundwater contamination issues and to be kept informed of any new sources of contamination in soil and/or groundwater that can potentially impact the quality of the source water in the SFB, as well as other basins where LADWP well fields are located. In addition, LADWP meets with DDW on a quarterly basis to brief them on all updates related to water quality, well field operations, and any groundwater remediation activities.

LADWP attends triannual meetings with the EPA, RWQCB, DTSC, DDW, and the Cities of Burbank and Glendale to discuss the status of Superfund Projects in the San Fernando Valley (SFV). LADWP briefs the committee on NHOU activities, while the City of Burbank and Glendale update the committee on the Burbank OU and Glendale OU, respectively. The EPA, RWQCB, and DTSC provide updates to the committee on various matters related to groundwater cleanup and remediation efforts in the SFV.

Further, LADWP and RWQCB entered into a memorandum of understanding (MOU), whereby LADWP funds ongoing RWQCB investigations to identify PRPs of groundwater contamination that has adversely impacted LADWP's well fields in the SFB. LADWP has recently renewed the MOU for the period from January 1, 2017 to December 30, 2021.

Specific LADWP personnel that act as liaisons with the various agencies mentioned above, are identified in Table 3.

In addition, the LADWP is currently and will continue to monitor groundwater at production and monitoring wells within NHW Well Field Study in conjunction with third-party groundwater monitoring; detailed information relating to groundwater monitoring activities is provided in the subsequent Step 4 (Effective Treatment and Monitoring) report of the NHW Well Field 97-005 Evaluation.

Table 3 LADWP Key Liaison Personnel

Agency	Title	LADWP Group
Division of Drinking Water (DDW)	Environmental Affairs Officer	Regulatory Affairs and Consumer Protection
Los Angeles Regional Water Quality Control Board (LARWQCB)	Remediation Support Squad Lead	Source Protection & Groundwater Remediation Group
Environment Protection Agency (EPA)	Remediation Support Squad Lead	Source Protection & Groundwater Remediation Group
Department of Toxic Substances Control (DTSC)	Remediation Support Squad Lead	Source Protection & Groundwater Remediation Group

7. References

CalMat Co. 2019. Letter to the Regional Water Quality Control Board: First Quarter 2019 Remediation Progress Report – Hewitt Remediation Project, 7245-7361 Laurel Canyon Road, North Hollywood, California. CAO No. R4-2015-0147. April 30.

CalMat Co. 2020. Letter to the Regional Water Quality Control Board: First Quarter 2020 Remediation Progress Report – Hewitt Remediation Project, 7245-7361 Laurel Canyon Road, North Hollywood, California. CAO No. R4-2015-0147. April 30.

DDW (Division of Drinking Water) (formerly California Department of Public Health). 2015. Addressing the Direct Domestic Use of Extremely Impaired Sources, Process Memo 97-005. Initially Established November 5, 1997, revised March 25, 2015 (Draft).

EPA (United States Environmental Protection Agency). 2009. EPA Superfund – Interim Action Record of Decision. North Hollywood Operable Unit, San Fernando Valley (Area 1) Superfund Site, Los Angeles County, California. EPA ID: CAD980894893. September 30.

GCE (GC Environmental, Inc.). 2005. Development Design Workplan, Hewitt Landfill, North Hollywood, CA. February 11.

Golder (Golder Associates). 2014. Response to 13267 Order for Hewitt Pit Landfill. May.

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Golder (Golder Associates). 2020. 2019 Fourth Quarter Groundwater Monitoring Report, Hewitt Site, 7245-7361 Laurel Canyon Boulevard, North Hollywood District, City of Los Angeles, California. January.

Hazen (Hazen and Sawyer). 2016a. Interim Remedial Investigation / Feasibility Study Report, North Hollywood West Well Field. December 2016.

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Hazen (Hazen and Sawyer). 2017. Interim Remedial Action Decision, North Hollywood West Well Field. July 2017.

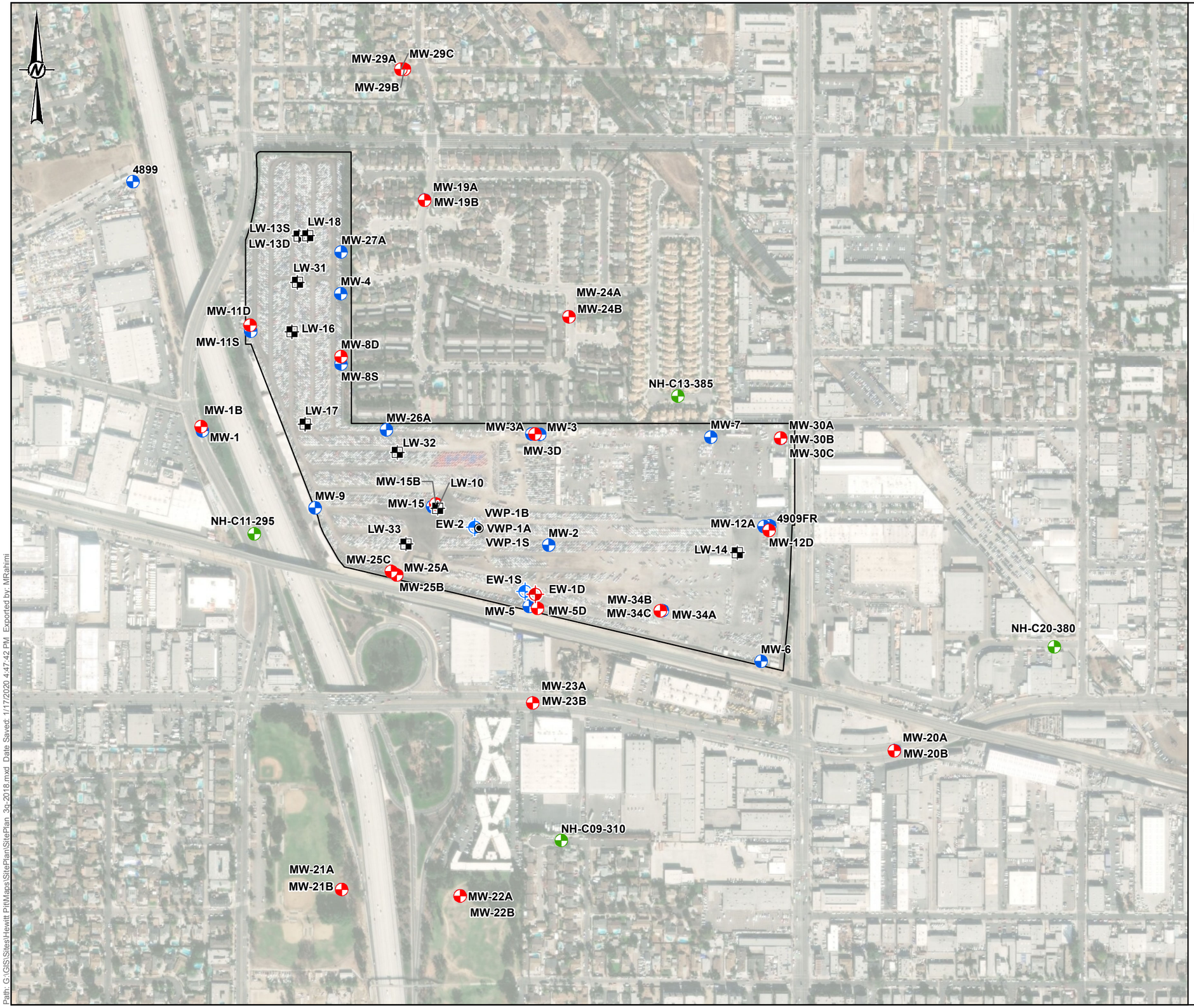
Law Environmental, Inc. 1989. Solid Waste Assessment Test (SWAT) Supplementary Monitoring Report, Hewitt Landfill (Closed). June 29.

LeRoy Crandall and Associates. 1987. Proposed Solid Waste Assessment Test Monitoring Program (SWAT), Hewitt Class 2 Disposal Site, Sun Valley District, Los Angeles, California for Calmat Co. March 31.

MWH. 2004. Soil and Interim Groundwater Remedial Action Plan for Reduction of Hexavalent Chromium, Former Honeywell North Hollywood Site, 11600 Sherman Way, North Hollywood, California. July 30.

Stantec. 2020. Fourth Quarter 2019 Waste Discharge Requirement (WDR) Monitoring Report. January.

Attachment A **Hewitt Pit Landfill - Fourth Quarter 2019 Groundwater Monitoring, Piezometer, Extraction, and Leachate Well Locations, Groundwater Elevation and Isoconcentration Contour Maps**



Legend

- Hewitt Monitoring Well - A Zone
- Hewitt Extraction Well - A Zone
- Hewitt Monitoring Well - B Zone
- Hewitt Extraction Well - B Zone
- NHOU Monitoring Well
- Piezometer
- Leachate Well
- Hewitt Site

NOTES

400 0 400
Feet

REFERENCE

SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V

CLIENT
CALMAT CO.

PROJECT
HEWITT SITE, NORTH HOLLYWOOD, CALIFORNIA

TITLE
HEWITT GROUNDWATER MONITORING, PIEZOMETER, EXTRACTION, AND LEACHATE WELL LOCATIONS

CONSULTANT
GOLDER

YYYY-MM-DD	2020-01-17
PREPARED	MR
REVIEW	AK
APPROVED	WLF

PROJECT No.	CONTROL	Rev.	FIGURE
19-127576	---	---	3

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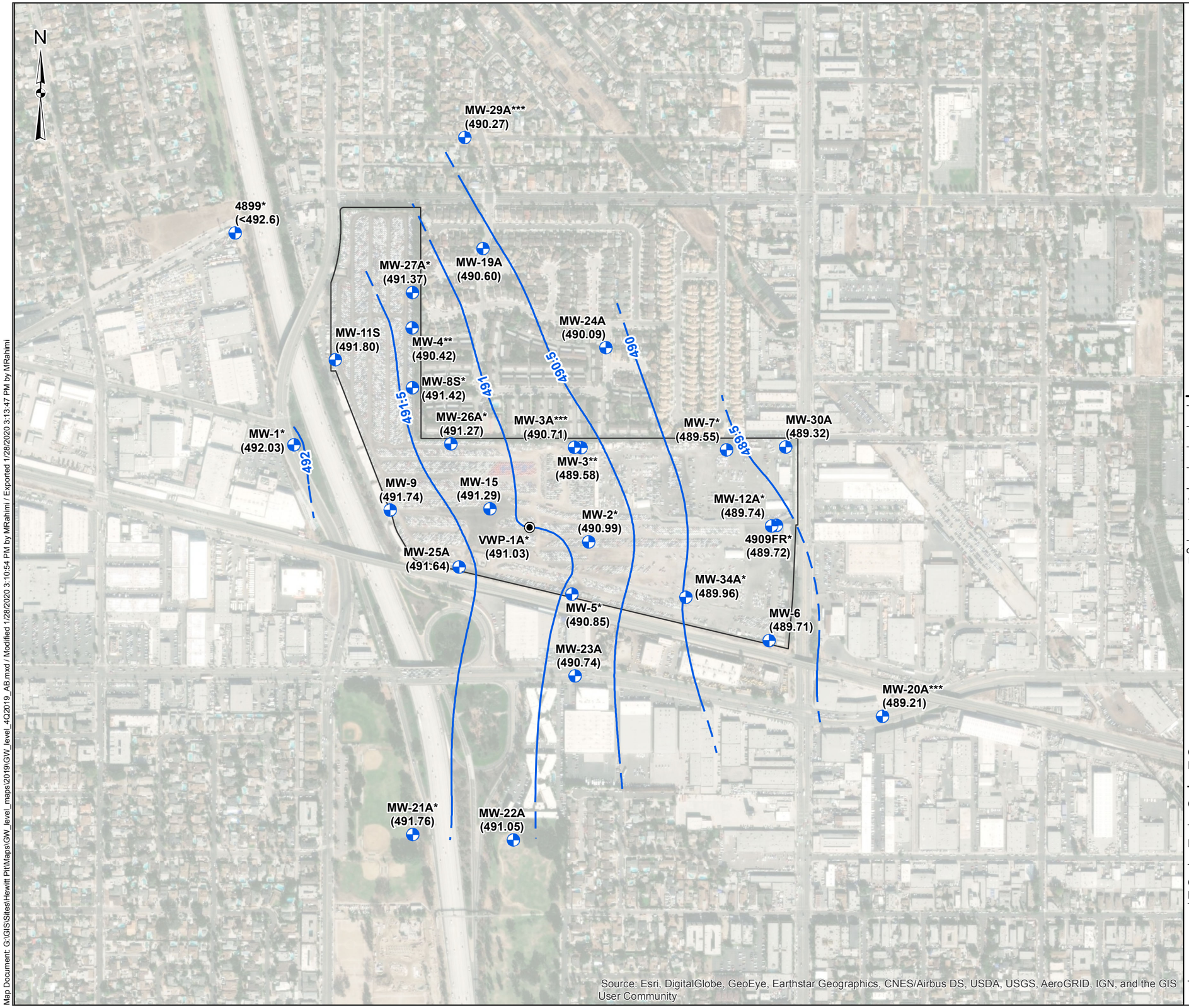

Legend

- Groundwater Monitoring Well
- Piezometer
- Interpreted Groundwater Elevation
- Hewitt Site

NOTES

-- The transducer groundwater elevations were collected on October 10, 2019

-- "<" bottom of the screen means water level was below the screen elevation

- * Manual measurements were collected between October 10 and 15, 2019

-- ** Manual measurements and not used in groundwater contouring

-- *** Manual measurements used in developing contours for consistency with vertical gradients rather than transducer data reported in Table 2

-- The vertical datum used for groundwater elevations is NAVD88

-- LADWP production data are not available at this time. Therefore, influences of these operations have not been incorporated in the estimated groundwater contours shown here.

