

Final EIR

800 Carlisle Way Well & Water Tank

File No. 2022-7041

SCH No. 2023020080



Prepared by



Sunnyvale

In Consultation with



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Appendix A: Draft EIR Comment Letters

Section 1.0 Introduction

This document, together with the Draft Environmental Impact Report (Draft EIR), constitutes the Final Environmental Impact Report (Final EIR) for the 800 Carlisle Way Well & Water Tank project.

1.1 Purpose of the Final EIR

In conformance with the California Environmental Quality Act (CEQA) and CEQA Guidelines, this Final EIR provides objective information regarding the environmental consequences of the proposed project. The Final EIR also examines mitigation measures and alternatives to the project intended to reduce or eliminate significant environmental impacts. The Final EIR is intended to be used by the City of Sunnyvale in making decisions regarding the project.

Pursuant to CEQA Guidelines Section 15090(a), prior to approving a project, the lead agency shall certify that:

- (1) The Final EIR has been completed in compliance with CEQA;
- (2) The Final EIR was presented to the decision-making body of the lead agency, and that the decision-making body reviewed and considered the information contained in the final EIR prior to approving the project; and
- (3) The Final EIR reflects the lead agency's independent judgment and analysis.

1.2 Contents of the Final EIR

CEQA Guidelines Section 15132 specify that the Final EIR shall consist of:

- a) The Draft EIR or a revision of the Draft;
- b) Comments and recommendations received on the Draft EIR either verbatim or in summary;
- c) A list of persons, organizations, and public agencies commenting on the Draft EIR;
- d) The Lead Agency's responses to significant environmental points raised in the review and consultation process; and
- e) Any other information added by the Lead Agency.

1.3 Public Review

In accordance with CEQA and the CEQA Guidelines (Public Resources Code Section 21092.5[a] and CEQA Guidelines Section 15088[b]), the City shall provide a written response to a public agency on comments made by that public agency at least 10 days prior to certifying the EIR. The Final EIR and all documents referenced in the Final EIR are available for public review at 456 West Olive Avenue on weekdays during normal business hours. The Final EIR is also available for review on the City's website: <https://www.sunnyvale.ca.gov/business-and-development/projects-in-sunnyvale/development-projects/carlisle-well-and-water-tank>.

Section 2.0 Draft EIR Public Review Summary

The Draft EIR for the 800 Carlisle Way Well & Water Tank project, dated May 2025, was circulated to affected public agencies and interested parties for a 45-day review period from May 15, 2025 through June 30, 2025. The City undertook the following actions to inform the public of the availability of the Draft EIR:

- A Notice of Availability of Draft EIR was published on the City's website (<https://www.sunnyvale.ca.gov/business-and-development/projects-in-sunnyvale/development-projects/carlisle-well-and-water-tank>.) and in the Sunnyvale Sun on May 9, 2025;
- Notification of the availability of the Draft EIR was mailed to project-area residents and other members of the public who had indicated interest in the project;
- The Draft EIR was delivered to the State Clearinghouse on May 15, 2025, as well as sent to various governmental agencies, organizations, businesses, and individuals (see Section 3.0 for a list of agencies, organizations, businesses, and individuals that received the Draft EIR);
- Copies of the Draft EIR were made available on the City's website (<https://www.sunnyvale.ca.gov/business-and-development/projects-in-sunnyvale/development-projects/carlisle-well-and-water-tank>), City of Sunnyvale Library (located at 665 West Olive Avenue), City of Sunnyvale One-Stop Permit Center (located at 456 West Olive Avenue), and City of Sunnyvale Community Center (located at 550 East Remington Drive); and
- On June 23, 2025, the City of Sunnyvale held a Planning Commission meeting to present an overview of the project, summarize the potential environmental impacts identified in the Draft EIR, and to solicit feedback from members of Planning Commission and the public on the analysis included in the Draft EIR.

Subsequent to the public circulation of the Draft EIR and the receipt of feedback from decision makers and members of the public, the project proponent made minor modifications to the proposed project to address community concerns. These changes to the project description and the corresponding text revisions to the Draft EIR are detailed further in Section 5.0 Draft EIR Text Revisions below. The primary changes to the proposed project include shifting the location of the proposed emergency diesel powered generator slightly north (further from existing residences than originally proposed), clarifications regarding the construction process for drilling and testing the groundwater well, adjusting the proposed water storage tank dimensions to 28 feet in diameter and 17 feet in height, and updating the number of trees proposed for removal and the number of replacement trees that would be planted on-site.

CEQA Guidelines Section 15088.5 states that a lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the Draft EIR for public review, but before the Draft EIR is certified. CEQA Guidelines Section 15088.5 clarifies that new information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse

environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. The following examples would qualify as significant new information that could require recirculation of the Draft EIR:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
4. The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

The limited scope of changes to the project description, clarifying nature of the corresponding text revisions to the Draft EIR, and comments received on the Draft EIR, do not qualify as significant new information under CEQA. Therefore, the standard for requiring recirculation of the Draft EIR has not been met.

Section 3.0 Draft EIR Recipients

CEQA Guidelines Section 15086 requires that a local lead agency consult with and request comments on the Draft EIR prepared for a project of this type from responsible agencies (government agencies that must approve or permit some aspect of the project), trustee agencies for resources affected by the project, adjacent cities and counties, and transportation planning agencies.

The NOA for the Draft EIR was sent to owners and occupants adjacent to the project site and to adjacent jurisdictions. The following agencies received a copy of the Draft EIR from the City or via the State Clearinghouse:

- State Water Resources Control Board
- California Department of Transportation
- County of Santa Clara
- Santa Clara Valley Water District

Section 4.0 Responses to Draft EIR Comments

In accordance with CEQA Guidelines Section 15088, this document includes written responses to comments received by the City of Sunnyvale on the Draft EIR. This section also summarizes and addresses verbal comments related to the Draft EIR received at the Planning Commission hearing on June 23, 2025.

Comments are organized under headings containing the source of the letter and its date. The specific comments from each of the letters and/or emails are presented with each response to that specific comment directly following. Copies of the letters and emails received by the City of Sunnyvale are included in their entirety in Appendix A of this document. A recording of the June 23, 2025 Planning Commission hearing can be viewed at the following link:

<https://sunnyvaleca.legistar.com/MeetingDetail.aspx?ID=1236464&GUID=3BE49766-665C-4737-B597-E54D5D883C63&Options=info|&Search=>.

Comments received on the Draft EIR are listed below.

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Written Comments from State Agencies

A. State Water Resources Control Board

Comment A.1: Thank you for the opportunity to review the EIR for the proposed Project. The State Water Resources Control Board, Division of Drinking Water (DDW), issues domestic water supply permits under the Safe Drinking Water Act. This Project falls under DDW's Santa Clara District jurisdiction. The Santa Clara District issues permit amendments according to the Title 22 California Code of Regulations (Cal. Code Regs) chapter 16. Public water systems need a permit amendment for modification of the water supply including new sources, new reservoirs with 100,000-gallon capacity or greater, service area expansions of twenty percent or more, and treatment design capacity or process changes as per Cal. Code Regs. § 64556.

Response A.1: This section introduces the comments below, which are subsequently responded to below.

Comment A.2: The State Water Board, DDW is a responsible agency under the California Environmental Quality Act (CEQA) for this Project. The Project will require approval of a domestic water supply permit amendment from the Santa Clara District for the new drinking water source and change in treatment (Cal. Code Regs §64556). Please list “domestic water supply permit amendment” in the EIR, under Section 2.2.2 Project Overview (PDF page 22) and Section 2.4 Uses of the EIR (PDF page 29) and in the Initial Study, under Section 2.7 Project Related Approvals, Agreements, and Permits (PDF page 10).

Response A.2: Text has been added to the Draft EIR and the Initial Study included as Draft EIR Appendix A to clarify these permit requirements, refer to Section 5.0 Draft EIR Text Revisions.

Comment A.3: When the CEQA process is completed, please forward the following items with the permit application to the State Water Board, DDW Santa Clara District at DWPDIST17@waterboards.ca.gov:

- The EIR, Mitigation Monitoring and Reporting Plan (MMRP),
- The Resolution or Board Minutes certifying the EIR, adopting the MMRP, and approving the Project; and
- The Notice of Determination filed at the County Clerk’s Office and the State Clearinghouse.

Please contact Lori Schmitz of the State Water Board at (916) 449-5285 or Lori.Schmitz@waterboards.ca.gov, for questions regarding this comment letter.

Response A.3: City staff will provide these materials to the State Water Resources Control Board at the email address provided above upon completion of the CEQA

process. The comment does not raise any specific issues about the adequacy of the Draft EIR; therefore, no further response is required.

B. California Department of Transportation

Comment B.1: Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the 800 Carlisle Way Well & Water Tank Project. The Local Development Review (LDR) Program reviews land use projects and plans to ensure consistency with our mission and state planning priorities. The following comments are based on our review of the May 2024 DEIR.

Please note this correspondence does not indicate an official position or approval by Caltrans on this project and is for informational purposes only.

Response B.1: This section introduces the comments below, which are subsequently responded to below.

Comment B.2: **Project Understanding**

The proposed project would reactivate the project site as a groundwater extraction site by constructing a replacement well that would be deeper than the current one.

Construction-Related Impacts

Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans. To apply, please visit Caltrans Transportation Permits ([link](#)).

Prior to construction, coordination may be required with Caltrans to develop a Transportation Management Plan (TMP) to reduce construction traffic impacts to the STN.

Response B.2: Details regarding construction logistics for the proposed project have not been prepared at this stage of the development process; however, the project would comply with Caltrans requirements regarding the need for a transportation permit if oversized or excessive load vehicles are required to transport materials on State roadways. In addition, the project applicant would coordinate with Caltrans to develop a Transportation Management Plan, if required by Caltrans.

Comment B.3: Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Marley Mathews, Associate Transportation Planner, via LDR-D4@dot.ca.gov. For future early coordination opportunities or project referrals, please visit Caltrans LDR website ([link](#)) or contact LDR-D4@dot.ca.gov.

Response B.3: This comment does not raise any specific issues about the adequacy of the Draft EIR; therefore, no further response is required.

Written Comments from Regional and Local Agencies

C. Santa Clara Valley Water District (dated June 17, 2025)

Comment C.1: Santa Clara Valley Water District (Valley Water) has reviewed the Notice of Availability of a Draft Environmental Impact Report (EIR) for the 800 Carlisle Way Well and Water Tank Project in Sunnyvale, received on May 9, 2025, and has the following comments:

Response C.1: This section introduces the comments below, which are subsequently responded to below.

Comment C.2: The proposed water production well must be permitted and inspected by Valley Water. Please find additional information about the well permitting process on Valley Water's Well Permit and Inspection web page (<https://www.valleywater.org/contractors/doing-businesses-with-the-district/wells-well-owners/well-permits-and-inspections>) or by calling the Well Permitting and Inspections Hotline at: 408-630-2660.

Valley Water's District Action requires that the amount of groundwater being pumped be disclosed by well owners to Valley Water in a water production statement. Please find additional information on Valley Water's web page about groundwater production reporting methods and requirements (<https://www.valleywater.org/contractors/doing-businesses-with-the-district/wells-well-owners/reporting-methods-and-requirements>) or by contacting Valley Water's Revenue Unit staff at 408-630-2770 or email: WaterRevenue@valleywater.org

Response C.2: The project applicant (California Water Service) would apply for the necessary permits from Valley Water and comply with all applicable regulations regarding operation of the groundwater extraction well and requirements for inspections. In addition, the project applicant would disclose the amount of groundwater being pumped on-site to Valley Water through the required water production statement process. Text has been added to the impact discussion on page 99 of the Initial Study included as Draft EIR Appendix A to clarify that the project would comply with these requirements, refer to Section 5.0 Draft EIR Text Revisions.

Comment C.3: Valley Water has no right of way at this location, and no encroachment permit will be needed in accordance with the Water Resources Protection Ordinance.

Response C.3: This comment is acknowledged. The comment does not raise any specific issues about the adequacy of the Draft EIR; therefore, no further response is required.

Comment C.4: Valley Water records indicated that there is 1 properly destroyed well at this site. Because the well is considered properly destroyed, no action is necessary to protect them or to

bring them into compliance with the Valley Water's Well Ordinance. While Valley Water has records for most wells located in the County, it is always possible that a well exists that is not in Valley Water's records. If previously unknown wells are found on the subject property during development, they must be properly destroyed under permit from the Valley Water or registered with the Valley Water and protected from damage. For more information, please call the Valley Water's Well Ordinance Program Hotline at 408-630-2660.

Response C.4: This comment is acknowledged. In the event an unknown well is found on-site during project construction, it shall be properly destroyed under permit from Valley Water (as described on page 93 of the Initial Study in Draft EIR Appendix A) or registered with Valley Water and protected from damage. The comment does not raise any specific issues about the adequacy of the Draft EIR; therefore, no further response is required.

Comment C.5: The site is in FEMA Flood Zone X (area determined to be outside the 500-year flood and protected by levee from 100- year flood).

Response C.5: This comment is acknowledged, and the description of the site in the comment is consistent with what is described in the Draft EIR. Therefore, no revisions to the Draft EIR text are necessary.

Written Comments from Organizations, Businesses, and Individuals

D. Thomas Gill (dated May 13, 2025)

Comment D.1: Good day Mary, my name Thomas Gill and I live at [REDACTED] adjacent to the planned project. I live in an Eikler home and have recently discovered that these style homes were built without using rebar in the construction of there foundations. All the adjacent home properties around the site are Eikler homes as well. These homes are subject to heating issues because of radiant heat pipes running through the foundation due to earth movement. When the earth moves, the foundation moves to create these leaks in the pipes. My concern is that the Vibrations and Noise that will exceed the city established thresholds will cause damage to not just my home but also all the others. Over time the movement can take place from these exceeded noises/vibrations after the fact. I also have a swimming pool adjacent to the site as do some other homes around the site. What guarantees do we have that this movement over time will not happen?

Response D.1: Potential vibration impacts associated with the project were evaluated on pages 31 and 32 of the Draft EIR. A more detailed technical analysis regarding estimated vibration generated by construction of the project was included in Draft EIR Appendix B (Noise Assessment and Peer Review). The threshold utilized to determine whether the project would generate significant vibration levels that could damage surrounding structures is outlined on page 19 of the Draft EIR. Typically, a threshold of 0.3 inches per second (ips) is utilized to avoid damage to older residential structures. However, as explained on page 19 of the Draft EIR, the City determined that a more conservative threshold of 0.25 ips was appropriate to avoid damage to existing structures near the proposed construction activities.

As discussed on pages 31 and 32 of the Draft EIR and shown in Tables 3.1-7 and 3.1-8, maximum vibration levels at the nearest receptor would be 0.03 ips during drilling activities and 0.03 ips or lower during the remaining construction activities on-site (including demolition, site preparation, minor grading, construction, and paving). Based on these results, it was determined that the project would result in vibration levels well below the established threshold of 0.25 ips and impacts during construction would be less than significant. The project would not generate groundborne vibration at surrounding receptors during operation of the proposed well and water tank.

The title of Table 3.1-8 on page 32 of the Draft EIR has been revised to reflect the information included in the table, refer to Section 5.0 Draft EIR Text Revisions.

E. Tina Baumgartner (Dated May 19, 2025)

Comment E.1: Dear Mary:

In this email I am providing my views, comments and concerns on the Draft EIR for the proposed Well & Water Tank Project at 800 Carlisle Way, Sunnyvale. This email reflects my views as well as those of my husband, Uli Palli, and my son, Max Palli.

I would ask that my questions and concerns are addressed well before the deadline of June 30 so that if there are any follow-on comments or questions they can be addressed as well.

Here are my concerns:

Response E.1: This section introduces the comments below, which are subsequently responded to below.

Comment E.2: Concern about the Geotechnical Report's Preliminary Nature

I have reviewed the Geotechnical Feasibility Study, and it says clearly that its recommendations are “preliminary” and “should not be used for project design” [see section 5.4. of the Geotechnical Feasibility Study], because no actual subsurface exploration was done yet. It says a full design-level investigation is needed later. But the EIR seems to say impacts like liquefaction and expansive soils are less than significant based on following the recommendations of this future, not-yet-done study. How can the EIR conclude these impacts are minor when the specific safety measures based on real site conditions haven't even been figured out or analyzed yet? This feels like putting the cart before the horse.

Please address this glaring inconsistency and the timeline for conducting a full design-level geotechnical investigation including exploration, laboratory testing, and analysis.

Response E.2: The discussion included in Section 4.7 Geology and Soils of the Initial Study (pages 66 to 75 of Draft EIR Appendix A) is based in part upon the information included in the Geotechnical Feasibility Study (Initial Study Appendix C) and Sustainable Groundwater Management Technical Memorandum (Initial Study Appendix D) prepared for the project, and other publicly available information from Santa Clara County Department of Planning & Development, the Association of Bay Area Governments, and the California Department of Conservation. These sources provide substantial information to determine whether impacts related to geology and soils, such those caused by liquefaction and expansive soils, are likely to occur on-site with implementation of the project.

During the environmental review process, reliance on information provided in a preliminary geotechnical investigation is sufficient to determine whether geology and soil impacts could be expected to occur on-site.

In addition, specific design details to address geological conditions on a project site to meet California Building Code standards will be identified as part of the required design-level geotechnical report to be submitted as part of the permitting process that Valley Water will oversee for the drilling and well construction that would occur on-site. Prior to the issuance of the Valley Water permits for the project, the project design would be refined based on recommendations included in the design-level geotechnical report to be prepared for the project. Valley Water would review the report and project plans to ensure that the recommendations were incorporated prior to permit issuance. As a result, the project would be reviewed and required to conform with the California Building Code and, as a result, the project would be constructed in a manner that would not result in significant geology and soil impacts.

Comment E.3: Health Concerns

A critical area of concern that needs further rigorous review and mitigation is the potential for harmful effects on neighbors in general and sensitive populations in particular, specifically children and the elderly, from construction noise and pollution. The Initial Study and Health Risk Assessment explicitly identify “sensitive receptors”, defining them as groups “more affected by air pollution than others, including “children under 16, the elderly over 65”, as well as individuals with respiratory or cardiovascular diseases. There are several “sensitive receptors” are located in the adjacent and nearby houses.

The reports highlight Toxic Air Contaminants (TACs), such as diesel exhaust (DPM), which is estimated to cause “about three-quarters of the cancer risk from TACs”. Diesel exhaust contains chemicals known as carcinogens and can lead to serious health effects. Concerns about health effects from diesel equipment, including the smell and inability to breathe in nearby homes, have been raised by residents.

Crucially, the health risk assessment modeling acknowledges that “For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs”. The modeling incorporated “age-sensitivity factors” reflecting this greater sensitivity. The analysis found that the “unmitigated maximum cancer risks from construction activities at the project MEI [maximally exposed individual] location would exceed the single-source significance threshold”. The calculated unmitigated risk for the MEI, was 13.65 per million, exceeding the threshold of 10 per million. While mitigation measures are proposed to reduce this calculated risk below the threshold, the initial finding demonstrates a significant potential impact on the health of the most vulnerable nearby residents.

Response E.3: As noted in Comment E.3, the analysis on pages 38 to 41 of the Initial Study (Draft EIR Appendix A) determined that the unmitigated construction risk impacts from the proposed project would exceed the Air District single-source threshold for incremental cancer risk for the maximally exposed individual (MEI), which is the sensitive receptor affected the most by project construction emissions.

To reduce the incremental cancer risk for the MEI during project construction, the project would implement mitigation measures LUTE DEIR MM 3.5.3 and MM AIR-3.1 which would limit fugitive dust and diesel particulate matter emissions from construction activities on-site. With implementation of these mitigation measures, the project's potentially significant cancer risk impact for the MEI would be reduced to a less than significant level. Since the air quality emissions modeling focuses on potential impacts to the MEI (which represents the worst-case exposure scenario), construction health risk impacts from the proposed project would be lower at other receptor locations adjacent to the project site and in the general project site vicinity. Therefore, impacts associated with these emissions would be less than significant. The comment does not provide any new significant information and no revisions to the Draft EIR or the Initial Study included as Draft EIR Appendix A are necessary.

Comment E.4: Beyond air quality, construction noise is also a concern. High noise levels, particularly at night, can interfere with sleep, impacting the health and well-being of all residents, including vulnerable individuals. The EIR states that nighttime drilling noise would be a “significant and unavoidable impact” even with mitigation. The proposed mitigation for this significant noise impact—hotel vouchers—is limited to only the “two nearest residences” and, importantly, the EIR notes that this measure does not actually reduce the significant noise level itself. How are the health and well-being of all neighbors who may be affected by unavoidable construction noise and pollution being adequately protected?

Response E.4: Per the requirements of the California Environmental Quality Act (CEQA), mitigation can only be required to reduce potentially significant impacts identified by the environmental analysis. The noise and vibration modeling completed for the project as part of Draft EIR Appendix B (Noise Assessment and Peer Review) identified an exceedance of the established nighttime thresholds for construction noise outside of the allowed construction hours at two of the nearest residential noise receptors adjacent to the southwestern portion of the project site. The modeling showed the construction noise would be below the significance threshold at all other residents. For this reason, mitigation measure MM NOI-1.2 (i.e., the provision of hotel vouchers) can only be required for residents of those two receptor locations under CEQA. As noted in the above comment, since the provision of the hotel vouchers does not reduce the noise level to below the threshold at these two residences, the impact is concluded to be significant and unavoidable.

However, while not required under CEQA, the applicant has agreed to provide the other residents adjacent to the site with the same opportunity to temporarily relocate during nighttime drilling. The provision of hotel vouchers to the other residents adjacent to the site would be required as part of a Condition of Approval by the City in the development permits for the project.

This comment does not raise any issues about the adequacy of the Draft EIR and no revisions to the Draft EIR (including Draft EIR Appendix A) are necessary.

Comment E.5: Concerns about Ground Instability

Neighbor concerns were raised regarding localized ground instability resulting from the extraction of water from the new deep well. While the Geotechnical Feasibility Study addresses settlement from structural loads and seismic events, does the EIR include a specific, localized geotechnical or hydrogeological analysis of the potential for subsidence or ground instability caused directly by pumping the deep 810-foot well, distinct from regional subsidence or settlement under building loads?

Response E.5: A detailed analysis regarding the potential for the project to cause ground instability and/or subsidence was included in the Sustainable Groundwater Management Technical Memorandum (Initial Study Appendix D) prepared for the project. The findings of this technical memorandum were summarized under the appropriate impact discussions on pages 72 to 73 and 98 to 101 of the Initial Study (which is included as Draft EIR Appendix A). As discussed on page 73 of the Initial Study:

Between 2014 to 2021, Cal Water's LAS District pumped an average of approximately 3,800 AFY of groundwater from their active well stations, which would account for approximately 3.4 percent of the total amount pumped from the subbasin. During a similar time period (2015 to 2023), the measured amount of subsidence over the Santa Clara Subbasin utilized by Cal Water's LAS District was approximately 0.01 feet, which is an average annual subsidence rate of 0.0015 feet per year. This is lower than the 95 percent certainty interval of accuracy (18 millimeters or 0.06 feet) of these measurements and significantly less than the maximum allowable subsidence rate of 0.01 feet per year detailed in Valley Water's Alternative Groundwater Sustainability Plan. In addition, prior analysis of the subbasin estimated that up to 200,000 AF of water could potentially be pumped in a single year without causing land subsidence.

In addition, as noted on page 99 of the Initial Study:

Between 2010 and 2019, the water budget for the Santa Clara Plain principal aquifer showed an average inflow of 86,000 AFY and an average outflow of 83,000 AFY, which resulted in an average annual increase in storage of approximately 3,000 AFY in the aquifer.

Therefore, Valley Water has been able to increase the inflow of water to the Santa Clara Plain principal aquifer in a manner which prevents overdraft and reduces the risk of subsidence over the subbasin. Page 4 of the Sustainable Groundwater Management Technical Memorandum (Initial Study Appendix D) prepared for the project also notes that the northeast-central area of the subbasin has been more

prone to subsidence than the southwest-central portions of the subbasin underlying the project site.

Based on the information outlined in the Initial Study and the associated technical appendices, it was determined that the potential risk of subsidence due to implementation of the project would be less than significant. In addition, Valley Water reviewed the environmental analysis prepared for the project and did not have any specific concerns related to potential subsidence caused by the proposed project.

Subsequent to circulation of the Draft EIR, additional technical documentation was prepared that further substantiates that the construction of the proposed project on-site would not result in localized subsidence around the location of the new groundwater well. This additional technical evaluation determined that the new groundwater well would be engineered and constructed to specifically prevent the movement of sand and other materials into the well structure, which would maximize yield, efficiency, sand control, and longevity of the well without inducing localized subsidence. This additional clarification has been added to page 73 of the Initial Study (which is included as Draft EIR Appendix A) (refer to Section 5.0 Draft EIR Text Revisions).

This comment does not raise any issues about the adequacy of the Draft EIR.

Comment E.6: Questioning Analysis of Pumping-Induced Subsidence

Some neighbors are worried about the ground around our homes potentially becoming unstable because of pumping water from that new, deep well. The Geotechnical Study talks about settlement from buildings or earthquakes, but it doesn't seem to specifically look at whether pumping water from 810 feet deep could cause the ground to settle or become unstable near the well.

Response E.6: See the discussion regarding potential project-induced subsidence under Response E.5.

Comment E.7: Also, one of the other reports mentioned the previous well had problems with 'excessive sanding' and casing issues, which might suggest some local ground issues.

Response E.7: The original groundwater well on-site, which was decommissioned and destroyed in 2016, was experiencing structural deterioration of the well casing and screen that led to excessive sanding in the well. The design of the original groundwater well, and other wells of that era, typically allowed for a useful service life of approximately 50 years. In 2016, the original groundwater well was 57 years old, and the deteriorated condition of the well at that time was typical of wells that have surpassed their useful service life, and was not due to adverse subsurface

conditions. Modern wells, including the proposed groundwater well that would be constructed with implementation of this project, are engineered and constructed to current standards and designed to prevent the movement of sand and other materials into the well structure. The design of modern wells (such as the proposed well) have a useful service life of approximately 100 years. The final structural design of the proposed groundwater well will be based on a site-specific investigation that will result in a design that maximizes yield, efficiency, sand control, and longevity without inducing localized subsidence, as described above in Response E.5.

This comment does not raise any issues about the adequacy of the Draft EIR and no revisions to the Draft EIR (including Draft EIR Appendix A) are necessary.

Comment E.8: The Geotechnical Study does not address how subsurface conditions related to foundation work, excavation (potentially through pesticide-contaminated soil), or drilling the deep well might be affected by or interact with existing or nearby contamination.

Response E.8: As discussed on page 90 of the Initial Study included as Draft EIR Appendix A, a Health and Safety Plan (HSP) would be prepared and implemented during construction activities on-site to establish health and safety protocols for construction personnel working with soil that could potentially contain residual pesticides. In addition, the excess soil that would be excavated and hauled off-site for disposal would be sampled and tested for compounds of concern consistent with the requirements of the disposal facility. These standard requirements would reduce impacts from potential soil contamination to a less than significant level by requiring that proper safety measures are implemented on-site during construction and that proper disposal protocols are followed.

As discussed on page 98 of the Initial Study (which is included as Draft EIR Appendix A) and the Sustainable Groundwater Management Technical Memorandum (Initial Study Appendix D) prepared for the project, there are 26 listed cleanup sites within one mile of the project site, two of which are open cases where the most recent groundwater sampling has shown that concentrations of constituents of concern (COCs) were below the applicable Environmental Screening Levels (ESLs), and one of which is a closed case whose contaminated plume extent is primarily limited to the property boundaries. Based on the distance, location, and level of contamination at those three sites, pumping operations at the proposed well on-site would not mobilize or cause migration of existing contaminants at those sites and the project would have a less than significant impact on groundwater quality.

This comment does not raise any issues about the adequacy of the Draft EIR and no revisions to the Draft EIR (including Draft EIR Appendix A) are necessary.

Comment E.9: Has there been a specific study done to analyze the risk of subsidence or instability just from the deep well pumping right at the site and next door?

Response E.9: See the discussion regarding potential project-induced subsidence under Response E.5.