500 0 500 Feet

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

CLIENT
CALMAT CO.

PROJECT
HEWITT SITE, NORTH HOLLYWOOD, CA

TITLE
GROUNDWATER ELEVATION CONTOURS - A ZONE WELLS, FOURTH QUARTER 2019

GOLDER

YYYY-MM-DD	2020-01-28
PREPARED	MR
DESIGN	AW
REVIEW	AK
APPROVED	ND

PROJECT No.	CONTROL	Rev.	FIGURE
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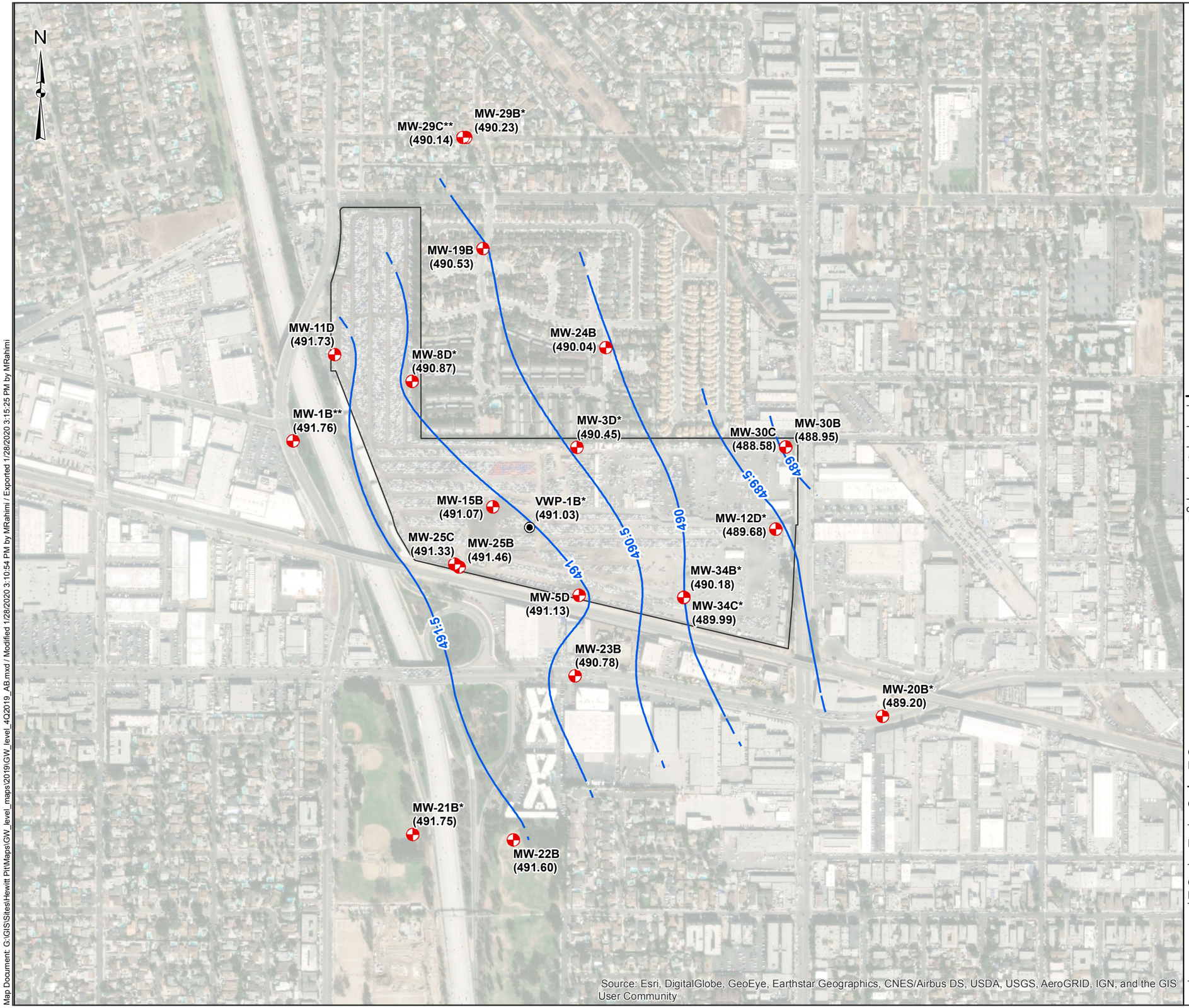

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Legend

- Groundwater Monitoring Well
- Piezometer
- Interpreted Groundwater Elevation
- Hewitt Site

NOTES

-- The transducer groundwater elevations were collected on October 10, 2019

-- * Manual measurements were collected between October 10 and 17, 2019

-- ** Manual measurements used in developing contours for consistency with vertical gradients rather than transducer data reported in Table 2

-- The vertical datum used for groundwater elevations is NAVD88

-- LADWP production data are not available at this time. Therefore, influences of these operations have not been incorporated in the estimated groundwater contours shown here.

500 0 500
Feet

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

CLIENT
CALMAT CO.

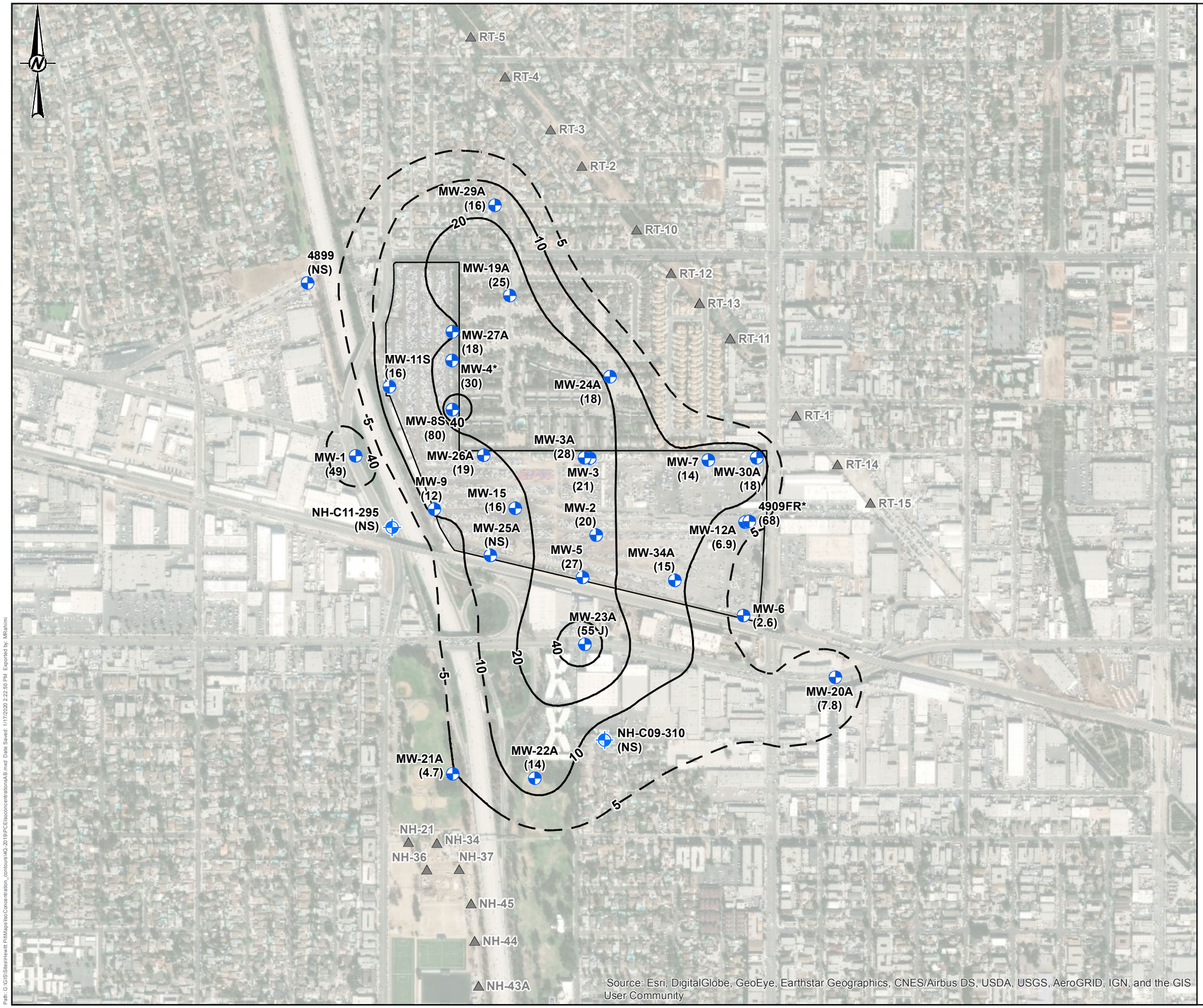
PROJECT
HEWITT SITE, NORTH HOLLYWOOD, CA

TITLE
GROUNDWATER ELEVATION CONTOURS - B ZONE WELLS, FOURTH QUARTER 2019

GOLDER

YYYY-MM-DD	2020-01-28
PREPARED	MR
DESIGN	AW
REVIEW	AK
APPROVED	ND

PROJECT No.	CONTROL	Rev.	FIGURE
1793376	---	---	5



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

- Groundwater Monitoring Well - Hewitt
- Groundwater Monitoring Well - NHOU
- Production Well - LADWP
- —50— PCE Isoconcentration Contour
- Hewitt Site Boundary

(33) Tetrachloroethene concentration in micrograms per liter

(NS) Not Sampled. Well was dry or inaccessible. Historical concentrations considered in contouring.

NOTES

1) The California Maximum Contaminant Level (MCL) for Tetrachloroethene (PCE) is 5 µg/L.

2) PCE concentrations obtained during the fourth quarter 2019 sampling event.

3) The contours have been created by 3D-Kriging in Earth Volumetric Studio (EVS) and then sliced at an elevation of 444 ft. It represents the bottom of the A zone aquifer; however, it should be noted that not all A zone wells are screened at this elevation. The contours were generated by EVS software, but were reviewed and modified by a qualified professional.

4) "J"- Estimated result

5) LADWP's Rinaldi-Toluca and North Hollywood West production well head locations shown for reference only.

6) * Well has been excluded from contouring. Well screens have been above the water table intermittently. Therefore, results are considered anomalous due to rising groundwater potentially mobilizing adsorbed contaminants and/or landfill gas condensation. We will continue to monitor data from this well going forward and will include, as needed.

600 0 600
Feet

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

CLIENT
CALMAT CO.