Comment E.10: Undocumented Fill Assessment

The GeoTech study acknowledges the likely presence of undocumented fill that could cause structural distress if not mitigated, recommending its extent and mitigation methods (removal/reuse) be evaluated in the design-level study. Similar to other geotechnical hazards, the specifics of dealing with this potential issue are deferred to a future study, impacting the completeness of the analysis in the EIR regarding potential impacts like disposal of fill material, especially if it's contaminated (e.g., with pesticides).

Response E.10: See Response E.2 above regarding the adequacy of the evaluation included in the Geotechnical Feasibility Study (Initial Study Appendix C). The design-level geotechnical report that would be prepared prior to the issuance of the permits issued by Valley Water for the project would include additional details regarding the potential presence/extent of undocumented fill on-site and recommendations regarding how to utilize or dispose of the undocumented fill, if it is determined to be present on-site. Similar to the excess soil that would be excavated and hauled off-site for disposal, if it is determined that undocumented fill is on-site and needs to be removed prior to constructing the proposed improvements, the undocumented fill would be sampled and tested for compounds of concern consistent with the requirements of the disposal facility. Adherence to these requirements and the HSP discussed in Response E.8 would reduce potential impacts regarding contamination in the soil and/or undocumented fill on-site to a less than significant level. Therefore, no revisions to the Draft EIR or the Initial Study included as Draft EIR Appendix A are necessary. In addition, the requirement to complete the design-level geotechnical report does not constitute deferred mitigation as the project applicant is committed to completing the report, the report shall be completed according to industry standards, and the applicant shall implement the measures identified in the report to comply with the California Building Code safety standards and Valley Water requirements regarding drilling and constructing water wells.

Comment E.11: Concern about Potential Contamination Risks

The Phase I Environmental Site Assessment says the site was historically used for orchards, and there's a "potential that residual pesticides could remain in Site soil". It also mentions nearby contaminated sites, like a Shell gas station that had groundwater contamination. The report didn't get a questionnaire back from the owner or interview previous owners, but concluded there were "no significant data gaps".

Could pumping the new deep well potentially change how groundwater flows and maybe pull or spread any old contamination, either from pesticides on site or those nearby plumes? Has the EIR

really looked closely at this specific risk, especially since the initial site assessment was missing some information?

Response E.11: As discussed on page 11 of the Phase I Environmental Site Assessment (Initial Study Appendix E) prepared for the project, “A data gap by itself is not inherently significant; it only becomes significant if it raises reasonable concerns.” While the Phase I Environmental Site Assessment acknowledges some interviews and questionnaires were not able to be completed, the findings of the report were based on other sources of information, such as interviews with Cal Water staff, records provided by the City, on-site reconnaissance and observations, review of federal, state, and local databases that track recorded releases of contaminants, and professional judgement. Based on these substantial sources, it was determined that there was only one Recognized Environmental Condition on-site, which was related to the site’s historic agricultural use.

The Phase I Environmental Site Assessment (Initial Study Appendix E) prepared for the project stated that, “Residual agricultural chemicals, if present, typically are limited to the upper few feet of soil and would not pose a significant threat to groundwater quality at the Site or to the operation of the planned water supply facility.” In addition, as discussed in Response E.8 above, the Sustainable Groundwater Management Technical Memorandum (Initial Study Appendix D) prepared for the project determined that based on the distance, location, and level of contamination at nearby sites with recorded releases of contaminants, pumping operations at the proposed well on-site would not mobilize or cause migration of existing contaminants at those sites and the project would have a less than significant impact on groundwater quality. These findings are summarized on page 98 of the Initial Study included as Draft EIR Appendix A. This comment does not raise any issues about the adequacy of the EIR and no revisions to the Draft EIR (including Draft EIR Appendix A) are necessary.

Comment E.12: Lack of Analysis for Catastrophic Tank Failure

While the reports say the area isn't in a flood zone usually, my concern, and others have mentioned this too, is about what happens if the 2.5 million-gallon water tank breaks. Would that flood our homes? Standard flood maps don't show this kind of event. Has a specific analysis been done to show how a sudden, catastrophic failure of this large water tank would affect flooding and property damage in the immediate neighborhood?"

Response E.12: CEQA requires that lead agencies evaluate the reasonably foreseeable impacts of a project that would occur under regular operating conditions. Therefore, an analysis of a speculative, “worst-case” scenario where the proposed water tank fails and releases stored water into the surrounding neighborhood was not included in the Draft EIR.

The project would include construction of a 56,000 gallon tank which would be constructed in accordance with applicable codes such as those required by the American Water Works Association (AWWA), California Building Code, and American Society of Civil Engineers (ASCE). Catastrophic failures of well-maintained water tanks are exceedingly rare. If the tank were to be damaged by an external force (e.g., a vehicle colliding with the tank, a tree falling on the tank, etc.), any water from the resulting leak would be directed to the new storm drain inlets on-site or the storm drain infrastructure on Carlisle Way.

Based on this discussion, it is unlikely and speculative to assume the proposed tank would fail. This comment does not provide any new significant information and no revisions to the Draft EIR are necessary.

Comment E.13: Information Gaps Relating to Environmental Questionnaire

The Phase I ESA notes that the owner's environmental questionnaire was not returned and previous owners/occupants were not interviewed, yet concludes "No significant data gaps were identified". How can the EIR rely on the Phase I ESA's findings regarding the absence of past spills or significant environmental concerns when key information from current and previous site users was not obtained?

Response E.13: See Response E.11 above regarding the adequacy of the Phase I Environmental Site Assessment prepared for the project and the data gaps identified within the report.

Comment E.14: Need for Specific, Enforceable Nighttime Construction Noise Mitigation

The EIR materials acknowledge that construction noise, especially from drilling, could be a "significant and unavoidable impact". Residents, including myself, are extremely concerned about this impacting our sleep and health, especially at night. The current plan talks about mitigation measures, but they seem general. What specific, mandatory, and enforceable mitigation measures will be in the Mitigation Monitoring and Reporting Program (MMRP) specifically for the drilling phase, and how will nighttime noise limits be monitored and enforced to prevent sleep disruption?

Response E.14: The Draft MMRP prepared for the project was posted on the City's website with the Draft EIR and supporting documentation starting on May 15, 2025, and is available for review at the following link:
<https://www.sunnyvale.ca.gov/business-and-development/projects-in-sunnyvale/development-projects/carlisle-well-and-water-tank>.

The mitigation measures in the Draft MMRP are the same mitigation measures identified in the Draft EIR and accompanying Initial Study. Pages 10 and 11 of the Draft MMRP include mitigation measures MM NOI-1.1 and MM NOI-1.2, which would mitigate impacts related to the drilling activities by installing acoustical

barriers meeting specific performance standards to attenuate the construction (including drilling) noise and providing hotel vouchers to significantly impacted residents. These two mitigation measures do not require ongoing monitoring of noise levels during drilling activities; however, modeling was completed as part of the Draft EIR (see Draft EIR Appendix B Noise Assessment and Peer Review) which calculated the maximum estimated noise levels that could be expected during drilling activities. As discussed in the Draft EIR on pages 23 to 28, two adjacent residences would be subject to significant and unavoidable noise impacts related to the exceedance of the established nighttime thresholds for construction noise outside of the allowed construction hours. The other residences adjacent to the project site would be exposed to nighttime noise levels that would remain below the established thresholds. However, as discussed above in Response E.4, while not required under CEQA, the project applicant would offer the same hotel vouchers to the remaining residents of properties adjacent to the project site. Mitigation measures MM NOI-1.1 and MM NOI-1.2 specifically, are required to be implemented by the applicant, and are enforceable by the City, as detailed in the Draft EIR and MMRP.

Comment E.15: Concerns about Tank Height, Privacy, Optics and the Variance Process

The tank height was initially proposed at 12 feet and is now doubled to 24 feet. We live in a single-story district intended to protect our privacy, especially with our large glass windows facing the backyards. A 24-foot structure with people working on it is like a two-story building, raising serious privacy and security concerns. Cal Water is seeking a variance for this. How will the EIR analysis, and specifically the proposed landscaping and screening, definitively guarantee that our privacy and security from overlooking won't be negatively impacted by the final 24-foot tank and its maintenance activities?"

Response E.15: Subsequent to circulation of the Draft EIR, the proposed tank height was revised to be a maximum of 17 feet, which is consistent with allowed maximum height in the zoning district and the maximum height of residences in the surrounding neighborhood. Potential impacts to privacy of surrounding residences are not considered an impact under CEQA; therefore, a detailed discussion of those potential impacts was not included in the Draft EIR or the associated appendices. However, as discussed on page 23 of the Initial Study included as Draft EIR Appendix A, the project is subject to the City's design review process, which would ensure the project incorporates appropriate design measures (such as setbacks and landscaping) to reduce potential visual impacts and be compatible with the existing neighborhood character. Refer to Section 5.0 Draft EIR Text Revisions for additional details regarding the revised project description. This comment does not raise any issues about the adequacy of the Draft EIR.

Comment E.16: Also, while screening the tank from the view of residents on Carlisle Way was discussed during the April information meeting, no plan seems to exist to do the same for the residents of Coventry Court. How will the tank be obscured from view?

Response E.16: There are existing trees and landscaping along the southern site boundary that provide screening between the project site and adjacent residences on Coventry Court. In addition, the project would plant five camphor trees, five toyon trees, and four pepper trees as replacement for the nine existing trees that would be removed to facilitate construction of the project. These trees would be planted along the eastern, southern, and western boundaries of the site which would provide additional screening between the proposed structures and adjacent residences.

Comment E.17: How will it be covered to avoid reflection and glaring and sounds bouncing off of it increasing noise levels even more?

Response E.17: As discussed above in Response E.16, the proposed improvements on-site would be screened from view of the adjacent residences by new and existing landscaping. The water tank would be painted with a non-reflective coating, as stated on page 23 of the Initial Study included as Draft EIR Appendix A, to avoid generating excessive glare at surrounding residences. Operational noise levels that would occur at the project site were modeled as part of the Noise Assessment completed for the Draft EIR (and included in Appendix B) and discussed on pages 30 and 31 in the Draft EIR. This modeling included the assumption that the proposed water tank would be present on-site and, as summarized in Table 3.1-6 on page 30 of the Draft EIR, it was determined that the operational noise from implementation of the project would be less than significant. This comment does not raise any issues about the adequacy of the Draft EIR and no revisions to the Draft EIR are required.

Comment E.18: Why has no consideration been given so far to how the tank will look from the perspective of the residents of Kingfisher Way and Coventry Court?

Response E.18: As discussed on page 23 of the Initial Study included as Draft EIR Appendix A, the project is subject to the City's design review process, which would ensure the project incorporates appropriate design measures (such as setbacks and landscaping) to reduce potential visual impacts and be compatible with the existing neighborhood character. In addition, updated elevations showing conceptual views of the proposed improvements from each direction, including views from the east and south from the direction of Kingfisher Way and Coventry Court, respectively, have been prepared (refer to Section 5.0 Draft EIR Text Revisions). The comment does not raise any specific issues about the adequacy of the Draft EIR; therefore, no further response is required.

Comment E.19: Unconsidered Social Impact

While environmental impacts are assessed, the direct social and economic impacts on neighboring residents stemming from these environmental effects (e.g., health impacts from noise-induced sleep deprivation, quality of life degradation from odors/fumes, potential effects on property values from perceived risks or aesthetic changes) are not explicitly quantified or analyzed in the sources provided. How were these resident concerns about the direct effects of environmental impacts on their well-being and property considered in the overall CEQA determination?

I am looking forward to having my questions answered and the short-comings of this report addressed.

Response E.19: Pursuant to CEQA, an EIR is an information document that assesses potential environmental impacts of a proposed project (CEQA Guidelines Section 15121(a)). Potential social and economic impacts of a project do not fall under the scope of CEQA; therefore, the topics such as those listed in Comment E.19 above were not included as part of the Draft EIR. Consistent with CEQA (and as acknowledged by the above comment), the Draft EIR evaluates the environmental impacts of the project. For example, the project's impact from noise is discussed in Section 3.1 Noise of the Draft EIR, odors impacts are discussed in Section 4.3 Air Quality of the Initial Study included as Draft EIR Appendix A, and aesthetics impacts are discussed in Section 4.1 Aesthetics of the Initial Study included as Draft EIR Appendix A. The above comment provides no substantial evidence that the project would result in a new significant environmental impact that was not disclosed in the Draft EIR. For these reasons, no further response is required.

F. Roger Burney (dated June 1, 2025)

Comment F.1: Preventing the build an industrial site needlessly in a multi-million dollar area where housing should go, must be the purpose of a planning organization. When this site was originally built, it serviced 3 streets among miles of orchards. The water district would never consider buying a home in this area and building it into an industrial site. If it must be built here, the solution is clear. Build it all below ground level. Ultimately the neighborhood pays the costs. Thus well and tank could go anywhere. Put it in an industrial area.

Response F.1: This comment is acknowledged. The comment does not raise any specific issues about the adequacy of the Draft EIR; therefore, no further response is required.

G. Jill Willard (dated June 4, 2025)

Comment G.1: Hello Mary, I have a few questions regarding the Carlisle Well and Water Tank Project. I have read through the documents on the website.

Response G.1: This section introduces the comments below, which are subsequently responded to below.

Comment G.2: 1. Utility Sheds

- Why are there three utility sheds proposed?
- How will these sheds be safeguarded against vandalism?
- How will these sheds be monitored to ensure that the chemicals are not leaking?
- Will the fire department be notified of the chemicals being stored in case the sheds are on fire?

Response G.2: The questions included in Comment G.2 are not related to the adequacy of the Draft EIR. However, the below response is to provide additional clarity regarding the proposed chemical storage sheds on-site.

Three chemical storage sheds are proposed in order to provide each chemical storage tank with their own secure shed. The chemical storage sheds would be secured with individual locks, and access to the site would be prohibited to the public by a locked gate. As discussed on pages 12 and 13 of the Draft EIR, these chemicals would be stored within a double containment system that would reduce the risk of any chemical leaks, and a staff member would visit the site daily to ensure that the equipment within the sheds is operating effectively. The project would be required to obtain a Hazardous Materials Storage Permit, which would ensure that first responders are aware of the permitted chemicals on-site in the event of a fire.

The comment does not raise any specific issues about the adequacy of the Draft EIR.

Comment G.3: 2. Soil

- How will you ensure that the soil dust from loading on to the trucks is not dispersed into the air and the surrounding neighborhoods.

Response G.3: As discussed on pages 35 and 36 of the Initial Study included as Draft EIR Appendix A, the project would implement mitigation measure LUTE DEIR MM 3.5.3 which requires implementation of Best Management Practices (BMPs) to control dust and exhaust during construction. This would include watering exposed surfaces during the day to reduce disturbance of dust, covering all trucks that are hauling soil or other loose materials from the site, and using wet power vacuum street sweepers at least once per day on visible mud or dirt track-out on adjacent public roads. Implementation of these measures would reduce fugitive dust impacts on the surrounding neighborhood.

Comment G.4: 3. Two to Three Week Period of Non-Stop (24 Hours) Work on the Project

- How will you ensure the noise level does not rise above the acceptable levels defined by the Environment Protection Agency during the day and at night.

Response G.4: Pursuant to CEQA Guidelines Section 15064(b)(1), it is the City's discretion to determine the appropriate thresholds of significance and whether a project may have a significant effect on the environment. As discussed on page 24 of the Draft EIR, the City (based on its careful judgement and scientific and factual data) utilized a combination of the construction noise thresholds established by the Federal Transit Administration (FTA) for construction activities that would occur during allowed construction hours and Sunnyvale Municipal Code (SMC) standards for construction activities that would occur outside the allowed construction hours.

As discussed on pages 23 to 30 of the Draft EIR, project construction activities (specifically drilling activities) would result in noise levels above the identified thresholds of significance. The project would implement mitigation measures MM NOI-1.1 on page 26 of the Draft EIR (which requires the installation of acoustical barriers) to reduce the impact to a less than significant level for all residences except for two. An additional mitigation measure, mitigation measure NOI-1.2 on pages 27 to 28 of the Draft EIR (which is the provision of hotel vouchers), would be required for these two residences where the noise would remain significant. There are no other feasible mitigation measures that would effectively reduce the significant noise that would be generated by the project at the two significantly impacted residences to a less than significant level. For this reason, the impact was concluded to be significant and unavoidable. Refer to Response E.14 regarding modeling completed to assess the construction noise impacts and how the applicant would provide residents of all adjacent residences with hotel vouchers, if requested.

Comment G.5: - There are studies that show continuous disruption of sleep for a short duration can cause significant negative affects on both the physical and mental health. The long-term health risks associated with interrupted sleep increase the risk of high blood pressure, cardiovascular disease, diabetes, etc.

Noise events at night become more intrusive, since the noise level of the event over background noise is greater than during the daytime. Have you done a noise assessment to account for the differences between daytime and nighttime exposure?

Response G.5: Existing noise levels for the project site and surrounding area were measured and summarized in on page 21 of the Draft EIR and detailed in Draft EIR Appendix B (Noise Assessment and Peer Review). These measurements included a long-term measurement over 24 hours to establish both daytime and nighttime noise levels and short-term measurements in 15-minute increments during the daytime. The nighttime construction noise from the drilling activities on-site was modeled and the potential increases in nighttime noise levels were disclosed and compared to the nighttime noise thresholds listed on page 24 of the Draft EIR. As discussed in the Draft EIR and detailed in Response G.4 above, two adjacent residences would be subject to significant and unavoidable noise impacts (specifically related to the exceedance of the established nighttime thresholds for

construction noise outside of the allowed construction hours) and the remaining residences adjacent to the project site would be exposed to nighttime noise levels that would remain below the established thresholds for construction activities that occur at night outside of the typically allowed construction hours. The nighttime construction activities would be temporary and long-term operational noise levels from the project's mechanical equipment would be below the City's allowed thresholds during daytime and nighttime (as discussed on pages 30 to 31 of the Draft EIR). This comment does not raise any issues about the adequacy of the Draft EIR.

Comment G.6: 4. Pump Activity

- It is our understanding that the pumps may be run 24/7 during peak periods. How are peak periods defined? Is it possible that the pumps will run for a six month period or longer?

Response G.6: The questions included in Comment G.6 are not related to the adequacy of the Draft EIR. However, the response below is included to provide additional clarity regarding operations on-site.

Peak periods are defined as the times when demand for potable water is at the highest levels. These peak periods typically occur during the summer season and at the times when properties use the most water (e.g., typical irrigation times, before and after typical work hours, etc.). It is unlikely that the pumps on-site would run continuously a period of six months or longer.

The comment does not raise any specific issues about the adequacy of the Draft EIR; therefore, no further response is required.

Comment G.7: Has there been an assessment addressing how the continuous noise level will affect the physical and mental health of the residents in the area and what mitigation will be put in place?

Response G.7: Operational noise levels that would occur at the project site were modeled in Draft EIR Appendix B (Noise Assessment and Peer Review) and discussed on pages 30 and 31 in the Draft EIR. As summarized in Table 3.1-6 (page 30 of the Draft EIR), operational of the mechanical equipment on-site would result in a minor increase in ambient noise level at receptors surrounding the project site. These increases in ambient noise levels would range from zero dBA to 2.2 dBA, which is below the established significance threshold of five dBA. In addition, the noise levels generated by the proposed equipment on-site would be below 50 dBA nighttime and 60 dBA daytime Sunnyvale Municipal Code (SMC) standards for mechanical equipment (i.e., operational) noise at residential property lines. The proposed equipment on-site would also be below the 60 dBA nighttime and 70 dBA daytime SMC standard for mechanical equipment (i.e., operational) noise at non-residential property, as disclosed on page 31 of the Draft EIR. Therefore, the operational noise from implementation of the project was determined to be less than significant.

Comment G.8: 5. Diesel Exhaust

- Diesel exhaust is known as a highly toxic air contaminant. Many of the homes in the surrounding area do not have air conditioning therefore the residents have to open the windows to cool down their homes. Why aren't solar power and electric vehicles being used for this project?

The project's potential to expose sensitive receptors to substantial pollutant concentrations (including those from diesel particulate emissions [DPM]) during construction and operation is discussed on pages 38 to 44 of the Initial Study in Draft EIR Appendix A and potential impacts were determined to be less than significant with implementation of mitigation measures LUTE DEIR MM 3.5.3 and MM AIR-3.1, which would limit fugitive dust and diesel particulate matter emissions from construction activities on-site. Specifically, mitigation measure MM AIR-3.1 requires that the project implement a plan to reduce DPM emissions by 35 percent such that increased cancer risk from construction would be reduced below the Air District significance threshold to a less than significant level (refer to page 41 of the Initial Study for more details about this mitigation measure). For this reason, no additional mitigation (such as the measures suggested in the above comment) are required under CEQA.

H. Mei-Ling Stefan (dated June 13, 2025)

The comments in this letter includes footnotes with notes and references that are not excerpted below. Please refer to the copy of this comment letter in Appendix A of this Final EIR for these footnotes.

Comment H.1: Night-time lighting: Instead of dismissing night-time lighting as only temporary, CalWater should provide the location, height, specific type and brightness of each night-time lighting device during the 24/7 drilling for up to 27 days, and mitigation measures.

It is well known that bright light at night suppresses the production of the sleep hormone melatonin. Sleep deprivation has consequences. CalWater property is adjacent to the back of Eichler houses, with master bedrooms and mostly floor to ceiling glass construction.

Response H.1: The City requires all development projects to comply with shielding restrictions for any light fixtures used during construction or operation of a project. These restrictions require that all lights are equipped with special lenses or directed in such a way to prevent any glare or direct illumination on any public street or adjacent properties. To determine compliance with the above requirements, the City would review photometric plans for the site to confirm that the lighting would not spill onto adjacent properties. The conditions of approval including in the planning entitlement for the project would also include these restrictions.

In addition, as required by mitigation measure MM NOI-1.1 identified on page 26 of the Draft EIR, the project would install various acoustic barriers during drilling activities on-site, including a 32-foot-high acoustic barrier wall that would be installed parallel to the site boundaries. The acoustic barrier wall would not have any openings or gaps except for an acoustical gate on the north side of the project site to facilitate site access during drilling activities. This acoustical gate would remain closed during drilling operations. Therefore, it is unlikely that this temporary lighting during drilling activities would reach surrounding residences. Text has been added to the Initial Study included as Draft EIR Appendix A to clarify this (refer to Section 5.0 Draft EIR Text Revisions).

Comment H.2: Disposal of 1.7 million gallons of water: How much of the initial draw of 1.7 million gallons of water will be discharged on land and at what rate? How would the volume and force of water discharged on land affect the structure of nearby soil, which is further disturbed by ground vibrations? Has CalWater considered the option of discharging water to the East Channel?

Note additional information not in the DEIR: I asked, "1.7 million gallons of water will first be drawn, and 18,000 gallons of it will go down the storm drain. Where will the rest of the water go?" CalWater's response (6/2/2025 email): "Water generated during well drilling and well testing operations will go to three potential destinations. 1. Storm Drain. 2. Sanitary Sewer. 3. Land Discharge. In the case of storm drain and land discharges, we will work under our NPDES permit and City permit, as required. For sewer discharge, we will work with City for permit. Final volumes of each are still undetermined though an initial estimate of 18,000 gallons may have been provided to the City by my predecessor in engineering" Note that 1.7 million gallons of water is equivalent to 5.2 acre-foot, and the CalWater property is about 0.77 acre.

Response H.2: As discussed on page 12 of the Draft EIR, the analysis assumed that the water pumped from the aquifer for this testing would be discharged into the existing storm drain system on Carlisle Way, pursuant to existing regulations. Subsequent to the circulation of the Draft EIR, the project applicant clarified that the initial development fluid pumped after initially drilling the well would need to be discharged into the sanitary sewer system until the water quality is acceptable enough to be discharged into the storm drain system. Once the water quality in this initial development fluid discharge is acceptable, that water and water from the yield testing would be discharged into the storm drain system. This clarification has been added to Section 5.0 Draft EIR Text Revisions. It has been confirmed and clarified by the project applicant that no water would be discharged onto adjacent land.

Comment H.3: Noise analysis and mitigation

(a) Drilling operation (24/7 for up to 27 days total) Table 7-1 in Appendix B lists the equipment modeled in the noise analysis. Trucks have been omitted in the noise analysis, though trucks will be used to move mud off site. The schedule of the trucks (within construction hours or at night) should

also be made clear. Even though trucks will not be running continuously, their peak noise should be added to the noise estimate (not the averaged noise for the duration of the drilling operation).

Response H.3: Based on information provided by the applicant, it is estimated that up to 17, 10-yard dump truck trips would be required to off-haul and dispose of the drill cuttings and mud that would be produced during drilling activities on-site. As described in the revised project description (refer to Section 5.0 Draft EIR Text Revisions), the soil, drilling additive, and water expelled from the borehole during the drilling process would be collected in a mud tank, or stockpiled, as appropriate, on-site until it is ready for disposal. This material would be generated continuously during the drilling process; however, it would not be loaded into the dump trucks and off-hauled for disposal until after the site preparation and drilling activities are completed. Collection and off-hauling of materials would occur in the daytime during the City's allowed construction hours. During the City's allowed construction hours, the threshold for residential receptors is 80 dBA. It is estimated that the maximum noise level of a dump as measured at 50 feet is 76 dBA; however, the approximate hourly noise level for the dump truck (which is what the significance threshold is based on) would be 72 dBA. The noise from the dump trucks would be another source of noise for the surrounding receptors while the material is being loaded and hauled off-site; however, this noise would not result in an exceedance of the construction noise threshold during City's allowed construction hours (80 dBA).¹ This clarification has been added to Section 5.0 Draft EIR Text Revisions. In addition, the noise generated by these truck trips would be reduced with implementation of LUTE DEIR MM 3.53 (discussed on pages 35 and 36 of the Initial Study included as Draft EIR Appendix A) which requires that idling times be construction vehicles be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes. The comment does not provide significant new information that the project would result in new or substantially more significant impacts than disclosed in the Draft EIR.

Comment H.4: Noted to facilitate the discussion in (b): With mitigation measure DEIR MM NOI-1.1 with acoustic barriers installed as shown in Appendix B Fig. 7-3, reproduced here, modeling shows that for all except two of the nearby residences, the modeled noise levels in DEIR Table 3.1-4 can be below 50 dBA , satisfying the night-time noise limit. Hotel vouchers can be provided to the two.

Response H.4: This comment is acknowledged. The comment does not raise any specific issues about the adequacy of the Draft EIR; therefore, no further response is required.

¹ Environmental Noise Control. Personal Communication. November 7, 2025.

Comment H.5: Demolition, grading & excavation, trenching & foundation, water tank construction (approx 6 months) DEIR MM NOI-1.3 for these construction phases is very unsatisfactory. Again, the noise generated by trucks has been neglected in the modeling. [1] DEIR Table 3.1-5, reproduced below, shows high levels of noise, some exceeding the significant threshold established as 80 dBA. Yet DEIR MM NOI-1.3 is only “Ongoing Noise Monitoring and Implementation of Portable Acoustic Barriers”. Are residents to be tested to the limit of their endurance, before some acoustic barriers are placed here and there? If there is confidence in the modeling, an acoustic barrier around the perimeter, as shown in the figure above, should be planned and installed before any resident suffers. Since the measurements at the monitoring sites may not reflect the real noise level at residences, it is all the more important to bring down the overall predicted noise level to have a safety margin for uncertainties in modeling, and realistic deviations not included in modeling.

Response H.5: As mentioned in Comment H.5 above and shown in Table 3.1-5 on page 29 of the Draft EIR, construction activities during demolition, grading, excavation, trenching, and tank construction on-site could generate noise levels that exceed the established threshold of significance of 80 dBA by up to two dBA at various receptors adjacent to the site.

The project would implement mitigation measure MM NOI-1.3 (described on page 29 of the Draft EIR), which would include ongoing noise monitoring to determine when the use of portable acoustic barriers is required to prevent the exceedance of the applicable 80 dBA threshold as measured at surrounding sensitive receptors. If noise levels during these construction activities are measured within one dBA of the 80 dBA threshold at surrounding sensitive receptors, portable acoustic barriers would be installed between the noise generating equipment and the impacted sensitive receptor prior to initiating any additional noise generating construction activities.