PROJECT
HEWITT SITE, NORTH HOLLYWOOD, CALIFORNIA

TITLE
TETRACHLOROETHENE SCHEMATIC ISOCONCENTRATION CONTOURS IN GROUNDWATER - A ZONE WELLS, FOURTH QUARTER 2019

CONSULTANT
GOLDER

YYYY-MM-DD	2020-01-17
PREPARED	MR
DESIGN	MR
REVIEW	AK
APPROVED	AK

PROJECT No.	CONTROL	Rev.	FIGURE
19-127576	---	---	6

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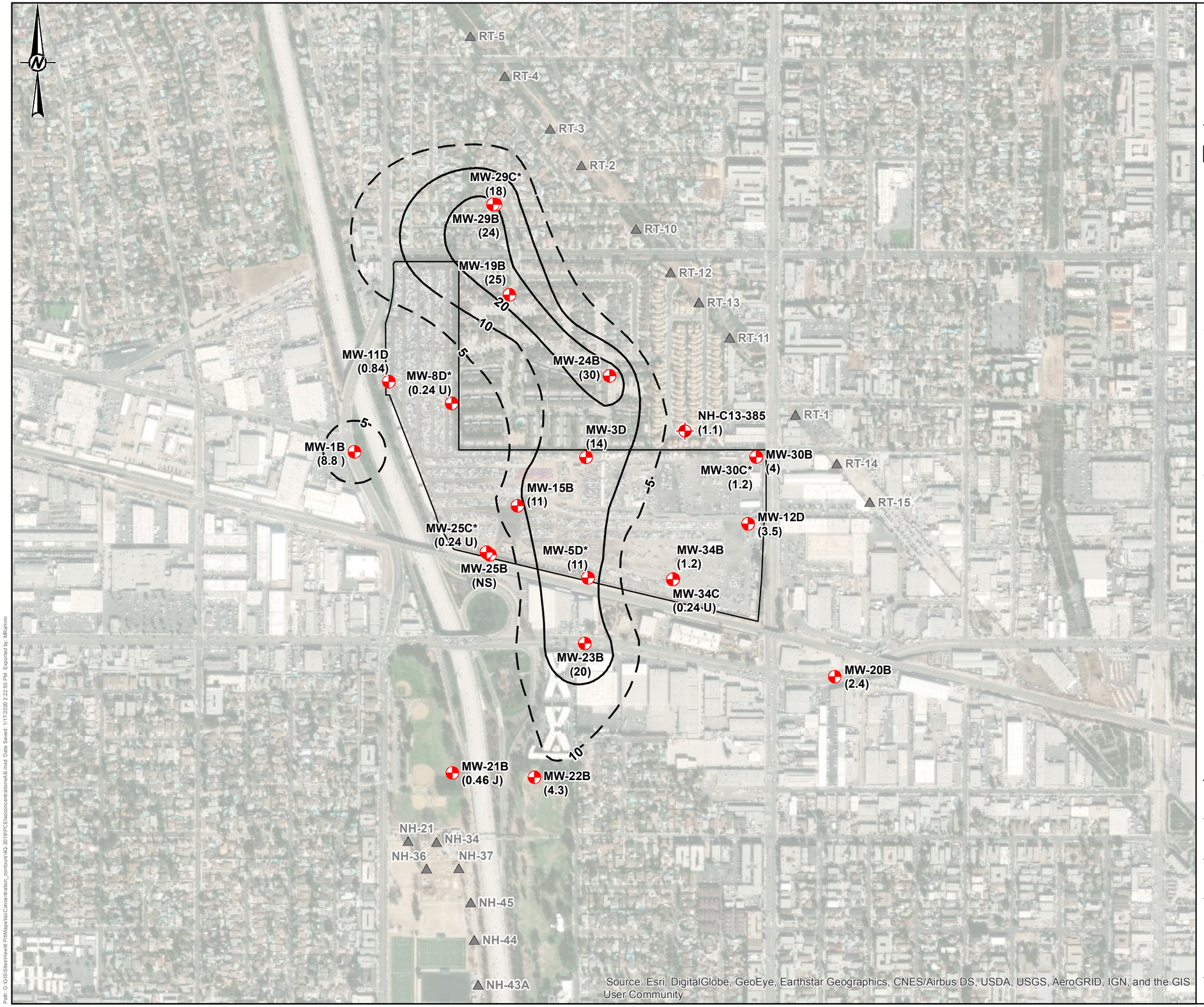

LEGEND

- Groundwater Monitoring Well - Hewitt
- Groundwater Monitoring Well - NHOU
- Production Well - LADWP
- —50— PCE Isoconcentration Contour
- Hewitt Site Boundary

(33) Tetrachloroethene concentration in micrograms per liter

NOTES

1) The California Maximum Contaminant Level (MCL) for Tetrachloroethene (PCE) is 5 µ g/L .

2) PCE concentrations obtained during the fourth quarter 2019 sampling event.

3) The contours have been created by 3D-Kriging in Earth Volumetric Studio (EVS) and then sliced at an elevation of 418 ft. It represents the middle of the B zone aquifer; however, it should be noted that not all B zone wells are screened at this elevation. The contours were generated by EVS software, but were reviewed and modified by a qualified professional.

4) "U"- Non-Detect (Method Detection Limit)
"J" – Estimated result

5) * sampling depth for wells MW-5D, MW-8D, MW-25C, MW-29C and MW-30C represent the lower portion of B zone.

6) LADWP's Rinaldi-Toluca and North Hollywood West production well head locations shown for reference only.

600 0 600
Feet

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

CLIENT
CALMAT CO.

PROJECT
HEWITT SITE, NORTH HOLLYWOOD, CALIFORNIA

TITLE
TETRACHLOROETHENE SCHEMATIC ISOCONCENTRATION CONTOURS IN GROUNDWATER - B ZONE WELLS, FOURTH QUARTER 2019

CONSULTANT
GOLDER

YYYY-MM-DD	2020-01-17
PREPARED	MR
DESIGN	MR
REVIEW	AK
APPROVED	AK

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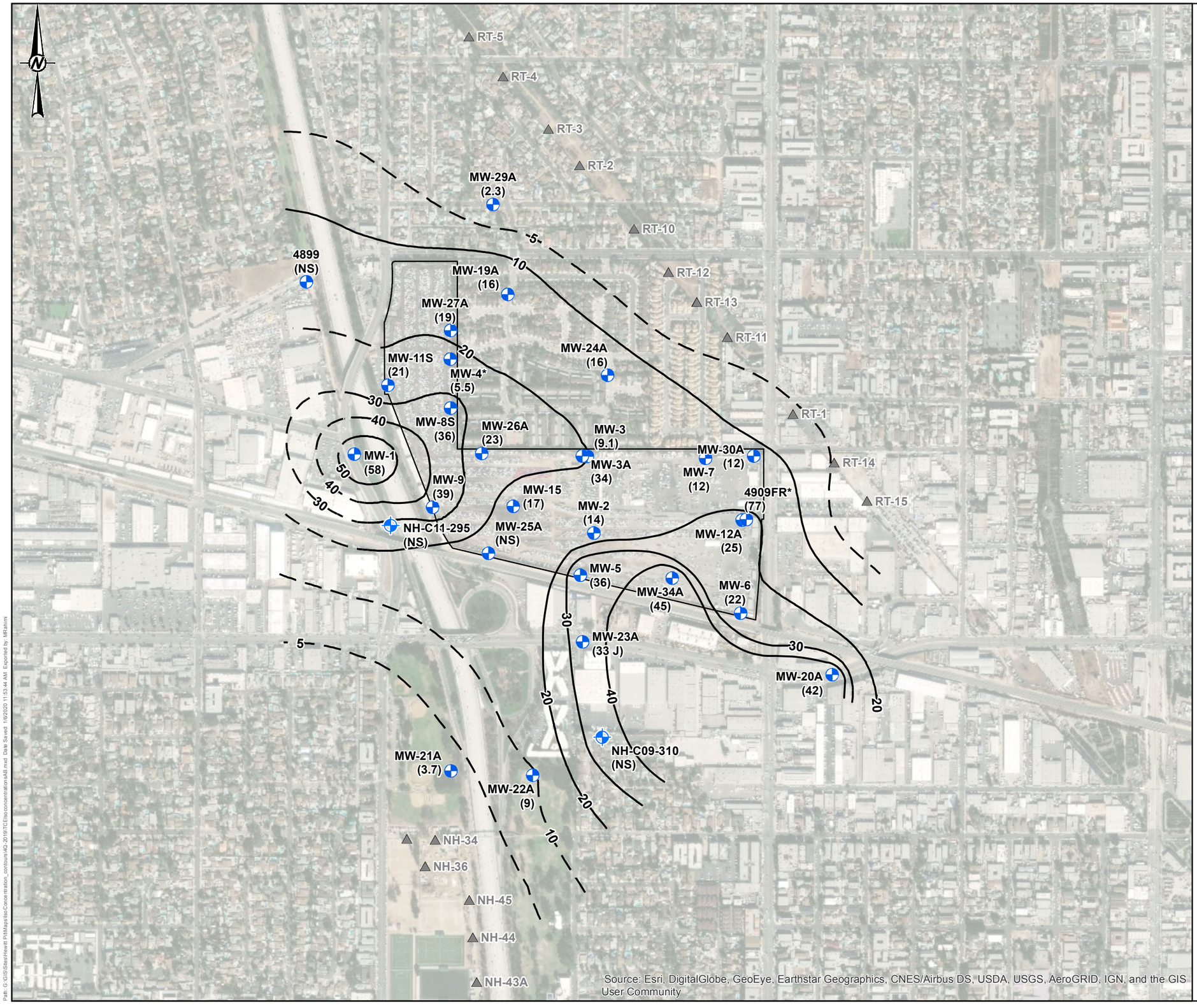

LEGEND

- Groundwater Monitoring Well - Hewitt
- Groundwater Monitoring Well - NHOU
- Production Well - LADWP
- —50— TCE Isoconcentration Contour
- Hewitt Site Boundary

(23) Trichloroethene concentration in micrograms per liter

(NS) Not Sampled. Well was dry or inaccessible. Historical concentrations considered in contouring.

NOTES

1) The California Maximum Contaminant Level (MCL) for Trichloroethene (TCE) is 5 µg/L.

2) TCE concentrations obtained during the fourth quarter 2019 sampling event.

3) The contours have been created by 3D-Kriging in Earth Volumetric Studio (EVS) and then sliced at an elevation of 444 ft. It represents the bottom of the A zone aquifer; however, it should be noted that not all A zone wells are screened at this elevation. The contours were generated by EVS software, but were reviewed and modified by a qualified professional.

4) "J"- Estimated result

5) LADWP's Rinaldi-Toluca and North Hollywood West production well head locations shown for reference only.

6) * Well has been excluded from contouring. Well screens have been above the water table intermittently. Therefore, results are considered anomalous due to rising groundwater potentially mobilizing adsorbed contaminants and/or landfill gas condensation. We will continue to monitor data from this well going forward and will include, as needed.

600 0 600
Feet

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

CLIENT
CALMAT CO.