With implementation of MM NOI-1.3, noise levels at the surrounding receptors would be reduced by up to six dBA, and it is possible that an even greater noise reduction could be achieved on-site with strategic positioning of the portable acoustic barriers (as explained on page 30 of the Draft EIR). In addition, the noise levels estimated in Table 3.1-5 in the Draft EIR are conservative since they assume that all construction equipment during these phases would be operated simultaneously (as explained on page 28 of the Draft EIR). It is more likely that construction equipment utilization would vary, and that different construction equipment would be used intermittently during the workday which would further reduce estimated noise levels at surrounding receptors. For these reasons, the Draft EIR concluded the significant construction noise impact would be reduced to a less than significant level with implementation of MM NOI-1.3.

In addition, as discussed in Response H.3 above, the dump trucks and their operation would be another source of noise. However, the addition of the dump truck noise would not result in new or substantially more significant noise impacts

than disclosed in the Draft EIR because they would operate during the City's allowed construction hours, not overlap with other construction activities, and generate noise levels below the City's established threshold of significance for daytime construction activities during allowed construction hours. This clarification has been added to Section 5.0 Draft EIR Text Revisions.

The comment does not provide significant new information that the project would result in new or substantially more significant impacts than disclosed in the Draft EIR.

Comment H.6: Unfortunately for residents, there is an issue with using 80.0 dBA as the significant noise threshold. The World Health Organization recommends no more than 40 hours per week of exposure time at 80 dBA to avoid hearing loss.[2] And there are also noise-related health risks other than hearing loss, to be discussed later.

Response H.6: Pursuant to CEQA Guidelines Section 15064(b)(1), it is the City's discretion to determine the appropriate thresholds of significance and whether a project may have a significant effect on the environment. The City's use of the FTA threshold for construction activities that would occur during allowed construction hours is based on careful judgement by the City and scientific and factual data. The use of 80 dBA as the threshold for construction activities during allowable construction hours is a standard practice by the City and other local jurisdictions and agencies to evaluate environmental impacts. As discussed on pages 23 to 32 of the Draft EIR, implementation of mitigation measure MM NOI-1.1 and mitigation measure MM NOI-1.3 would ensure that project construction noise levels during allowable construction hours would not exceed the established threshold of 80 dBA at surrounding residential properties. Therefore, the project would result in less than significant construction noise impacts during the allowed construction hours (i.e., between 7:00 AM and 6:00 PM on Monday through Friday and 8:00 AM and 5:00 PM on Saturday).

Comment H.7: 4. Ground vibration analysis

It would be foolhardy, and unfair to residents, to take the calculated results literally and dismiss ground vibration as insignificant. We should be aware of the crude nature of the calculations as well as other uncertainties [3-5]. A simple phenomenological formula is used to calculate the peak particle velocity of soil as ground vibrations propagate from the source:

The exponent n in Eq(1) determines how fast the vibration decreases with distance. The U.S. Federal Transit Administration (FTA) uses a value of 1.5 [3], and this value is used in the DEIR analysis. However, observations have shown slower decays than predicted. The California Department of Transportation (Caltrans) has suggested $n = 1.1$ in general, and higher values in some soil types [6] Digging in my backyard in Coventry Ct, I would assign $n = 1.1$ to my soil. The following is professional recommendation: [7]: 'Vibration velocity calculations - and representations of "vibration safety" based on them - should only be viewed as approximate, at best, in the absence of

proper validation in the specific locale of interest. When such equations are used in an effort to prevent damage, a "safety factor" of at least 2 should be included in the calculated velocity and corresponding "safe distance".'

If we adopt this recommendation, then in Appendix Table 10-1, the receptor at 17 ft would experience 0.06 ips, above the distinctly perceptible threshold [8]. In Appendix Table 10-2, the receptor at 55 ft would also experience distinctly perceptible vibrations, except when the jack hammer is used alone.

Response H.7: Utilizing the attenuation coefficient of $n = 1.5$ results in a more conservative assessment in situations where the reference vibration distance is farther from the source than the distance where the prediction is being made. With the distance between the nearest receptor and the proposed location of the drilling equipment on-site being 17 feet and the reference vibration distance being 25 feet, the use of the attenuation coefficient of $n = 1.5$ in this situation would result in an overestimation of vibration impacts. Therefore, the use of an attenuation coefficient of $n = 1.5$ for this project is appropriate and conservative because it overestimates the potential vibration impacts at the nearest receptors.

It is not standard industry practice to include a safety factor when comparing predicted vibration levels against Caltrans vibration criteria. If the estimated vibration levels disclosed in the Draft EIR showed a potential for damage at surrounding structures, then a soil and structure specific assessment that may include a safety factor as part of the calculations could be warranted. Since the estimates disclosed in the Draft EIR are well below the threshold for structural damage, the methodology suggested in Comment H.7 of applying a safety factor is not appropriate to estimate predicted vibration levels.

Comment H.8: For both Tables 10.1 and 10.2, the contribution of trucks have been omitted. For loaded trucks, the reference source amplitude at 25 ft is 0.076 ips as given by CalTrans.[9] For Table 10.2, it should be clarified if the activities will occur separately, or will overlap in time. Moreover, for a hydraulic breaker (hoe ram), Caltrans has modified Eq (1) to account for differences in impact energy, and I would like to know if the hoe ram to be used indeed delivers 5000 ft-lbs like the reference hoe ram. [10]

Response H.8: As discussed above in Response H.3 and clarified on revised page 28 of the Draft EIR (see Section 5.0 Draft EIR Text Revisions), it is estimated that up to 17, 10-yard dump truck trips would be required to off-haul and dispose of the drill cuttings and mud that would be produced during drilling activities on-site. Additional truck trips for off-hauling materials may be required during the remaining construction activities on-site (e.g., demolition). These truck trips would occur in the daytime during the City's allowed construction hours when the threshold for vibration levels is 0.25 ips.

As shown in Table 3.1-7 and Table 3.1-8 in the Draft EIR (pages 31 and 32), the maximum vibration level at adjacent receptors is estimated to range from 0.01 to 0.03 ips depending on the construction activity that is occurring on-site. The hoe ram and dozer equipment that would operate on-site (which have reference source amplitude of 0.089 ips at 25 feet) would generate the highest level of vibration at the nearest residential receptor of approximately 0.03 ips. The dump trucks may result in some perceptible vibration for surrounding receptors when the trucks are driving to and from the site; however, hauling trips would occur separately from other construction activities. In addition, assuming that the reference source amplitude for loaded dump trucks at 25 feet would be 0.076 ips, as noted in Comment H.8 above, the individual trucks on-site would generate vibration levels at the nearest residential receptors similar to those estimated for the hoe ram and dozer equipment on-site (0.03 ips at the nearest residential receptor). Therefore, the vibration from trucks accessing the site would not result in an exceedance of the applicable threshold during City's allowed construction hours (0.25 ips) at residential receptors. This clarification has been added to the Draft EIR (refer to Section 5.0 Draft EIR Text Revisions).

The equipment assumed for construction activities on-site, as listed in the Draft EIR and Draft EIR Appendix B (Noise Assessment and Peer Review), includes a hoe ram. The applicant does not anticipate use of a hydraulic breaker, therefore, the potential vibration levels generated by a hydraulic breaker on-site were not calculated or evaluated.

The comment does not provide significant new information that the project would result in new or substantially more significant impacts than disclosed in the Draft EIR.

Comment H.9: With regard to Table 10.1 for the well drilling phase, is it valid to use Eq (1) and a PPV reference taken at 100 ft, to calculate the PPV at a distance of only 17 ft - much closer to the source than the reference? For other calculations, the receptor distance is larger than the reference distance of 25 ft.

Response H.9: Exact specifications for the drilling rig that would be utilized for the project were not available during noise and vibration modeling for the project. Therefore, vibration levels for the project were estimated based on archived field measurements for a comparable water well drilling project where measurements were collected at a distance of 100 feet. The vibration level measured for that project at that distance was 0.0021 ips. Using comparable reference measurements to estimate potential vibration levels at different distances for a project when exact specifications are unavailable is a standard industry practice that provides a reasonable estimate for anticipated vibration levels that could result from implementation of a project.

Comment H.10: Neighbor Tom Gill has raised concerns about the effects of ground vibrations on the unreinforced concrete slab foundations of Eichler houses, and the water pipes in the concrete slabs. Even discounting the potential of resonance vibrations, we do not know if 0.25 ips is a “safe” limit with regard to structural damage.[11]

Response H.10: Refer to Response D.1 above.

Comment H.11: Professionals recommend these measures :[12] (i) pre-construction documentation of existing conditions of adjacent buildings in detail, and (ii) construction vibration monitoring at critical locations around the construction site and near adjacent buildings; with limits agreed upon prior to construction. (Real-time monitoring results should be available to residents.)

Response H.11: As discussed on pages 31 to 32 of the Draft EIR, as well as in Response D.1 above, the estimated vibration levels resulting from proposed construction activities on-site were found to be well below the established thresholds. Therefore, no mitigation measures such as pre-construction documentation or ongoing vibration monitoring are necessary to reduce impacts to a less than significant level.

Comment H.12: 5. Air quality

DEIR Impact AIR-3 states: “The project would not expose sensitive receptors to substantial pollutant concentrations with mitigation incorporated”. MM Air 3.1 should be strengthened. Diesel exhaust contains both particulate matter and gaseous components which are toxic pollutants.[13] Diesel exhaust has many adverse health effects, not only cancer. EPA specifies diesel engine emission standards in particulate matter (PM), non-methane hydrocarbons (NMHC), nitrogen oxides (NOx) and carbon monoxide (CO). Hydrocarbons in diesel exhaust include benzene, formaldehyde, and many other harmful or carcinogenic organic compounds. Nitrogen oxides can lead to smog formation. As for human health, nitrogen oxides irritate eyes, nose, throat and lungs; cause shortness of breath and nausea; even low-level exposure for 1-2 days can cause fluid build-up in the lungs.[13,14]

Tier 4 emission standard has been in effect since 2015 [15] and the California Air Resources Board has started working on Tier 5 to further reduce ultrafine particulate matter. Tier 4 provides drastically reduced emissions in both NMHC+ NOx. and PM [15] Tier 4 also requires the use of low-sulphur fuel, strongly reducing the emission of sulphur oxides (SOx), which are harmful to both human health and our environment [16]

The table below compares, for a few cases, the results of reducing PM emissions by 30% in Tier 2 and 3 – with Tier 4 emissions. Such mitigation does not change the gaseous emissions- around 7-13 times that of Tier 4, and PM emissions are still as large as 5-21 times that of Tier 4.

Engine hp type	Tier 2		Tier 3		Tier 2 mitigated		Tier 3 mitigated		Tier 4	
	Gas	PM	Gas	PM	Gas	PM	Gas	PM	Gas	PM
75 <= hp <100	5.6	0.3	3.5	0.3	5.6	0.21	3.5	0.21	0.43	0.01
600 <= hp <= 750	4.8	0.15	3	0.15	4.8	0.105	3	0.105	0.44	0.01
750<= hp <=1207 (G)	4.8	0.15			4.8	0.105			0.64	0.02

Note: (i) emissions in g/bhp-hr (ii) "Gas"= NMHC+Nox (iii) "mitigated": 30% reduction in PM

(iv) "G" refers to generator

This would severely short-change residents, and would not sufficiently protect nearby residents from harm. Diesel exhaust can infiltrate our homes and get trapped. During the 24/7 drilling and days in the extended construction period, we shall have limited opportunities to open our windows to purge the trapped exhaust. Senior and very senior residents live in half of the households closest to CalWater. Among us is a 94-year-old neighbor in fragile health. A neighbor adjacent to CalWater was once sickened, years ago, by the emission from a diesel generator turned on by the cell phone company on site for a few days; she needed medication to recover. To give us the best chance for survival, best efforts should be made to use electric or natural gaspowered equipment, and Tier 4 engines should be specified in diesel-powered equipment..

Response H.12: As discussed on page 41 of the Initial Study included as Draft EIR Appendix A, as well as in Response G.8 above, mitigation measure MM AIR-3.1 would require that the project implement a feasible plan to reduce DPM emissions by at least 35 percent. This plan could include the use of construction equipment that meets U.S. EPA Tier 4 emission standards for particulate matter or a combination of equipment that meets U.S. EPA emission standards for Tier 2 or 3 engines that altogether achieve a 35 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment. Alternatively, the project could develop a construction operations plan to achieve the same reduction in construction diesel particulate matter emissions by which could include installation of electric power lines during early construction phases to avoid use of diesel generators and compressors, the use of electrically-powered equipment, and/or the use of forklifts and aerial lifts that are electric or propane/natural gas powered.

Implementation of these measures would ensure that potential impacts related to sensitive receptors being exposed to pollutant concentrations (including DPM) be less than significant. The comment does not provide significant new information that the project would result in new or substantially more significant impacts than disclosed in the Draft EIR.

Comment H.13: Questions/comments on the following:

Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Is the Lead Agency contact responsible only for responding to dust complaints, and no other complaints? How do residents know what is not in compliance with applicable Air District regulations? In case we happen to know, how well will it work for us to call the Air District's number, and shall we go through being transferred from one staff member to another?

Only posting the contact information of the lead agency at the construction site may not be helpful enough. If residents feel any ill effects, it may not be safe to go to the construction site to find the information. Information on contact person(s), construction schedule, precautions residents should take and other communications, should be distributed beforehand to at least the residents in the immediate vicinity of CalWater, where the chances of ill effects may be greatest. The project is unique, and unprecedented in our lifetime in Sunnyvale. Depending on the situation, the promise of responding within 48 hours is not very assuring.

Response H.13: The text referenced in Comment H.13 above was included in mitigation measure LUTE DEIR MM 3.5.3, which was detailed on pages 35 to 36 of the Initial Study included as Draft EIR Appendix A. This mitigation measure was included to reduce potential air quality impacts associated with construction on-site to a less-than-significant level. In addition to these measures, the project would also be required to implement a Construction Management Plan (CMP) to minimize effects of construction on surrounding land uses to the extent possible. This requirement would be included as one of the Conditions of Approval for the project, and the CMP would be subject to the review and approval of the Director of Community Development and Director of Public Works with a separate Miscellaneous Plan Permit (MPP) prior to issuance of a demolition permit, grading permit, or building permit.