PROJECT
HEWITT SITE, NORTH HOLLYWOOD, CALIFORNIA

TITLE
TRICHLOROETHENE SCHEMATIC ISOCONCENTRATION CONTOURS IN GROUNDWATER - A ZONE WELLS, FOURTH QUARTER 2019

CONSULTANT
GOLDER

YYYY-MM-DD	2020-01-17
PREPARED	MR
DESIGN	MR
REVIEW	AK
APPROVED	AK

PROJECT No.	CONTROL	Rev.	FIGURE
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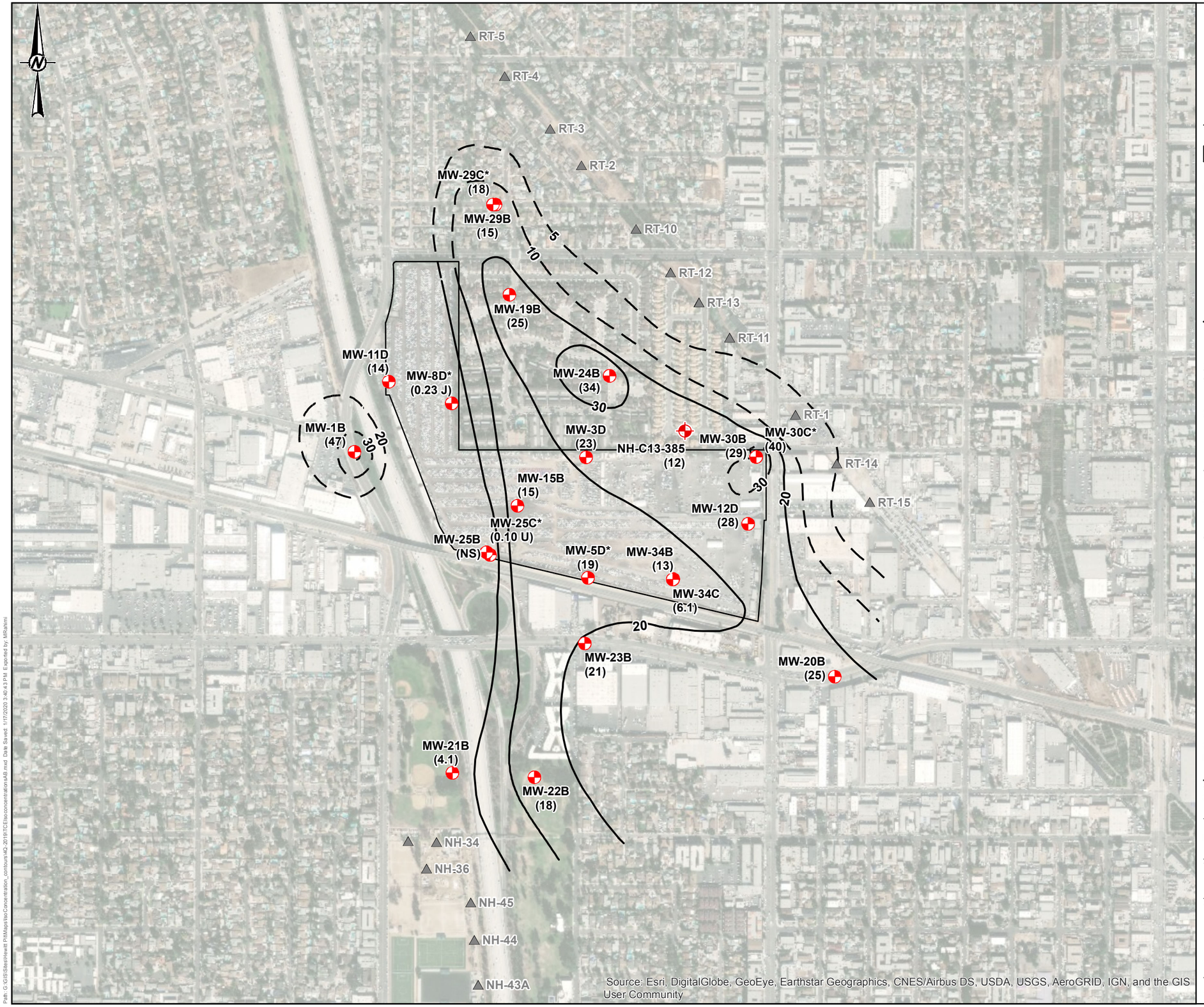

LEGEND

- Groundwater Monitoring Well - Hewitt
- Groundwater Monitoring Well - NHOU
- Production Well - LADWP
- —50— TCE Isoconcentration Contour
- Hewitt Site Boundary

(23) Trichloroethene concentration in micrograms per liter

NOTES

1) The California Maximum Contaminant Level (MCL) for Trichloroethene (TCE) is 5 µg/L.

2) TCE concentrations obtained during the fourth quarter 2019 sampling event.

3) The contours have been created by 3D-Kriging in Earth Volumetric Studio (EVS) and then sliced at an elevation of 418 ft. It represents the middle of the B zone aquifer; however, it should be noted that not all B zone wells are screened at this elevation. The contours were generated by EVS software, but were reviewed and modified by a qualified professional.

4) "U" - Non-Detect (Method Detection Limit)
"J"- Non-Detect (Method Detection Limit)

5) * Sampling depth for wells MW-5D, MW-8D, MW-25C, MW-29C and MW-30C represent lower portion of B zone.

6) LADWP's Rinaldi-Toluca and North Hollywood West production well head locations shown for reference only.

600 0 600
Feet

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

CLIENT
CALMAT CO.

PROJECT
HEWITT SITE, NORTH HOLLYWOOD, CALIFORNIA

TITLE
TRICHLOROETHENE SCHEMATIC ISOCONCENTRATION CONTOURS IN GROUNDWATER - B ZONE WELLS, FOURTH QUARTER 2019

CONSULTANT
GOLDER

YYYY-MM-DD	2020-01-17
PREPARED	MR
DESIGN	MR
REVIEW	AK
APPROVED	AK

PROJECT No.	CONTROL	Rev.	FIGURE
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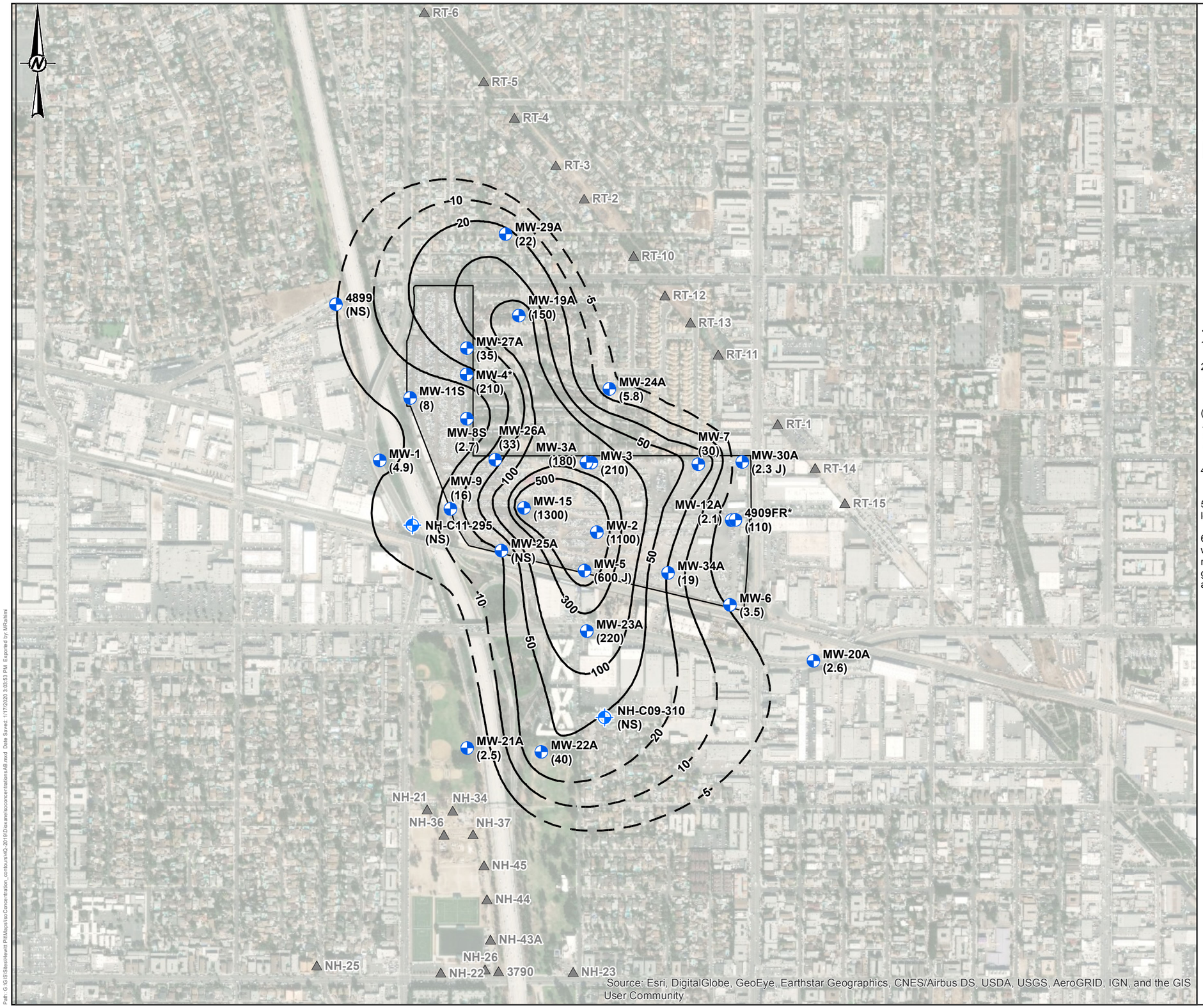

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

- Groundwater Monitoring Well - Hewitt
- Groundwater Monitoring Well - NHOU
- Production Well - LADWP
- 50 — 1,4-Dioxane Isoconcentration Contour
- Hewitt Site Boundary

(0.28) 1,4-Dioxane concentration in micrograms per liter

(NS) Not Sampled. Well was dry or inaccessible. Historical concentrations considered in contouring.

NOTES

1) The California drinking water notification level for 1,4-dioxane is 1 µg/L.

2) 1,4-Dioxane concentrations obtained during the fourth quarter 2019 sampling event.

3) The contours have been created by 3D-Kriging in Earth Volumetric Studio (EVS) and then sliced at an elevation of 444 ft. It represents the bottom of the A zone aquifer; however, it should be noted that not all A zone wells are screened at this elevation. The contours were generated by EVS software, but were reviewed and modified by a qualified professional.

4) "U"- Non-Detect (Method Detection Limit)
"J" - Estimated result

5) LADWP's Rinaldi-Toluca and North Hollywood West production well head locations shown for reference only.

6) * Well has been excluded from contouring. Well screens have been above the water table intermittently. Therefore, results are considered anomalous due to rising groundwater potentially mobilizing adsorbed contaminants and/or landfill gas condensation. We will continue to monitor data from this well going forward and will include, as needed.

600 0 600
Feet

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

CLIENT
CALMAT CO.

PROJECT
HEWITT SITE, NORTH HOLLYWOOD, CALIFORNIA

TITLE
1,4-DIOXANE SCHEMATIC ISOCONCENTRATION CONTOURS IN GROUNDWATER - A ZONE WELLS - FOURTH QUARTER 2019

CONSULTANT
GOLDER

YYYY-MM-DD	2020-01-17
PREPARED	MR
DESIGN	MR
REVIEW	AK
APPROVED	AK

PROJECT No.	CONTROL	Rev.	FIGURE
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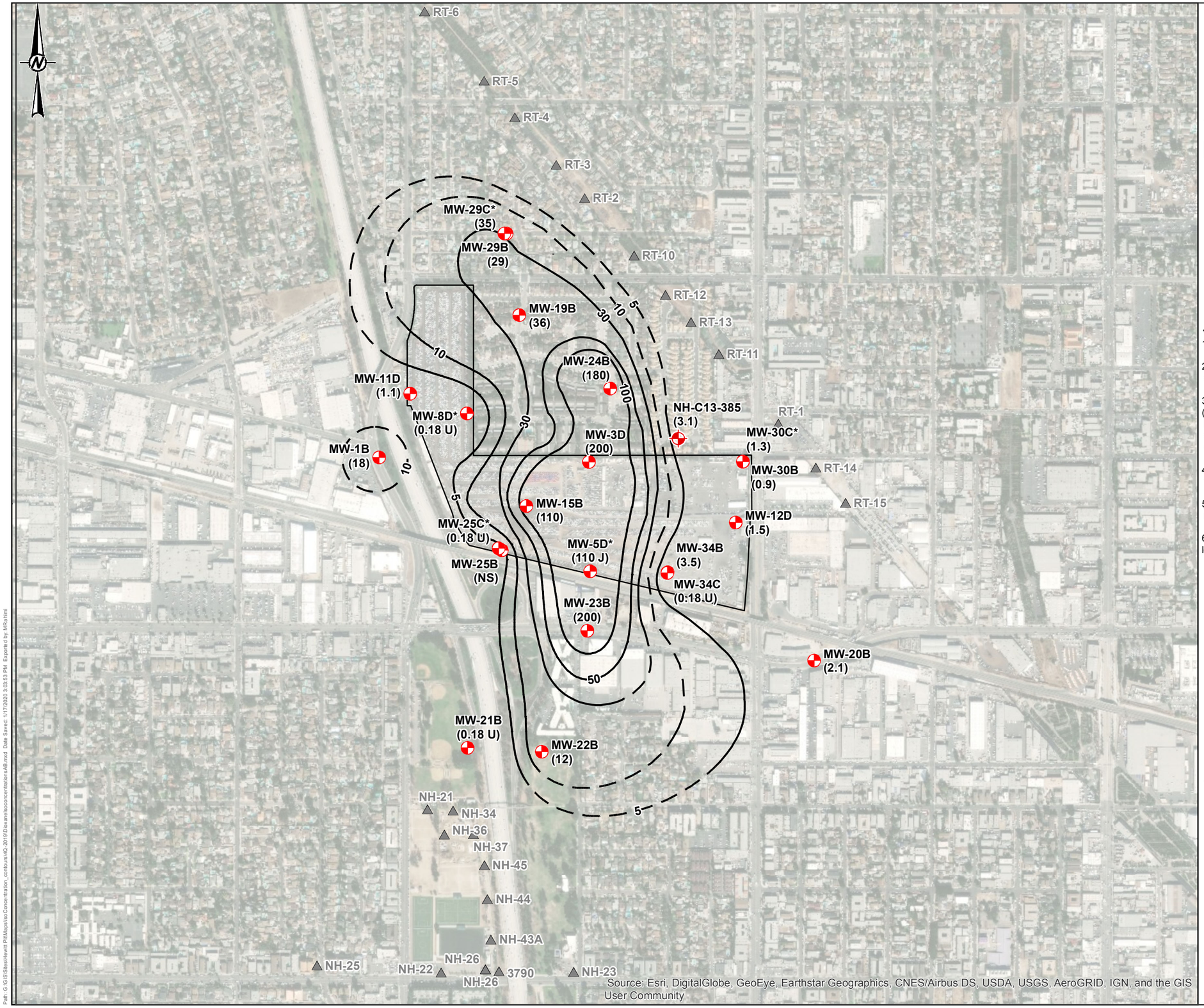

LEGEND

- Groundwater Monitoring Well - Hewitt
- Groundwater Monitoring Well - NHOU
- Production Well - LADWP
- 50 — 1,4-Dioxane Isoconcentration Contour
- Hewitt Site Boundary

(0.28) 1,4-Dioxane concentration in micrograms per liter

NOTES

1) The California drinking water notification level for 1,4-Dioxane is 1 µg/L.

2) 1,4-Dioxane concentrations obtained during the fourth quarter 2019 sampling event.

3) The contours have been created by 3D-Kriging in Earth Volumetric Studio (EVS) and then sliced at an elevation of 418 ft. It represents the middle of the B zone aquifer; however, it should be noted that not all B zone wells are screened at this elevation. The contours were generated by EVS software, but were reviewed and modified by a qualified professional.

4) "U"- Non-Detect (Method Detection Limit)
"J" - Estimated result

5) * Sampling depth for wells MW-5D, MW-8D, MW-25C, MW-29C and MW-30C represent the lower portion of B zone.

6) LADWP's Rinaldi-Toluca and North Hollywood West production well head locations shown for reference only.

600 0 600
Feet

REFERENCE

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET

CLIENT
CALMAT CO.

PROJECT
HEWITT SITE, NORTH HOLLYWOOD, CALIFORNIA

TITLE
1,4-DIOXANE SCHEMATIC ISOCONCENTRATION CONTOURS IN GROUNDWATER - B ZONE WELLS - FOURTH QUARTER 2019

CONSULTANT
GOLDER

YYYY-MM-DD	2020-01-17
PREPARED	MR
DESIGN	MR
REVIEW	AK
APPROVED	AK

PROJECT No.	CONTROL	Rev.	FIGURE
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Attachment B **Former Bendix Facility - Fourth Quarter 2019 Site Plan, Sample Locations, Groundwater Elevation and Isoconcentration Contour Maps**

Imagery: USGS 2013 High Resolution Orthoimagery for Los Angeles County, California (U.S. Geological Survey, 2015)

N

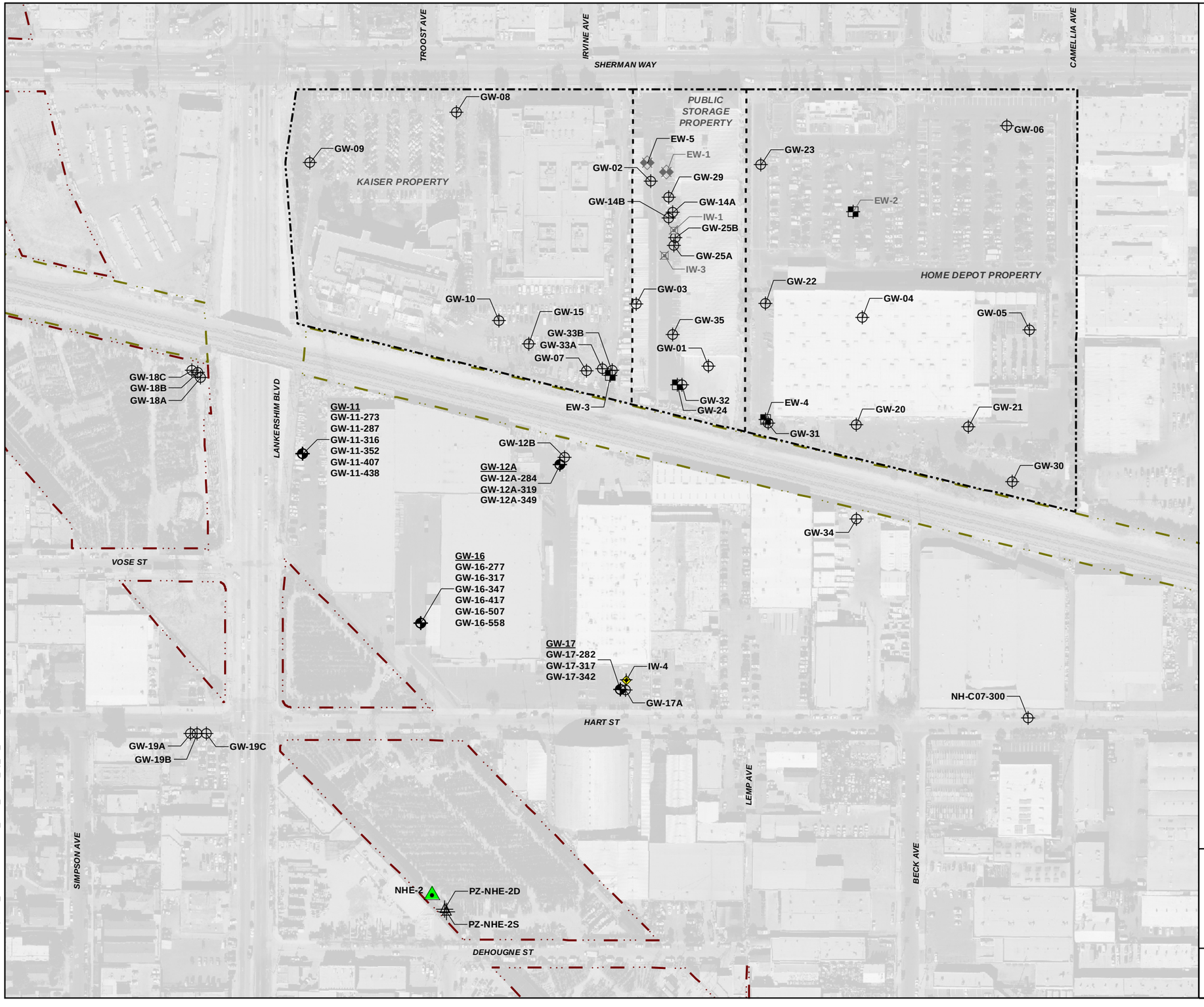
0 2,000 4,000

Feet

SITE VICINITY MAP
Former Bendix Facility
North Hollywood, California

wood.	By: KLU	Prj. No. 8619191720.610002
	Date: 04/12/2019	Figure 1

Friday, April 12, 2019 7:04:37 AM
S:\191005\191720\phase_610002.610002\19_0206_1Q19_fig_01_SVM_24K.mxd



EXPLANATION

- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Extraction Well
- Piezometer
- Injection Well
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

N

0 200 400
Feet

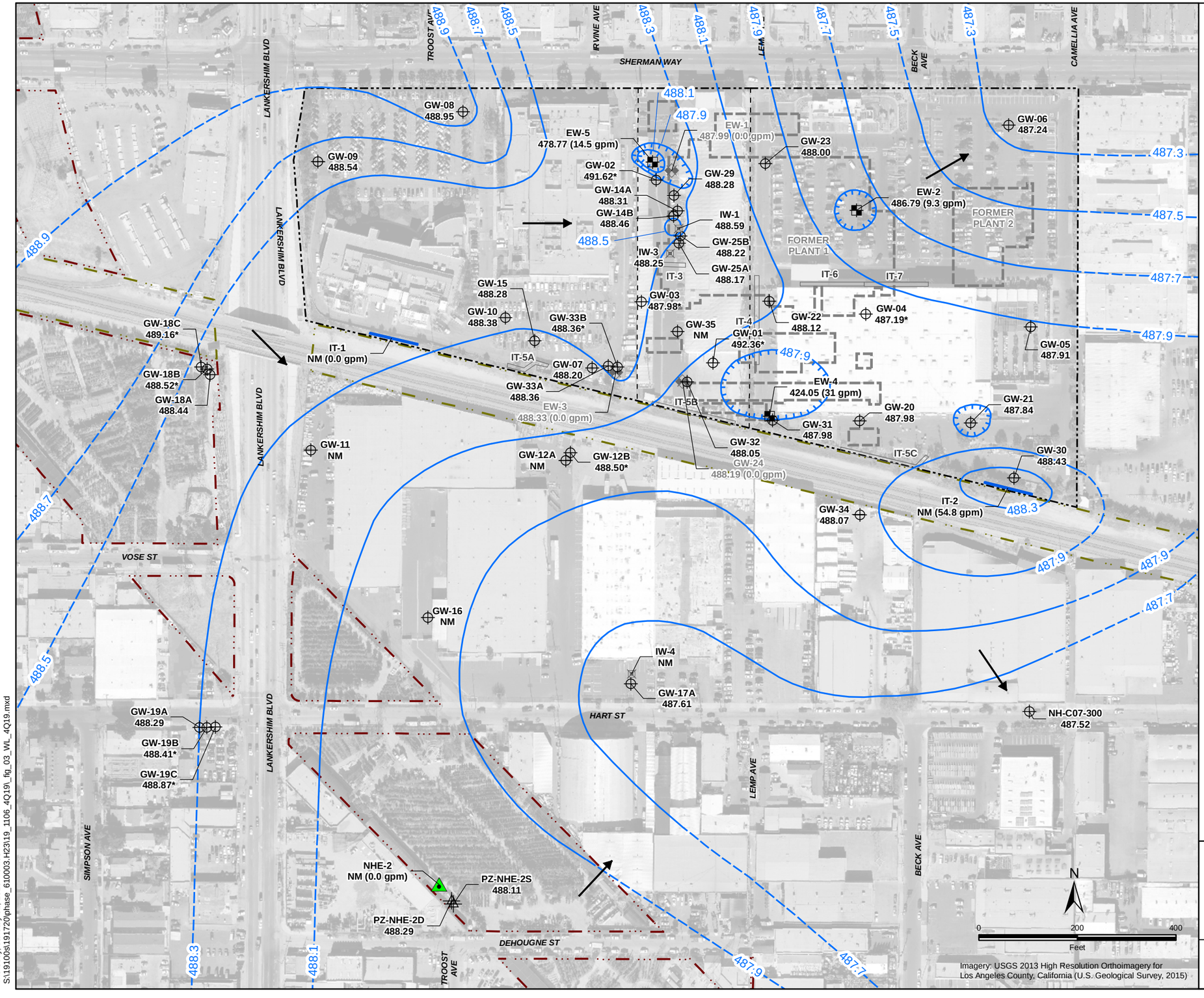
Imagery: USGS 2013 High Resolution Orthoimagery for Los Angeles County, California (U.S. Geological Survey, 2015)

SITE PLAN AND SAMPLE LOCATIONS
Former Bendix Facility
North Hollywood, California

wood.