As part of the CMP, the applicant would be required to notify all adjacent residents in writing regarding the schedule of significant construction activities planned for the project site at the various stages of construction. In addition, the applicant would designate a "disturbance coordinator" who would be responsible for responding to any local complaints about the construction process, including those regarding fugitive dust. The disturbance coordinator would be responsible for determining the cause of the complaint and identifying and implementing reasonable measures that are warranted to correct the problem. The applicant for

the project would be responsible for conspicuously posting the telephone number for the disturbance coordinator at the construction site, and it would also be included in the notice sent to neighbors regarding the construction schedule.

Since the project would be required to implement a CMP that would include designation of a dedicated disturbance coordinator for construction activities on-site, the text on page 36 of the Initial Study included as Draft EIR Appendix A has been revised to remove the text in LUTE DEIR MM 3.5.3 regarding contacting the Air District to ensure compliance with applicable regulations. Residents with questions or concerns regarding construction activities on-site would be able to contact either the Lead Agency (i.e., City) contact or the applicant's dedicated disturbance coordinator, and the contact information for these individuals would be provided to residents in writing and posted conspicuously at the project site. Clarification about the CMP condition of approval and revision to LUTE DEIR MM 3.5.3 is included in Section 5.0 Draft EIR Text Revisions.

Comment H.14: (B) Other considerations

1. When regulations fall short: health risks (a) The high noise threshold of significance of 80 dBA is based on the risk of hearing loss. But we now know that, in addition to hearing loss, excessive noise exposure also causes or exacerbates many other health issues, including hypertension, damages to the nervous system, cardiovascular and mental health problems [17] (b) If these stressors – bright light at night, noise, bad air quality or sensations of vibration – act together, will the combined adverse effects on health be reached at lower thresholds than what might be suggested by the individually analyzed impacts? (c) Any of the stressors listed above can cause sleep deprivation during the 24/7 drilling for up to 27 days. Sleep deprivation is associated with an increased risk of chronic diseases, a weakened immune system, impaired cognitive functioning, and an increased risk of accidents. [18,19]

Response H.14: To evaluate potential impacts under CEQA, appropriate thresholds (e.g., maximum decibel level, average daily emissions, etc.) are used by lead agencies to determine when an impact could potentially be considered significant. As noted on page 24 of the Draft EIR and consistent with practice on past projects within Sunnyvale, the City utilizes the construction noise thresholds established by the FTA (80 dBA at surrounding residential properties or 85 dBA at the adjacent park) for construction work that occurs during the City's allowed construction hours. The project's impacts related to noise and vibration are evaluated against these thresholds and disclosed in the Draft EIR on pages 23 to 33, and the project's impacts related to light and air quality/community health risk are disclosed in the Initial Study included as Draft EIR Appendix A on pages 23 to 24 and pages 33 to 44, respectively. These impact determinations are based on substantial evidence (including facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts). Based on the substantial evidence, these impacts were concluded to be less than significant with the implementation of mitigation, except for nighttime construction noise associated with the drilling of the groundwater

well. The above comment does not identify an alternative threshold, substantial evidence supporting the appropriateness of an alternative threshold, or substantial evidence that the project would result in a new significant impact not disclosed in the Draft EIR if the alternative threshold was applied.

Comment H.15: 2. Feedback on Draft Mitigation Monitoring and Reporting Programs : In addition to dust control, and real-time noise monitoring results which should be available to residents, I would like to reiterate that real-time monitoring of ground vibrations is also warranted, as suggested in (A)4 above, together with pre-construction documentation of nearby building structures.

Response H.15: As discussed in Response D.1 and Response H.11 above, the estimated vibration levels resulting from proposed construction activities on-site were found to be well below the established thresholds. Therefore, no additional mitigation measures such as pre-construction documentation or ongoing vibration monitoring can be required under CEQA.

Verbal Comments

I. Planning Commission Meeting (June 23, 2025)

On June 23, 2025, the City of Sunnyvale held a Planning Commission meeting to present an overview of the project, summarize the potential environmental impacts identified in the Draft EIR, and to solicit feedback from members of Planning Commission and the public on the analysis included in the Draft EIR. Comments on the Draft EIR are summarized and grouped by topic below:

Noise Comments

Comment I.1: General comments were received regarding the operational noise from the diesel-powered emergency generators and pump station on-site.

Response I.1: The operational noise impact from the project (including from operation of the diesel-powered emergency generator and pump station) are discussed on pages 30 and 31 in the Draft EIR where it was determined to be less than significant.

Hazards and Hazardous Materials Comments

Comment I.2: Comments were received regarding the potential for residual agricultural contaminants to be present in the soil on-site.

Response I.2: As discussed on page 90 of the Initial Study included as Draft EIR Appendix A, based on the Phase I Environmental Site Assessment (which is included as Initial Study Appendix E) that was prepared for the project, it is possible that residual agricultural contaminants could be present in the shallow soil on-site. However, the project would implement standard measures to test the soil being excavated, implement proper safety measures on-site during construction, and follow proper disposal protocols. Therefore, impacts related to potential residual agricultural contaminants were found to be less than significant.

Comment I.3: Comments were received regarding the adequacy of the Phase I Environmental Site Assessment prepared for the project given the noted data gaps.

Response I.3: These comments were similar to written comments received about data gaps identified in the Phase I Environmental Site Assessment (Initial Study Appendix E) that was prepared for the project and responded to above in Response E.11. As discussed under Response E.11 above, the findings of the report were based on other sources of information, such as interviews with Cal Water staff, records provided by the City, on-site reconnaissance and observations, review of federal, state, and local databases that track recorded releases of contaminants, and

professional judgement. Therefore, the report contained substantial evidence to support its conclusions and findings.

Comment I.4: Comments were received regarding the storage of hazardous materials that would be utilized on-site to treat pumped groundwater.

Response I.4: As discussed on pages 12 and 13 of the Draft EIR, these hazardous materials would be stored within a double containment system in each chemical storage shed that would reduce the risk of any chemical leaks, and a staff member would visit the site daily to ensure that the equipment within the sheds is operating effectively. The project would be required to obtain a Hazardous Materials Storage Permit, which would ensure appropriate storage of the materials.

Geology and Soils Comments

Comment I.5: Comments were received regarding potential subsidence that could be caused by pumping groundwater on-site.

Response I.5: The potential risk of subsidence resulting from implementation of the project on-site was evaluated on pages 72 to 73 and 98 to 101 of the Initial Study included as Draft EIR Appendix A and those risks were found to be less than significant based on site specific analysis, data, and expert opinion supported by facts.

Air Quality Comments

Comment I.6: Comments were received regarding emissions from the diesel-powered emergency generators and how emissions from the construction equipment on-site could impact the health of surrounding residents.

Response I.6: The project's potential to expose sensitive receptors to substantial pollutant concentrations (including those from DPM emissions) during construction and operation was discussed on pages 38 to 44 of the Initial Study included as Draft EIR Appendix A (as revised, see Section 5.0 Draft EIR Text Revisions), and potential impacts were determined to be less than significant with implementation of mitigation measures LUTE DEIR MM 3.5.3 and MM AIR-3.1 (which would limit fugitive dust and diesel particulate matter emissions from construction activities on-site).

Comments Summarizing Written Comments

Comment I.7: Comments were received regarding potential impacts from nighttime lighting, flooding concerns from potential land discharges and tank failure, excessive noise during construction, ground vibration levels felt by adjacent residents, and the appropriateness of the selected thresholds of significance.

Response I.7: These verbal comments were a summary of written comments that had been provided previously by the commenter. Those written comments are responded to in detail above in Response H.1 to Response H.15.

Section 5.0 Draft EIR Text Revisions

This section contains revisions to the text of the 800 Carlisle Way Well & Water Tank Draft EIR dated May 2025. Revised or new language is underlined. All deletions are shown with a ~~line through the text~~.

5.1 Draft EIR Text Revisions

Page iii of the Draft EIR

REVISE the second and third paragraphs under the Project Location, Background Information, and Description heading as follows:

The project site was formerly used as a groundwater extraction site for California Water Service (Cal Water) to provide potable water to their Los Altos Suburban service district (which includes portions of Sunnyvale). The site consisted of a water well and associated chemical storage buildings, a cellular communication tower, booster pump, and a 50,000-gallon water storage tank. In 2016, the water well on-site was decommissioned and is no longer functional. The water tank was also removed in 2016. The chemical storage buildings ~~and booster pump~~ – though ~~inactive~~ unused – remain on-site. The cellular communication tower ~~is still in active use and is owned and maintained separately~~ was removed by the cellular service provider under a separate project application in January 2025.

To provide water supply reliability and meet current customer water supply demands, Cal Water is proposing to reactivate the site as a groundwater extraction site by constructing a replacement well and associated improvements to accommodate future water demands. ~~No modifications are proposed to the communication tower as part of the proposed project.~~

Page iv of the Draft EIR

REVISE the text in the last bullet as follows:

- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. ~~The Air District's phone number shall also be visible to ensure compliance with applicable regulations.~~

Page xi of the Draft EIR

REVISE the second paragraph under the No Project/No Redevelopment Alternative heading as follows:

Under the No Project/No Redevelopment Alternative, the site would remain as it is today and continue to contain the old chemical storage buildings, ~~inactive booster pump, and cellular communication tower.~~

MM NOI-1.2: Provision of Vouchers for Alternative Accommodations. California Water Service (Cal Water) shall provide the two nearest residences adjacent to the southwestern portion of the project site (i.e., 819 and 823 Coventry Court as identified in the Noise Assessment Report dated July 24, 2024 in Appendix B of the Draft EIR) with the potential to exceed 50 dBA noise levels during nighttime drilling activities, with vouchers for alternative accommodations. At least 45 days prior to the initiation of nighttime drilling activities, Cal Water shall communicate the anticipated drilling schedule to the affected residents at 819 and 823 Coventry Court. Upon request, vouchers shall be offered based on the needs of each household for the specific dates that nighttime drilling activities are scheduled. It is anticipated that the nighttime drilling activities would occur over two separate phases. If requested by the affected residents, vouchers for alternative accommodations shall be issued for each of the two phases based on the finalized construction schedule and be for \$300/night/room, with the necessary number of rooms being determined through consultation with the affected residents. Confirmation regarding any request for vouchers and the provision of vouchers for alternative accommodations shall be provided by Cal Water to the City prior to the initiation of nighttime drilling activities~~issuance of building permits.~~

If noise levels during these construction activities are measured within ~~three~~ one dBA of the 80 dBA threshold at surrounding sensitive receptors, then portable acoustic barriers shall be installed between the noise generating equipment and the impacted sensitive receptor prior to initiating any additional noise generating construction activities.

This change was disclosed in a Recirculated NOP which was circulated on March 14, 2025~~4~~. The 30-day comment period for the Recirculated NOP concluded on April 14, 2025.

The project site was formerly used as a groundwater extraction site for California Water Service (Cal Water) to provide potable water to their Los Altos Suburban service district. This service district encompasses the City of Los Altos and portions of Cupertino, Los Altos Hills, Mountain View, Sunnyvale and adjacent unincorporated areas of Santa Clara County. The service district delivers potable water to approximately 18,000 service connections (approximately 2,000 of which are located in Sunnyvale) and a population of approximately 70,000 customers.

The site consisted of a water well and associated chemical storage buildings, a cellular communication tower, booster pump, and a 17-foot tall, 50,000-gallon water storage tank (through Planning Permits - #1999-0687 and #2001-0319). In 2016, the water well on-site was decommissioned and properly destroyed due to sanding issues and casing deterioration within the

well. This water well, therefore, is no longer functional. The 50,000-gallon redwood tank was removed in 2016 because the closure of the groundwater well on-site rendered the storage tank obsolete. The chemical storage buildings and ~~booster pump~~ – though ~~inactive~~ unused – remain on-site. The cellular communication tower, ~~which was previously is still in active use and is owned and maintained separately by Sprint Nextel on a portion located within on~~ the northwestern portion of the project site, was removed by the cellular service provider under a separate project application in January 2025 ~~that is leased from Cal Water. No modifications are proposed to the communication tower as part of the proposed project.~~

To provide water supply reliability and meet current customer water supply demands, Cal Water is proposing to reactivate the site as a groundwater extraction site by constructing a replacement well and associated improvements to accommodate current and future water demands. The proposed replacement well would provide access to a long-term source of water for Cal Water that would be used to partially offset a decrease in supply from other sources due to drought and climate change. Cal Water is continuously looking for ways to improve the reliability of their water system, including replacing and installing new wells. The project site was selected for a replacement well because land acquisition to install new wells in the area is challenging, Cal Water already owns the property, the water quality is better than in surrounding areas, and the historic yield from the previous well on-site was higher than other options in the surrounding area.

Page 9 of the Draft EIR

REVISE the first paragraph in Section 2.2.2 as follows:

The project would demolish the existing chemical storage buildings, electrical control panel, and connection to the existing water main on-site. After demolition, the project would install a replacement groundwater well and construct a new, approximately 56,000-gallon steel water storage tank, three chemical storage enclosures, and several utility and right-of-way improvements, including a new discharge pipeline. The project would also include a 150 kilowatt (kW) diesel-powered emergency generator with a sound attenuation enclosure. These project components are described in further detail below.