By: KLU
Date: 04/12/2019
Prj. No. 8619191720.610002
Figure 2

Friday, April 12, 2019 7:03:20 AM
S:\1910\s1191720\phase_610002.610002\219_0206_1Q19_fig_02_SitePlan_SampLocs.mxd



EXPLANATION

- **EW-4 / 424.05** — Well Name / Groundwater Elevation (ft NAVD88)
- **(31 gpm)** — Pumping Rate of Injection Trench or Extraction Well[1]
- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Active Injection Well
- Extraction Well
- Piezometer
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- 484.9 — Line of Estimated Equal Elevation of Groundwater in feet NAVD88 (dashed where inferred)
- Apparent Direction of Groundwater Flow
- Active Injection Trench (treated water)
- Inactive Injection Trench
- Former Building Footprint
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

Abbreviations:
ft = feet
gpm = gallons per minute
NAVD88 = North American Vertical Datum 1988
NM = not measured
* = not used for contouring

Notes:
1. Groundwater injection/extraction rates are posted in gallons per minute (gpm) for EW-1, EW-2, EW-3, EW-4, EW-5, IT-1, IT-2, GW-24, and NHE-2.
2. Depth to water measurements were collected on October 28, 2019 for all extraction and injection wells, and wells in the monitoring program.

GROUNDWATER ELEVATION CONTOUR MAP
FOURTH QUARTER 2019
Former Bendix Facility
North Hollywood, California

wood.

By: KLU

Date: 01/02/2020

Prj. No. 8619191720.610003

Figure **3**

Thursday, January 02, 2020 4:04:58 PM
S:\1910\8\191720\phase_610003.H23\19_1106_4Q19_fig_03_WL_4Q19.mxd

KEY TO DATA LABELS

GW-12A — Well name[1]

284': NS/*NS*
319': 4.5/*6.6*
349': 3.1*/*NS*
} Sample depth (ft bgs)[2] and most recent Cr VI concentration (µg/L); previous results in italics[3,4]

SHERMAN WAY
TROOST AVE
IRVINE AVE
LEMP AVE
BECK AVE
CAMELLIA AVE
LANKERSHIM BLVD
VOSE ST
SIMPSON AVE
DEHOUGNE ST
HART ST

PUBLIC STORAGE PROPERTY
KAISER PROPERTY
FORMER PLANT 1
FORMER PLANT 2
HOME DEPOT PROPERTY

GW-08 1.1/*NS*
GW-09 1.5/*NS*
GW-06 9.7/*NS*
EW-5* 7.8/*6.1*
GW-02 4.3/*7.0*
EW-1
GW-23 0.86 J/*0.73 J*
GW-29 43/*43*
GW-14A ND(20) U/*NS*
IW-1
EW-2* 1.3/*1.7*
GW-25B 1.8/*NS*
GW-14B 2.3/*NS*
GW-25A ND(20) U/*NS*
IW-3
IT-3
GW-03 ND(1.0) U/*NS*
IT-6
IT-7
GW-10 4.3/*3.5*
GW-33B* 2.1/*NS*
GW-33A 16/*NS*
GW-35* NS/*NS*
GW-22 250/*280*
GW-04 18/*26*
IT-4
GW-05 ND(1.0) U/*2.7*
IT-1
GW-15 8.1/*8.6*
IT-5A
GW-01 ND(1.0) U/*0.91 J*
GW-18C* 0.87 J/*NS*
GW-18B* 0.43 J/*NS*
GW-18A 2.0/*NS*
GW-07 13/*14*
EW-4* 47/*51*
GW-20 17/*NS*
EW-3 1.2/*7.5*
IT-5B
GW-31 64/*NS*
GW-21 13/*11*
IT-5C
GW-30 9.0/*11*
IT-2
GW-11
273': 7.4*/*13*
287': 12/*3.3*
316': 17/*0.82 J*
352': 4.0*/*9.1*
407': 13*/*NS*
438': 11*/*NS*
GW-12B 4.2/*NS*
GW-12A
284': NS/*NS*
319': 4.5/*6.6*
349': 3.1*/*NS*
GW-24 ND(0.20) U/*ND(0.20) U*
GW-32 ND(1.0) U/*ND(1,000) U*
GW-34 2.9/*37*
GW-16
277': 3.7*/*5.6*
317': 12/*8.6*
347': 22*/*12*
417': ND(1.0) U*/*NS*
507': 48*/*NS*
558': ND(1.0) U*/*NS*
GW-17 282': ND(1.0) U/*ND(1.0) U*
IW-4
GW-17A ND(1.0) U/*ND(1.0) U*
NH-C07-300 13/*NS*
GW-19A 5.8/*42 J*
GW-19B* 0.76 J/*NS*
GW-19C* 1.8/*NS*
NHE-2 30/*28*
PZ-NHE-2D* NS/*NS*
PZ-NHE-2S* NS/*NS*

10
100
150

N
0 200 400
Feet

Imagery: USGS 2013 High Resolution Orthoimagery for Los Angeles County, California (U.S. Geological Survey, 2015)

EXPLANATION

- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Extraction Well
- Active Injection Well
- Piezometer
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- Line of Estimated Equal Cr VI Concentration in Groundwater (µg/L) (dashed where inferred)
- Active Injection Trench (treated water)
- Inactive Injection Trench
- Former Building Footprint
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

Abbreviations:
µg/L = micrograms per liter
Cr VI = hexavalent chromium
bgs = below ground surface
ft = feet
ND = not detected above reporting limit indicated in parentheses
NS = not sampled

Notes:
1. Wells not used for contouring indicated with an asterisk (*).
2. Where available, sample depths at Barcad well are indicated in feet bgs. Results for locations with multiple depth-discrete samples are displayed by increasing depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias. U indicates the analyte was analyzed for but was not detected above the reported value.
4. Groundwater samples were collected from October 28-31, 2019. Previous results are from Third quarter 2019.
5. Interior hatching associated with contour lines indicates a reduction in concentration relative to the surrounding area.

HEXAVALENT CHROMIUM CONCENTRATIONS IN GROUNDWATER - FOURTH QUARTER 2019
Former Bendix Facility
North Hollywood, California

wood.

By: KLU
Date: 12/23/2019
Prj. No. 8617190030
Figure 4

Monday, December 23, 2019 2:24:01 PM
C:\Project_Deliverables\GIS_Sites\HW_NorthHollywood\Mapfiles\2019\Q4\NorthHollywood_Figure04_Cr6_19Q4_htsRev1.mxd

KEY TO DATA LABELS

GW-12A — Well name[1]
284': NS/*NS*
319': 15/*6.6*
349': ND(1.0) U*/*NS*
} Sample depth (ft bgs)[2] and most recent 1,1-DCE concentration (µg/L); previous results in italics[3,4]

SHERMAN WAY
TROOST AVE
IRVINE AVE
LEMP AVE
BECK AVE
CAMELLIA AVE
LANKERSHIM BLVD
KAISER PROPERTY
PUBLIC STORAGE PROPERTY
FORMER PLANT 1
FORMER PLANT 2
HOME DEPOT PROPERTY
VOSE ST
HART ST
DEHOUGNE ST
SIMPSON AVE

GW-09 6.8/*NS*
GW-08 ND(1.0) U/*NS*
GW-06 0.51 J/*NS*
EW-5* NS/*NS*
GW-02 0.42 J/*0.48 J*
EW-1
GW-23 ND(1.0) U/*0.22 J*
GW-29 1.1/*1.7*
GW-14A 1.4/*NS*
EW-2* NS/*NS*
GW-14B ND(1.0) U/*NS*
GW-25B 0.72 J/*NS*
IW-1
GW-25A 1.4/*NS*
IW-3
IT-3
GW-03 1.4/*NS*
GW-22 1.1/*1.8*
IT-6
IT-7
GW-10 0.82 J/*0.31 J*
GW-33B* 1.5/*NS*
GW-35* NS/*NS*
IT-4
GW-04 0.98 J/*0.50 J*
IT-1
GW-15 ND(1.0) U/*ND(1.0) U*
GW-33A ND(1.0) U/*NS*
GW-01 1.4/*1.9*
GW-05 ND(1.0) U/*ND(1.0) U*
IT-5A
GW-18C* ND(1.0) U/*NS*
GW-18B* ND(1.0) U/*NS*
GW-18A 3.1/*NS*
GW-07 ND(1.0) U/*ND(1.0) U*
EW-3* NS/*NS*
GW-24 NS/*NS*
GW-32 2.7/*5.4*
IT-5B
EW-4* NS/*NS*
GW-20 0.45 J/*NS*
GW-21 ND(1.0) U/*ND(1.0) U*
GW-31 2.9/*NS*
IT-5C
GW-30 ND(1.0) U/*ND(1.0) U*
GW-34 0.64 J/*1.5*
IT-2
GW-12B 0.63 J/*NS*
GW-11
273': 4.0/*2.0*
287': 3.7/*3.7*
316': 4.4/*6.4*
352': 2.0*/*5.2*
407': 1.2*/*NS*
438': ND(1.0) U*/*NS*
GW-12A
284': NS/*NS*
319': 15/*6.6*
349': ND(1.0) U*/*NS*
GW-17
282': 4.8*/*0.51 J*
IW-4
GW-16
277': 2.7/*4.6*
317': 4.2/*5.5*
347': 3.3*/*6.2*
417': 0.33 J*/*NS*
507': 1.6*/*NS*
558': 0.71 J*/*NS*
GW-17A 11/*8.0*
NH-C07-300 ND(1.0) U/*NS*
GW-19A 0.47 J/*3.6*
GW-19B* ND(1.0) U/*NS*
GW-19C* ND(1.0) U/*NS*
NHE-2 2.6/*1.9 J*
PZ-NHE-2D* NS/*NS*
PZ-NHE-2S* NS/*NS*

6

0 200 400 Feet

N

Imagery: USGS 2013 High Resolution Orthoimagery for Los Angeles County, California (U.S. Geological Survey, 2015)

EXPLANATION

- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Extraction Well
- Active Injection Well
- Piezometer
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- Line of Estimated Equal 1,1-DCE Concentration in Groundwater (µg/L) (dashed where inferred)
- Active Injection Trench (treated water)
- Inactive Injection Trench
- Former Building Footprint
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

Abbreviations:
µg/L = micrograms per liter
1,1-DCE = 1,1-dichloroethene
bgs = below ground surface
ft = feet
ND = not detected above reporting limit indicated in parentheses
NS = not sampled

Notes:
1. Wells not used for contouring indicated with an asterisk (*).
2. Where available, sample depths at Barcad well are indicated in feet bgs. Results for locations with multiple depth-discrete samples are displayed by increasing depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias. U indicates the analyte was analyzed for but was not detected above the reported value.
4. Groundwater samples were collected from October 28-31, 2019. Previous results are from Third quarter 2019.

1,1-DICHLORETHENE CONCENTRATIONS IN GROUNDWATER - FOURTH QUARTER 2019
Former Bendix Facility
North Hollywood, California

wood.

By: KLU
Date: 01/02/2020
Prj. No. 8617190030
Figure **5**

Thursday, January 2, 2020 2:59:09 PM
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KEY TO DATA LABELS

GW-12A — Well name[1]
284': NS/*NS*
319': ND(0.50) U/*ND(1.0) U*
349': ND(0.50) U*/*NS*
} Sample depth (ft bgs)[2] and most recent 1,2-DCA concentration (µg/L); previous results in italics[3,4]

HERMAN WAY
TROOST AVE
IRVINE AVE
LEMP AVE
BECK AVE
CAMELLIA AVE
LANKERSHIM BLVD
LANKERSHIM BLVD
LANKERSHIM BLVD
VOSE ST
SIMPSON AVE
DEHOUGNE ST
HART ST
LEMP AVE
BECK AVE

PUBLIC STORAGE PROPERTY
KAISER PROPERTY
FORMER PLANT 1
FORMER PLANT 2
HOME DEPOT PROPERTY

GW-08 0.30 J/*NS*
GW-09 ND(0.50) U/*NS*
EW-5* NS/*NS*
GW-23 0.53/*0.48 J*
GW-06 ND(0.50) U/*NS*
GW-02 ND(0.50) U/*0.25 J*
EW-1
GW-29 ND(0.50) U/*0.23 J*
EW-2* NS/*NS*
GW-14A ND(0.50) U/*NS*
GW-14B ND(0.50) U/*NS*
GW-25B ND(0.50) U/*NS*
IW-1
GW-25A ND(0.50) U/*NS*
IW-3
IT-3
GW-22 0.28 J/*0.22 J*
IT-7
IT-6
GW-33B* 0.31 J/*NS*
GW-03 ND(0.50) U/*NS*
GW-10 0.57/*0.57*
0.5
GW-33A 0.20 J/*NS*
GW-35* NS/*NS*
GW-05 ND(0.50) U/*0.31 J*
IT-4
GW-04 ND(0.50) U/*ND(0.50) U*
IT-1
GW-15 0.35 J/*0.21 J*
GW-01 ND(0.50) U/*ND(0.50) U*
IT-5A
GW-18C* ND(0.50) U/*NS*
GW-18B* ND(0.50) U/*NS*
GW-18A ND(0.50) U/*NS*
GW-07 ND(0.50) U/*ND(0.50) U*
GW-11
273': ND(0.50) U/*ND(0.50) U*
287': ND(0.50) U/*ND(0.50) U*
316': ND(0.50) U/*ND(0.50) U*
352': ND(0.50) U*/*ND(0.50) U*
407': ND(0.50) U*/*NS*
438': ND(0.50) U*/*NS*
EW-3* NS/*NS*
GW-24 NS/*NS*
IT-5B
EW-4* NS/*NS*
GW-20 0.22 J/*NS*
GW-21 0.20 J/*0.22 J*
GW-31 0.19 J/*NS*
GW-12B ND(0.50) U/*NS*
GW-32 ND(0.50) U/*ND(0.50) U*
IT-5C
GW-30 ND(0.50) U/*0.20 J*
GW-34 ND(0.50) U/*0.20 J*
IT-2
GW-12A
284': NS/*NS*
319': ND(0.50) U/*ND(1.0) U*
349': ND(0.50) U*/*NS*
GW-16
277': ND(0.50) U/*ND(0.50) U*
317': ND(0.50) U/*ND(0.50) U*
347': ND(0.50) U*/***0.30 J***
417': ND(0.50) U*/*NS*
507': ND(0.50) U*/*NS*
558': ND(0.50) U*/*NS*
GW-17
282': ND(0.50) U/*ND(0.50) U*
IW-4
GW-17A 0.47 J/*0.22 J*
NH-C07-300 ND(0.50) U/*NS*
GW-19A ND(0.50) U/*0.34 J*
GW-19B* ND(0.50) U/*NS*
GW-19C* ND(0.50) U/*NS*
NHE-2 ND(0.50) U/*ND(0.50) U*
PZ-NHE-2D* NS/*NS*
PZ-NHE-2S* NS/*NS*

N
0 200 400
Feet

Imagery: USGS 2013 High Resolution Orthoimagery for Los Angeles County, California (U.S. Geological Survey, 2015)

EXPLANATION

- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Extraction Well
- Active Injection Well
- Piezometer
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- 0.5 — Line of Estimated Equal 1,2-DCA Concentration in Groundwater (µg/L) (dashed where inferred)
- Active Injection Trench (treated water)
- Inactive Injection Trench
- Former Building Footprint
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

Abbreviations:
µg/L = micrograms per liter
1,2-DCA = 1,2-dichloroethane
bgs = below ground surface
ft = feet
ND = not detected above reporting limit indicated in parentheses
NS = not sampled

Notes:
1. Wells not used for contouring indicated with an asterisk (*).
2. Where available, sample depths at Barcad well are indicated in feet bgs. Results for locations with multiple depth-discrete samples are displayed by increasing depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias. U indicates the analyte was analyzed for but was not detected above the reported value.
4. Groundwater samples were collected from October 28-31, 2019. Previous results are from Third quarter 2019.

1,2-DICHLOROETHANE CONCENTRATIONS IN GROUNDWATER - FOURTH QUARTER 2019
Former Bendix Facility
North Hollywood, California

wood.

By: KLU
Date: 01/02/2020
Prj. No. 8617190030
Figure 6

Thursday, January 2, 2020 3:01:26 PM
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KEY TO DATA LABELS

GW-12A
284': NS/*NS*
319': 1.0/*1.3*
349': ND(0.50) U*/*NS*

— Well name[1]
} Sample depth (ft bgs)[2] and most recent CT concentration (µg/L); previous results in italics[3,4]

SHERMAN WAY
TROOST AVE
IRVINE AVE
LEMP AVE
BECK AVE
CAMELLIA AVE
LANKERSHIM BLVD
VOSE ST
SIMPSON AVE
DEHOUGNE ST
HART ST

PUBLIC STORAGE PROPERTY
KAISER PROPERTY
FORMER PLANT 1
FORMER PLANT 2
HOME DEPOT PROPERTY

GW-08 ND(0.50) U/*NS*
GW-09 **0.39 J**/*NS*
EW-5* NS/*NS*
GW-02 ND(0.50) U/***0.30 J***
EW-1
GW-29 ND(0.50) U/***0.46 J***
GW-14A ND(0.50) U/*NS*
GW-14B ND(0.50) U/*NS*
IW-1
GW-25B ND(0.50) U/*NS*
GW-25A ND(0.50) U/*NS*
IT-3
IW-3
GW-06 ND(0.50) U/*NS*
GW-23 ND(0.50) U/*ND(0.50) U*
EW-2* NS/*NS*
GW-33B* ND(0.50) U/*NS*
GW-10 ND(0.50) U/*ND(0.50) U*
GW-33A ND(0.50) U/*NS*
GW-03 ND(0.50) U/*NS*
GW-22 ND(0.50) U/*ND(0.50) U*
IT-7
IT-6
GW-35* NS/*NS*
IT-4
GW-04 ND(0.50) U/*ND(0.50) U*
IT-1
GW-15 ND(0.50) U/*ND(0.50) U*
IT-5A
GW-01 ND(0.50) U/*ND(0.50) U*
GW-05 ND(0.50) U/*ND(0.50) U*
GW-18C* ND(0.50) U/*NS*
GW-18B* ND(0.50) U/*NS*
GW-18A **0.30 J**/*NS*
GW-07 ND(0.50) U/*ND(0.50) U*
EW-3* NS/*NS*
GW-24 NS/*NS*
EW-4* NS/*NS*
GW-20 ND(0.50) U/*NS*
GW-21 ND(0.50) U/*ND(0.50) U*
IT-5B
GW-31 ND(0.50) U/*NS*
GW-12B ND(0.50) U/*NS*
GW-32 ND(0.50) U/*ND(0.50) U*
IT-5C
GW-30 ND(0.50) U/*ND(0.50) U*
GW-34 ND(0.50) U/*ND(0.50) U*
IT-2

GW-11
273': 0.26 J/*0.42 J*
287': 0.28 J/*0.30 J*
316': 0.39 J/*0.56*
352': ND(0.50) U*/***0.56***
407': ND(0.50) U*/*NS*
438': ND(0.50) U*/*NS*

GW-12A
284': NS/*NS*
319': 1.0/*1.3*
349': ND(0.50) U*/*NS*

GW-16
277': 0.26 J/*0.56*
317': 0.44 J/*0.55*
347': 0.25 J*/*0.55*
417': ND(0.50) U*/*NS*
507': ND(0.50) U*/*NS*
558': ND(0.50) U*/*NS*

0.5

GW-17
282': ND(0.50) U/*ND(0.50) U*
IW-4
GW-17A ND(0.50) U/*ND(0.50) U*
NH-C07-300 ND(0.50) U/*NS*

GW-19A ND(0.50) U/***0.59***
GW-19B* ND(0.50) U/*NS*
GW-19C* ND(0.50) U/*NS*

NHE-2
0.35 J/*ND(0.50) U*
PZ-NHE-2D* NS/*NS*
PZ-NHE-2S* NS/*NS*

N
0 200 400
Feet

Imagery: USGS 2013 High Resolution Orthoimagery for Los Angeles County, California (U.S. Geological Survey, 2015)

EXPLANATION

- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Extraction Well
- Active Injection Well
- Piezometer
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- Active Injection Trench (treated water)
- 0.5 — Line of Estimated Equal CT Concentration in Groundwater (µg/L) (dashed where inferred)
- Inactive Injection Trench
- Former Building Footprint
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

Abbreviations:
µg/L = micrograms per liter
CT = carbon tetrachloride
bgs = below ground surface
ft = feet
ND = not detected above reporting limit indicated in parentheses
NS = not sampled

Notes:
1. Wells not used for contouring indicated with an asterisk (*).
2. Where available, sample depths at Barcad well are indicated in feet bgs. Results for locations with multiple depth-discrete samples are displayed by increasing depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias. U indicates the analyte was analyzed for but was not detected above the reported value.
4. Groundwater samples were collected from October 28-31, 2019. Previous results are from Third quarter 2019.

CARBON TETRACHLORIDE CONCENTRATIONS IN GROUNDWATER - FOURTH QUARTER 2019
Former Bendix Facility
North Hollywood, California

wood.

By: KLU
Date: 01/02/2020
Prj. No. 8617190030
Figure **7**

Thursday, January 2, 2020 3:05:45 PM
C:\Project_Deliverables\GIS_Sites\HW_NorthHollywood\Mapfiles\2019\Q4\NorthHollywood_Figure07_CT_19Q4_htsRev2.mxd

KEY TO DATA LABELS

GW-12A — Well name[1]

284': NS/*NS*
319': 0.91 J/*2.1*
349': ND(1.0) U*/*NS*

} Sample depth (ft bgs)[2] and most recent cis-1,2-DCE concentration (µg/L); previous results in italics[3,4]

SHERMAN WAY
TROOST AVE
IRVINE AVE
LEMP AVE
BECK AVE
CAMELLIA AVE
LANKERSHIM BLVD
VOSE ST
SIMPSON AVE
DEHOUGNE ST
HART ST

PUBLIC STORAGE PROPERTY
KAISER PROPERTY
FORMER PLANT 1
FORMER PLANT 2
HOME DEPOT PROPERTY

GW-08 6.2/*NS*
GW-09 0.48 J/*NS*
GW-06 1.1/*NS*
EW-5* NS/*NS*
GW-23 14/*13*
GW-02 5.8/*4.5*
EW-1
GW-29 2.7/*2.7*
GW-14A 8.0/*NS*
IW-1
EW-2* NS/*NS*
GW-14B 6.7/*NS*
GW-25B 3.2/*NS*
IW-3
GW-25A 1.4/*NS*
IT-3
GW-03 2.7/*NS*
GW-22 4.6/*3.5*
IT-6
IT-7
GW-10 ND(1.0) U/*ND(1.0) U*
GW-33B* 5.3/*NS*
GW-35* NS/*NS*
GW-05 0.47 J/*7.7*
GW-33A ND(1.0) U/*NS*
IT-1
GW-15 ND(1.0) U/*ND(1.0) U*
IT-4
GW-04 0.36 J/*3.1*
GW-01 1.4/*3.9*
IT-5A
GW-18C* ND(1.0) U/*NS*
GW-18B* ND(1.0) U/*NS*
GW-18A 0.30 J/*NS*
GW-07 ND(1.0) U/*ND(1.0) U*
EW-3* NS/*NS*
GW-24 NS/*NS*
EW-4* NS/*NS*
GW-20 1.1/*NS*
GW-32 1.3/*4.0*
IT-5B
GW-31 1.4/*NS*
GW-21 ND(1.0) U/*1.6*
GW-11
273': ND(1.0) U/*ND(1.0) U*
287': ND(1.0) U/*ND(1.0) U*
316': 0.73 J/*0.35 J*
352': 4.2*/*3.1*
407': 0.62 J*/*NS*
438': ND(1.0) U*/*NS*
GW-12B ND(1.0) U/*NS*
IT-5C
GW-30 ND(1.0) U/*ND(1.0) U*
GW-12A
284': NS/*NS*
319': 0.91 J/*2.1*
349': ND(1.0) U*/*NS*
GW-34 ND(1.0) U/*0.92 J*
IT-2
GW-16
277': 0.67 J/*0.80 J*
317': 1.7/*1.6*
347': 2.9*/*3.4*
417': 2.9*/*NS*
507': 0.92 J*/*NS*
558': 0.40 J*/*NS*
IW-4
GW-17
282': 4.4/*0.31 J*
NH-C07-300 ND(1.0) U/*NS*
GW-19A 0.56 J/*6.1*
GW-19B* ND(1.0) U/*NS*
GW-19C* ND(1.0) U/*NS*
GW-17A 4.2/*3.8*
NHE-2 2.1/*2.0 J*
PZ-NHE-2D* NS/*NS*
PZ-NHE-2S* NS/*NS*

N
0 200 400
Feet

Imagery: USGS 2013 High Resolution Orthoimagery for Los Angeles County, California (U.S. Geological Survey, 2015)

EXPLANATION

- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Extraction Well
- Active Injection Well
- Piezometer
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- Active Injection Trench (treated water)
- Line of Estimated Equal cis-1,2-DCE Concentration in Groundwater (µg/L) (dashed where inferred)
- Inactive Injection Trench
- Former Building Footprint
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

Abbreviations:
µg/L = micrograms per liter
cis-1,2-DCE = cis-1,2-dichloroethene
bgs = below ground surface
ft = feet
ND = not detected above reporting limit indicated in parentheses
NS = not sampled

Notes:
1. Wells not used for contouring indicated with an asterisk (*).
2. Where available, sample depths at Barcad well are indicated in feet bgs. Results for locations with multiple depth-discrete samples are displayed by increasing depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias. U indicates the analyte was analyzed for but was not detected above the reported value.
4. Groundwater samples were collected from October 28-31, 2019. Previous results are from Third quarter 2019.