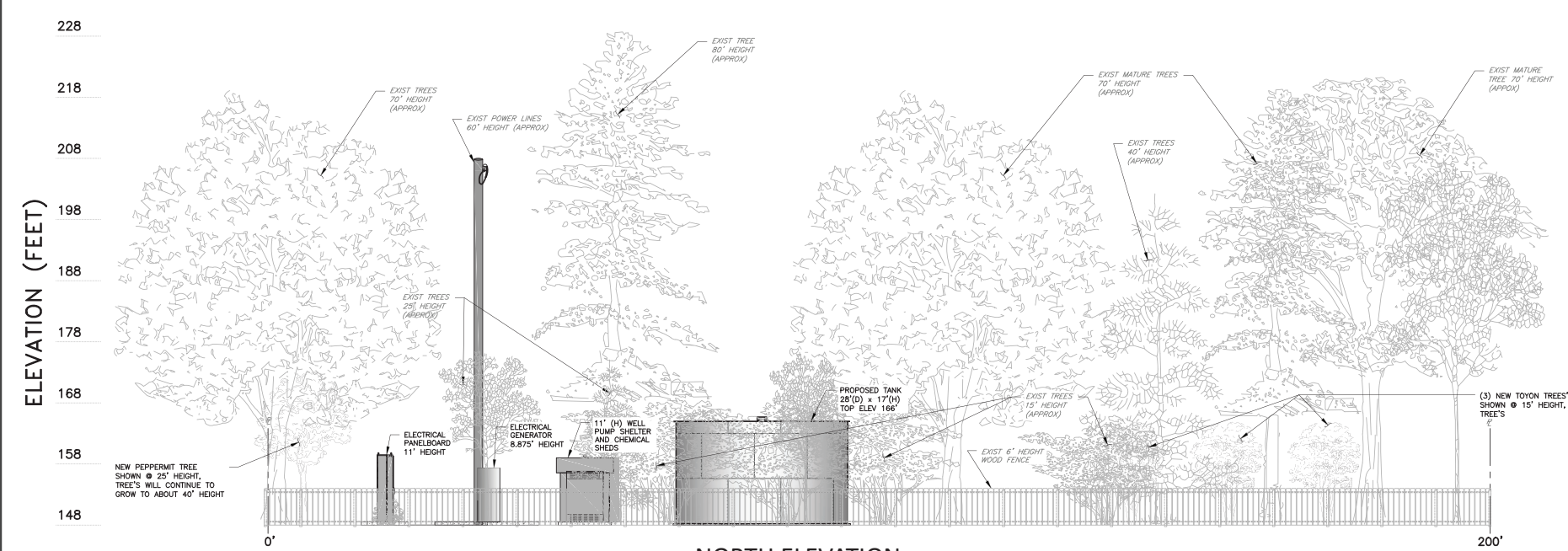
Page 9 of the Draft EIR

REVISE the fourth paragraph in Section 2.2.2 as follows:

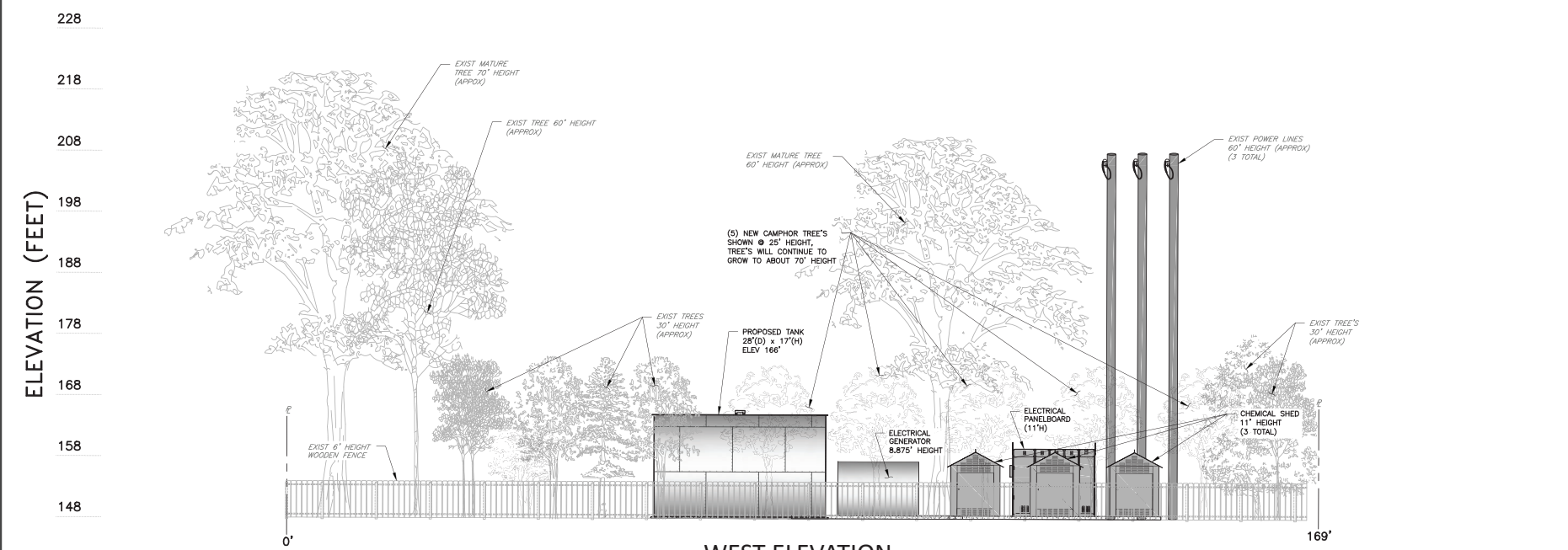
The project is consistent with the existing General Plan land use and zoning designations on the site, therefore, no General Plan amendment or rezoning is required. As mentioned in Section 2.4 Uses of the EIR, the project requires a use permit, building permits, a domestic water supply permit amendment, and a hazardous materials storage permit, ~~and variance for the proposed height of the water tank which would exceed the height typically allowed for structures in this zone.~~

Pages 10 and 11 of the Draft EIR

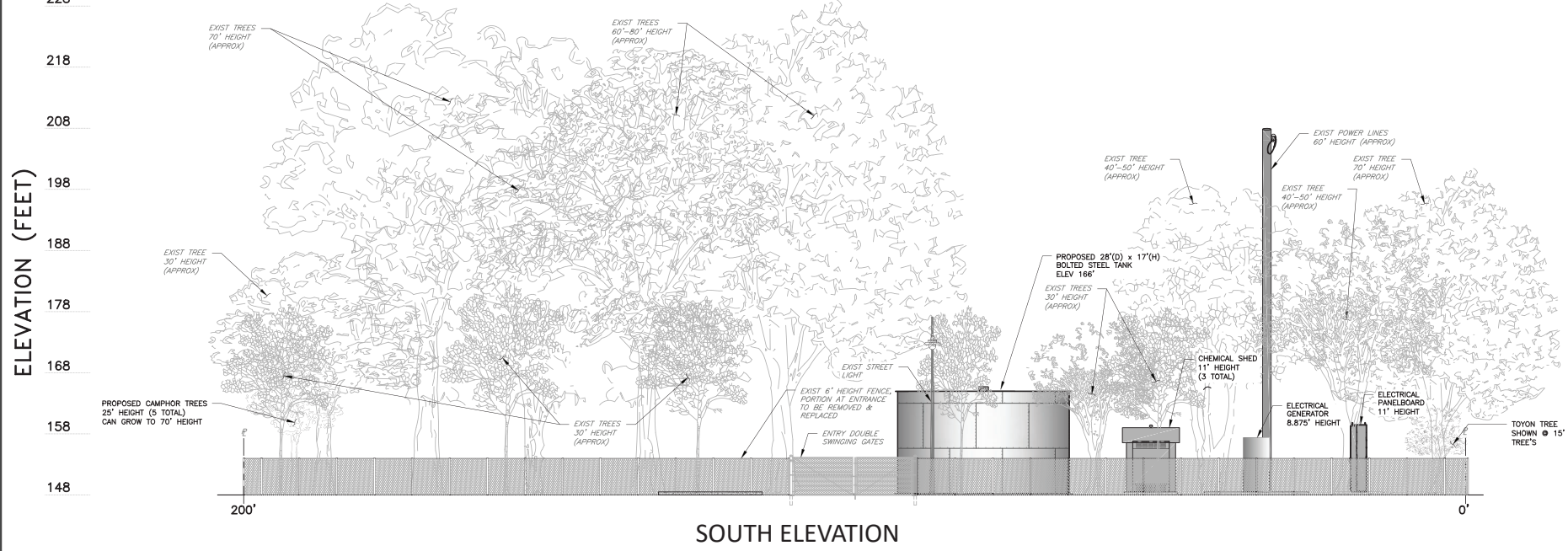
REPLACE Figure 2.2-1: Proposed Site Plan and Figure 2.2-2: Proposed Project Elevations with the figures below.



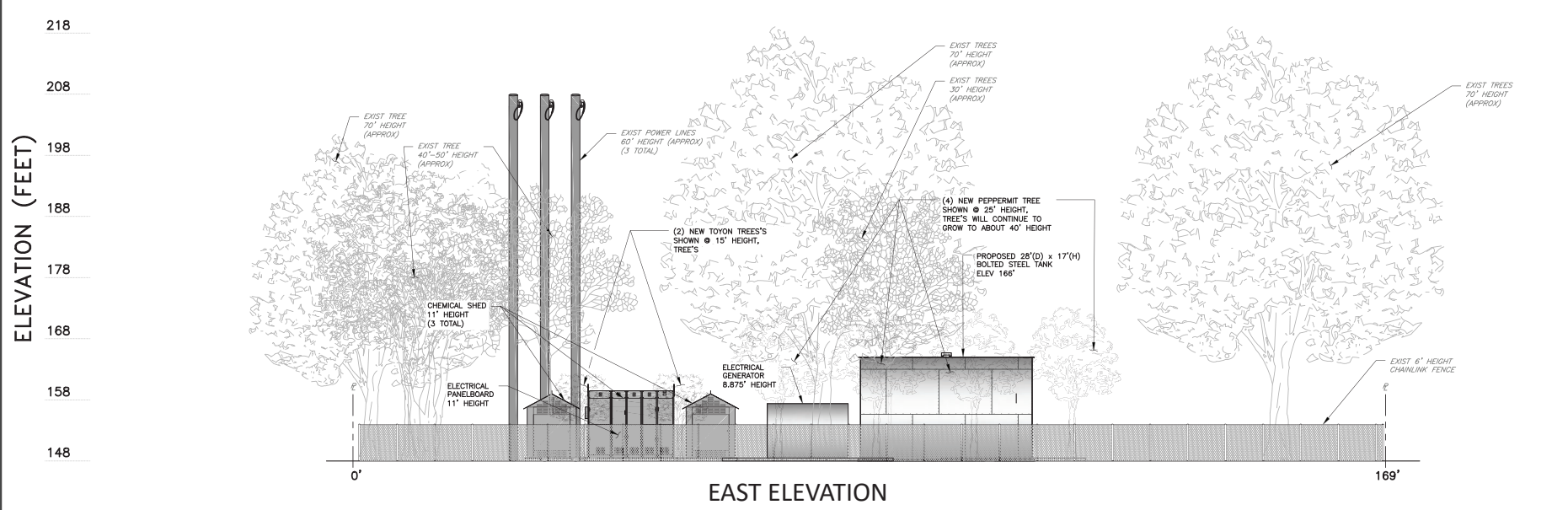
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

Source: California Water Service, Engineering Department, December 2, 2025.

~~After the well has been drilled and the casing installed, the project would conduct a standard water production test which would continuously pump water from the new well for 24 hours. The purpose of the production test would be to determine the yield of the aquifer as well as the size of the pump that would be necessary for the new well. It is anticipated that this would result in the pumping of approximately 1.7 million gallons of raw water from the aquifer. After the well is drilled and constructed, the drilling fluid that has intruded the formation and remained within the well structure above the aquifer would be removed, or “developed”. This initial development fluid would be circulated to the surface using airlift techniques to portable tanks before being discharged to the sanitary sewer system. The initial development fluid would be removed until the turbidity levels decrease enough to meet the standards necessary to discharge the fluid to the storm drain system. The total volume of water discharged to the sanitary sewer system would be approximately 1.3 to 1.5 million gallons over a four to five day period. At the conclusion of the airlifting process, the water produced from the well would have suitable turbidity levels to be discharged to the storm drain system. After the initial well development is complete, the final well development would be conducted using a test pump at increasing discharge rates until the rate is approximately 150 percent of the design capacity of the well. This would occur over another four to five day period and result in a total discharge volume of approximately three million gallons to the storm drain system. Testing to determine the final yield of the well would be conducted over the course of two days. The first day of testing would most likely require eight to 10 hours of pumping at varying discharge rates between 75 and 150 percent of the well design capacity. The second day of testing would be conducted at the design discharge capacity of the well for a period of eight to 24 hours. The total discharge volume during this two-day testing period would be up to approximately 2.4 million gallons. No water would be discharged over land.~~

The water pumped from the aquifer that would be discharged into the existing storm drain system on Carlisle Way would be done pursuant to Cal Water’s state-wide National Pollutant Discharge Elimination System (NPDES) discharge permit and existing regulations, including Chapter 12.60 (Stormwater Management) of the Sunnyvale Municipal Code (SMC). During operation of the new well, a discharge of the initial raw water would be required per Division of Drinking Water regulations to flush the ~~system~~ new well prior to filling up the new water storage tank. This initial draw of raw water would last for approximately 15 minutes and would result in the discharge of approximately 18,000 gallons of water to the existing storm drain system on Carlisle Way. After this initial discharge is complete, the water tank would begin storing the groundwater pumped from the new well on-site.

The project would construct a new, steel water storage tank in the center of the project site that would be connected to the new groundwater well. The storage tank would be ~~21~~ 28 feet in diameter, ~~24~~ 17 feet in height, and would have an approximate capacity of 56,000 gallons. ~~The dimensions of the water tank would allow for optimal operation of the booster pump while still~~

~~providing the necessary amount of freeboard for a tank of this size, which is four feet.~~² The groundwater in the aquifer has entrained air, which causes aesthetic problems and maintenance issues in the distribution system. To address these issues, the water must be aerated after it is pumped from the ground to allow for the release of entrained air in the water. To facilitate release of the entrained air, the water would be discharged into the tank from a point close to the top of the tank and allowed to “splash”, which would agitate the water and expedite aeration.

Pages 12 and 13 of the Draft EIR **REVISE** the text in Section 2.2.3.3 as follows:

The project would construct three new chemical storage sheds with a maximum height of ~~110~~ feet that would be placed on concrete pads on the northwest portion of the project site. These chemical storage sheds would be used to store approximately 300 gallons of 12.5 percent sodium hypochlorite and 100 gallons of 19.5 percent ammonium hydroxide within their own separate chemical storage sheds. These chemicals would be stored within a double containment system that would reduce the risk of any chemical leaks and would be used to disinfect (or treat) the ~~treated~~ water ~~in the storage tank~~ prior to release into the distribution system. Most of the equipment operation required to disinfect the ~~treated~~ water would be done remotely; however, a staff member would visit the site daily to clean the chemical injector and ensure that the equipment is operating effectively.

Page 13 of the Draft EIR **REVISE** the first sentence in Section 2.2.3.4 as follows:

The project would install an 150 kW emergency back-up generator on-site that would only be operational during power outages or during bi-weekly testing.