CIS-1,2-DICHLOROETHENE CONCENTRATIONS IN GROUNDWATER - FOURTH QUARTER 2019
Former Bendix Facility
North Hollywood, California

wood.

By: KLU
Date: 12/23/2019
Prj. No. 8617190030
Figure **8**

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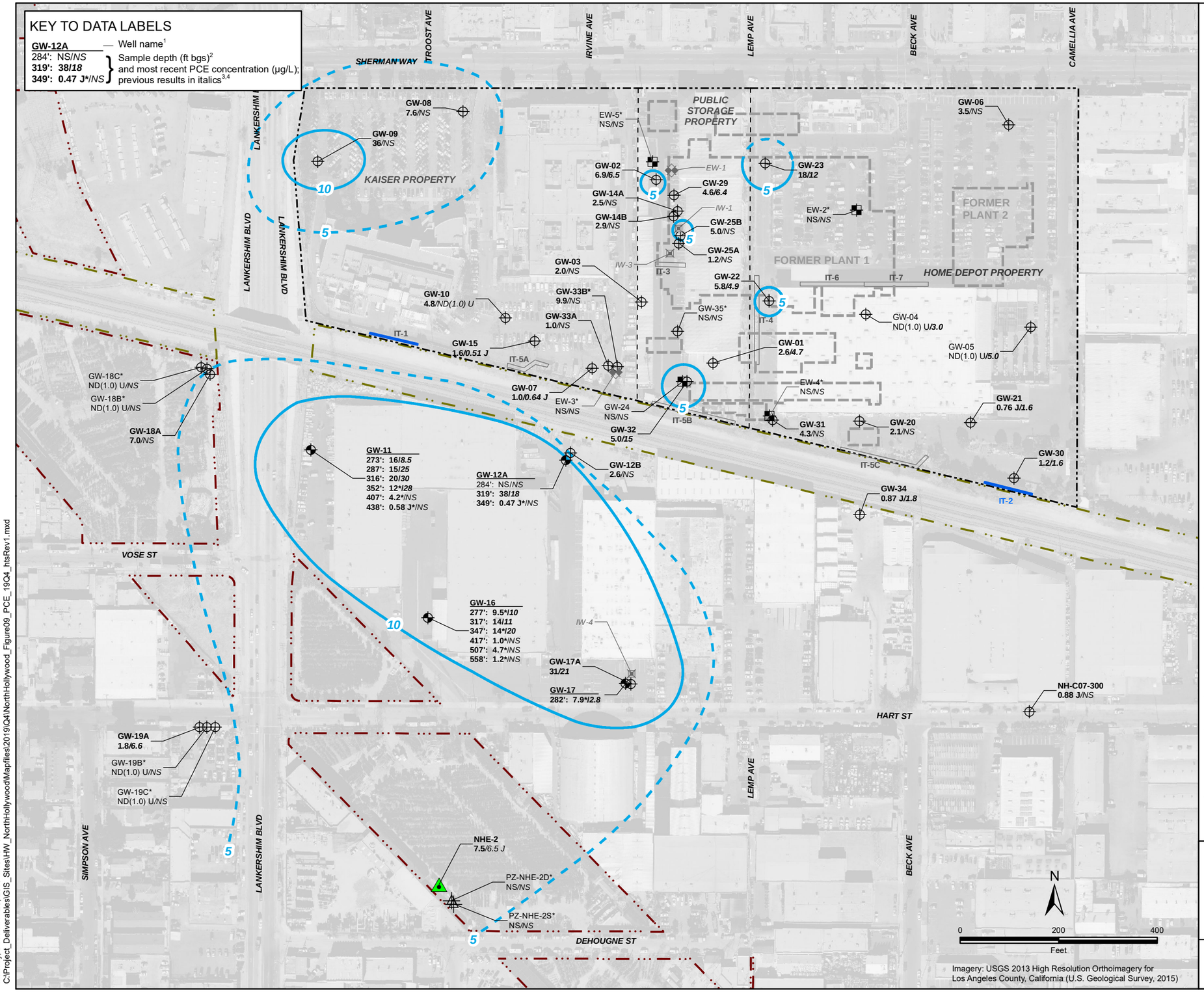

EXPLANATION

- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Extraction Well
- Active Injection Well
- Piezometer
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- Line of Estimated Equal PCE Concentration in Groundwater (µg/L) (dashed where inferred)
- Active Injection Trench (treated water)
- Inactive Injection Trench
- Former Building Footprint
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

Abbreviations:
µg/L = micrograms per liter
PCE = tetrachloroethene
bgs = below ground surface
ft = feet
ND = not detected above reporting limit indicated in parentheses
NS = not sampled

Notes:
1. Wells not used for contouring indicated with an asterisk (*).
2. Where available, sample depths at Barcad well are indicated in feet bgs. Results for locations with multiple depth-discrete samples are displayed by increasing depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias. U indicates the analyte was analyzed for but was not detected above the reported value.
4. Groundwater samples were collected from October 28-31, 2019. Previous results are from Third quarter 2019.

TETRACHLOROETHENE CONCENTRATIONS IN GROUNDWATER - FOURTH QUARTER 2019
Former Bendix Facility
North Hollywood, California

wood.

By: KLU	Prj. No. 8617190030
Date: 12/23/2019	Figure 9

Monday, December 23, 2019 4:19:46 PM
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KEY TO DATA LABELS

GW-12A — Well name[1]
284': NS/*NS*
319': 130/*220*
349': 1.8*/*NS*
} Sample depth (ft bgs)[2] and most recent TCE concentration (µg/L); previous results in italics[3,4]

EXPLANATION

- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Extraction Well
- Active Injection Well
- Piezometer
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- Line of Estimated Equal TCE Concentration in Groundwater (µg/L) (dashed where inferred)
- Active Injection Trench (treated water)
- Inactive Injection Trench
- Former Building Footprint
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

Abbreviations:
µg/L = micrograms per liter
TCE = trichloroethene
bgs = below ground surface
ft = feet
ND = not detected above reporting limit indicated in parentheses
NS = not sampled

Notes:
1. Wells not used for contouring indicated with an asterisk (*).
2. Where available, sample depths at Barcad well are indicated in feet bgs. Results for locations with multiple depth-discrete samples are displayed by increasing depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias. U indicates the analyte was analyzed for but was not detected above the reported value.
4. Groundwater samples were collected from October 28-31, 2019. Previous results are from Third quarter 2019.

TRICHLOROETHENE CONCENTRATIONS IN GROUNDWATER - FOURTH QUARTER 2019
Former Bendix Facility
North Hollywood, California

wood.

By: KLU
Date: 01/03/2020
Prj. No. 8617190030
Figure 10

Imagery: USGS 2013 High Resolution Orthoimagery for Los Angeles County, California (U.S. Geological Survey, 2015)

0 200 400 Feet

N

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KEY TO DATA LABELS

GW-12A — Well name[1]

284': NS/*NS*
319': 15/*7.0*
349': 9.8*/*NS*

} Sample depth (ft bgs)[2] and most recent 1,4-Dioxane concentration (µg/L); previous results in italics[3,4]

SHERMAN WAY
TROOST AVE
IRVINE AVE
LEMP AVE
BECK AVE
CAMELLIA AVE
LANKERSHIM BLVD
VOSE ST
SIMPSON AVE
DEHOUGNE ST
HART ST
KAISER PROPERTY
PUBLIC STORAGE PROPERTY
FORMER PLANT 1
FORMER PLANT 2
HOME DEPOT PROPERTY

GW-08 3.8/*NS*
GW-09 1.1/*NS*
GW-06 6.0/*NS*
EW-5* 2.7/*4.5*
GW-23 4.7/*6.3*
GW-02 3.8/*4.8*
EW-1
GW-29 3.1/*3.1*
GW-14A 3.0/*NS*
EW-2* 2.5/*3.8*
GW-14B 4.9/*NS*
GW-25B 3.0/*NS*
IW-1
IW-3
GW-25A 7.9/*NS*
GW-03 1.6/*NS*
GW-22 6.0/*6.3*
IT-3
IT-6
IT-7
GW-10 1.4/*0.85*
GW-33B* 4.0/*NS*
GW-35* NS/*NS*
IT-4
GW-04 3.4/*8.9*
GW-33A 0.92/*NS*
GW-05 1.4/*8.9*
IT-1
IT-5A
GW-01 4.2/*4.6*
GW-15 0.79/*0.77*
GW-07 0.86/*0.58*
EW-4 3.1/*4.4*
GW-21 0.89/*2.9*
EW-3 0.62/*1.3*
GW-24 7.6/*3.3*
IT-5B
GW-31 4.1/*NS*
GW-20 2.8/*NS*
GW-32 4.9/*4.4*
GW-18C* 0.38 J/*NS*
GW-18B* 1.0/*NS*
GW-18A 1.0/*NS*
GW-12B 1.8/*NS*
IT-5C
GW-34 ND(0.50) U/*1.6*
IT-2
GW-30 ND(0.50) U/*0.90*

GW-11
273': ND(1.0) U*/*2.7*
287': 3.3*/*4.2
316': 11/*12*
352': 6.0*/*16*
407': 3.4*/*NS*
438': 0.51*/*NS*

GW-12A
284': NS/*NS*
319': 15/*7.0*
349': 9.8*/*NS*

GW-16
277': 6.1/*2.4*
317': 3.0/*3.6*
347': 5.9*/*6.6*
417': 2.6*/*NS*
507': 1.9*/*NS*
558': ND(0.50) U*/*NS*

IW-4
GW-17 282': 7.5/*0.52*
GW-17A 23/*34*
NH-C07-300 0.99/*NS*
GW-19C* ND(0.50) U/*NS*
GW-19B* ND(0.50) U/*NS*
GW-19A 1.9/*6.1*
NHE-2 6.8/*6.9*
PZ-NHE-2D* NS/*NS*
PZ-NHE-2S* NS/*NS*

N
0 200 400
Feet

Imagery: USGS 2013 High Resolution Orthoimagery for Los Angeles County, California (U.S. Geological Survey, 2015)

EXPLANATION

- Groundwater Monitoring Well
- BARCAD Monitoring Well
- Extraction Well
- Active Injection Well
- Piezometer
- Inactive Extraction Well
- Inactive Injection Well
- North Hollywood Extraction Well
- Line of Estimated Equal 1,4-dioxane Concentration in Groundwater (µg/L) (dashed where inferred)
- Active Injection Trench (treated water)
- Inactive Injection Trench
- Former Building Footprint
- Site Boundary Former Bendix Facility
- Parcel Division of Former Bendix Facility
- Transmission Right-of-Way Property Boundary
- Extent of Transit Right-of-Way Property

Abbreviations:
µg/L = micrograms per liter
bgs = below ground surface
ft = feet
ND = not detected above reporting limit indicated in parentheses
NS = not sampled

Notes:
1. Wells not used for contouring indicated with an asterisk (*).
2. Where available, sample depths at Barcad well are indicated in feet bgs. Results for locations with multiple depth-discrete samples are displayed by increasing depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias. U indicates the analyte was analyzed for but was not detected above the reported value.
4. Groundwater samples were collected from October 28-31, 2019. Previous results are from Third quarter 2019.

1,4-DIOXANE CONCENTRATIONS IN GROUNDWATER - FOURTH QUARTER 2019
Former Bendix Facility
North Hollywood, California

wood.

By: KLU
Date: 01/02/2020
Prj. No. 8617190030
Figure **11**

Thursday, January 2, 2020 3:08:30 PM
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