Page 13 of the Draft EIR **REVISE** the text in Section 2.2.3.7 as follows:

The proposed project would construct a new eight-inch distribution water line that would connect to an existing 10-inch water main on-site. In addition, the project would construct a new 15-inch storm drain lateral line that would connect to the existing 15-inch mainline in Carlisle Way. The point of connection to the existing storm drain would be within the public right-of-way on Carlisle Way. The project would also install a new manhole to provide maintenance access to the connection between the new storm drain lateral line and the existing storm drain main line. In addition, the project would install a ~~private~~ manhole in at the center of Carlisle Way property line. A portion of the sidewalk along Carlisle Way would be reconstructed concurrent with the new access driveway described in Section 2.2.3.5. During the discharge of the initial development fluid into the sanitary sewer system (as discussed in additional detail above), a temporary above-ground line would be extended to the nearest sanitary sewer manhole to provide a connection to the City's

²Freeboard is the area within the tank that does not contain water, as measured from the water overflow height to the top of the tank.

sanitary sewer system. This temporary above-ground line would be disconnected from the sanitary sewer line once the initial development fluid is able to be discharged into the storm drain system.

Electricity would be provided by the existing electrical utilities on-site, which would require an electrical utility application with the applicable electrical utility. No connections to natural gas are proposed.

Page 14 of the Draft EIR

REVISE the text in Section 2.2.3.8 as follows:

The project site currently contains 38 trees, 15 of which are protected under the City of Sunnyvale's tree protection ordinance.³ The proposed project would remove a total of ~~eight~~ nine trees, including ~~five~~ seven protected trees and ~~three~~ two unprotected trees. Four of the trees proposed for removal are either diseased, dead, or dying. The other ~~four~~ five trees would be removed to construct the new well and storage tank. There are six street trees in front of the project site and none of them are proposed for removal. The project would plant ~~12~~ five camphor trees, five toyon trees, and four pepper trees for replacement, along the eastern, southern, and western borders of the project site consistent with the requirements outlined in Chapter 19.94 of the SMC.

Page 14 of the Draft EIR

REVISE the text in Section 2.2.3.9 as follows:

The project site currently consists of approximately 524 square feet (or 1.6 percent) of impervious area. The remaining 33,276 square feet (or 98.4 percent) of the site consists of pervious area, which is comprised of landscaping and other permeable surfaces. The proposed project would result in an increase of impervious area by approximately ~~1,261~~ 535 square feet (or ~~3.7~~ 4.5 percent). The proposed improvements that would contribute to the increase in impervious area include the addition of the proposed tank, well, generator, panel, chemical shed, and booster pump ~~small, paved areas throughout the project site.~~

Page 15 of the Draft EIR

REVISE the text in the last three sentences of Section 2.2.3.10 as follows:

The soil, drilling additive, and water expelled from the borehole during the drilling process would be collected in a mud tank, or stockpiled, as appropriate, and disposed of at an off-site landfill location or recycling facility. Collection and disposal of the drill cuttings and mud that would be produced during drilling activities on-site would require up to 17, 10-yard dump truck trips at the project site.

³ The provisions of Chapter 19.94 (Tree Preservation) of the Municipal Code identify and prescribe specific procedures and requirements for the filing, processing, and consideration of the removal and preservation of trees. A significant size tree (or protected tree) is defined as: Any single trunk tree 38 inches or greater in circumference (the circumference of the tree is measured at 4.5 feet above the ground); or any multi-trunk tree which has at least one trunk 38 inches or greater in circumference or where the measurements of the multi-trunks added together equal at least 113 inches.

These truck trips would occur during the City's allowed construction hours and would not coincide with other construction activities on-site (e.g., demolition, site preparation, etc.).

Construction for the remaining project components, including the chemical storage sheds, water storage tank, and required water storage tank discharge would take a total of approximately six months.

The project requires ~~excavation~~ drilling at a maximum depth of 1,000 feet bgs for the well and excavation of eight feet bgs for the remaining improvements, and would result in the off-haul of approximately 210 cubic yards of soil.

Page 15 of the Draft EIR **DELETE** the final bullet in Section 2.4:

This EIR is intended to provide the City of Sunnyvale, other public agencies, and the general public with the relevant environmental information needed in considering the proposed project. The City of Sunnyvale anticipates that discretionary approvals by the City, including but not limited to the following, will be required to implement the project addressed in this EIR:

- Use Permit
- Building Permits
- Hazardous Materials Storage Permit
- Domestic Water Supply Permit Amendment
- ~~Variance for the maximum tank height~~

Page 19 of the Draft EIR **ADD** the following text below the Section 3.1.1.2 Regulatory Framework heading:

Federal

Federal Transit Administration Transit Noise and Vibration Impact Assessment Manual

The Transit Noise and Vibration Impact Assessment Manual prepared by the Federal Transit Administration (FTA) identifies construction noise thresholds for a variety of land uses that could be adjacent to construction activities. Under these thresholds, construction activities during daytime hours are limited to 80 dBA L_{eq} as measured at residential land uses, 85 dBA L_{eq} as measured at commercial and office uses, and 90 dBA L_{eq} as measured at industrial land uses.⁴

⁴ Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123*. September 2018.

MM NOI-1.2: Provision of Vouchers for Alternative Accommodations. California Water Service (Cal Water) shall provide the two nearest residences adjacent to the southwestern portion of the project site (i.e., 819 and 823 Coventry Court as identified in the Noise Assessment Report dated July 24, 2024 in Appendix B of the Draft EIR) with the potential to exceed 50 dBA noise levels during nighttime drilling activities, with vouchers for alternative accommodations. At least 45 days prior to the initiation of nighttime drilling activities, Cal Water shall communicate the anticipated drilling schedule to the affected residents at 819 and 823 Coventry Court. Upon request, vouchers shall be offered based on the needs of each household for the specific dates that nighttime drilling activities are scheduled. It is anticipated that the nighttime drilling activities would occur over two separate phases. If requested by the affected residents, vouchers for alternative accommodations shall be issued for each of the two phases based on the finalized construction schedule and be for \$300/night/room, with the necessary number of rooms being determined through consultation with the affected residents. Confirmation regarding any request for vouchers and the provision of vouchers for alternative accommodations shall be provided by Cal Water to the City prior to the initiation of nighttime drilling activities~~issuance of building permits.~~

If noise levels during these construction activities are measured within ~~three~~ one dBA of the 80 dBA threshold at surrounding sensitive receptors, then portable acoustic barriers shall be installed between the noise generating equipment and the impacted sensitive receptor prior to initiating any additional noise generating construction activities.

Off-Haul of the Drill Cuttings and Mud

Prior to beginning work on the remaining project components, up to 17, 10-yard dump truck trips would be required to off-haul and dispose of the drill cuttings and mud that would be produced during drilling activities on-site. Operation of the single dump truck would occur during the City's allowed construction hours and would generate an hourly noise level of approximately 72 dBA when measured at 50 feet. Therefore, the truck trips required to haul the drill cuttings and mud from the site would not exceed the City's established threshold of significance (80 dBA). (Less than Significant Impact)

Periodic noise would also be generated by the diesel-powered emergency generator that would be installed. However, the emergency generator would only be operational during power outages or during bi-weekly testing where it would be run for approximately 30 minutes during daytime hours.

Table 3.1-8: Estimated Vibration Level During ~~Drilling~~ Remaining Construction Activities

Off-Haul of the Drill Cuttings and Mud

As discussed previously, collection and disposal of the drill cuttings and mud that would be produced during drilling activities would occur prior to beginning work on the remaining project components on-site. This would require up to 17, 10-yard dump truck trips at the project site during the City's allowed construction hours and would not coincide with other construction activities on-site (e.g., demolition, site preparation, etc.). Based on available reference information from Caltrans, it is estimated that the individual trucks on-site would generate vibration levels at the nearest residential receptors similar to those estimated for the hoe ram and dozer equipment listed in Table 3.1-8 below. Therefore, the vibration levels generated by individual trucks accessing the site (approximately 0.03 ips at the nearest residential receptor) would not result in an exceedance of the applicable threshold during City's allowed construction hours (0.25 ips) at residential receptors and would not result in a significant vibration impact to surrounding properties or structures. (Less than Significant Impact)

Construction activities on-site, including the initial developing of the well and initial production tests, would result in the discharge of raw water into the sanitary sewer and storm drain system.

Under the No Project/No Redevelopment Alternative, the site would remain as it is today and continue to contain the old chemical storage buildings, ~~inactive booster pump, and cellular communication tower.~~

~~However, this redevelopment potential may be constrained by the requirements of the existing lease for the communication tower on-site.~~

5.2 Draft EIR Appendix A (Initial Study) Text Revisions

Page 6 of the Initial Study

DELETE the final bullet in Section 2.7:

This EIR is intended to provide the City of Sunnyvale, other public agencies, and the general public with the relevant environmental information needed in considering the proposed project. The City of Sunnyvale anticipates that discretionary approvals by the City, including but not limited to the following, will be required to implement the project addressed in this EIR:

- Use Permit
- Building Permits
- Hazardous Materials Storage Permit
- Domestic Water Supply Permit Amendment
- ~~Variance for the maximum tank height~~

Page 7 of the Initial Study

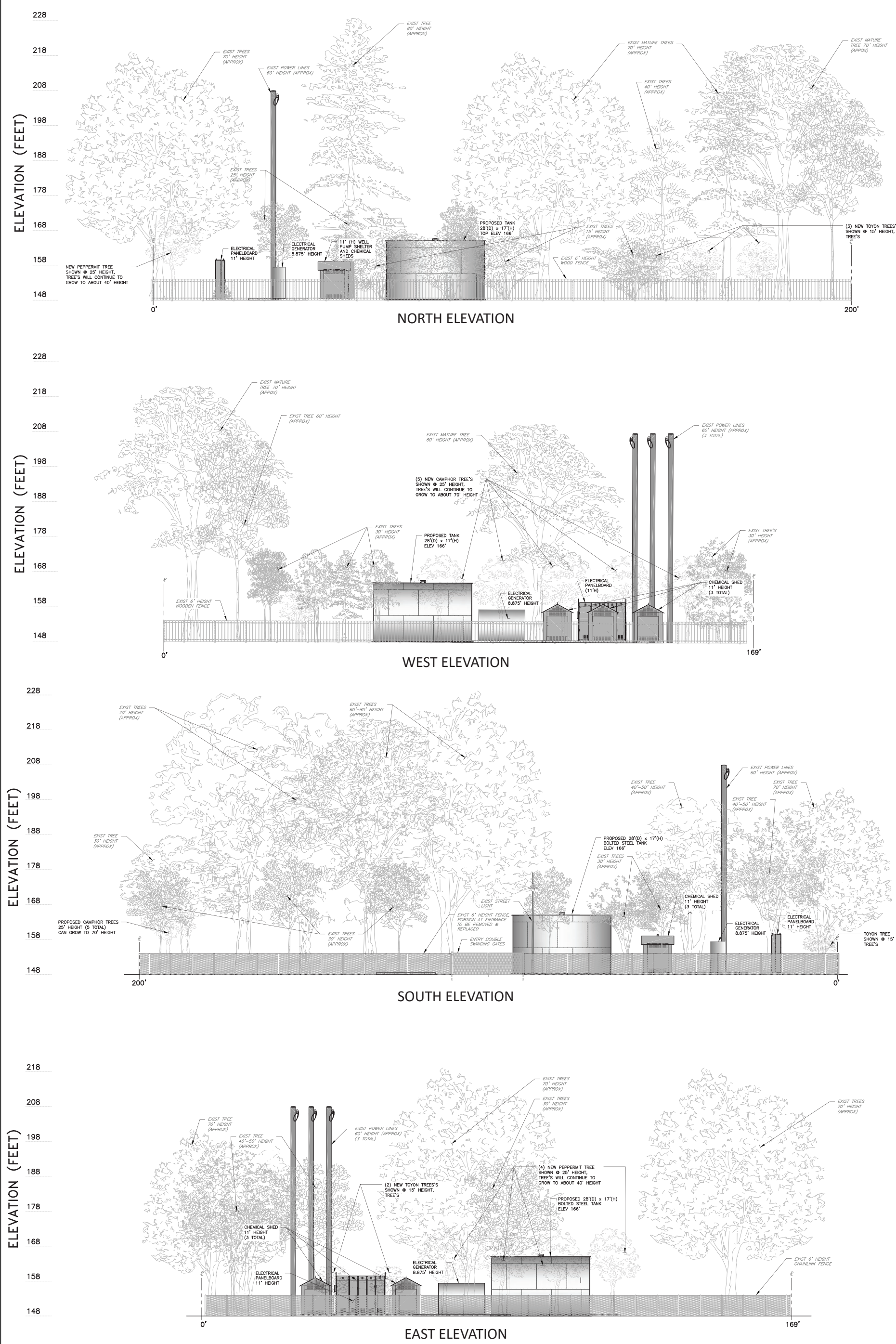
REVISE the text of the second and third paragraphs in Section 3.1 as follows:

The site consisted of a water well and associated chemical storage buildings, a cellular communication tower, booster pump, and a 17-foot tall, 50,000-gallon water storage tank (through Planning Permits - #1999-0687 and #2001-0319). In 2016, the water well on-site was decommissioned and properly destroyed due to sanding issues and casing deterioration within the well. This water well, therefore, is no longer functional. The 50,000-gallon redwood tank was removed in 2016 because the closure of the groundwater well on-site rendered the storage tank obsolete. The chemical storage buildings ~~and booster pump~~ – though ~~inactive~~ unused – remain on-site. The cellular communication tower, ~~which was previously is still in active use and is owned and maintained separately by Sprint Nextel on a portion located within on~~ the northwestern portion of the project site, was removed by the cellular service provider under a separate project application in January 2025 that is leased from Cal Water. No modifications are proposed to the communication tower as part of the proposed project.

To provide water supply reliability and meet current customer water supply demands, Cal Water is proposing to reactivate the site as a groundwater extraction site by constructing a replacement well and associated improvements to accommodate current and future water demands. The proposed replacement well would provide access to a long-term source of water for Cal Water that would be used to partially offset a decrease in supply from other sources due to drought and climate change. Cal Water is continuously looking for ways to improve the reliability of their water system, including replacing and installing new wells. The project site was selected for a replacement well because land acquisition to install new wells in the area is challenging, Cal Water already owns the property, the water quality is better than in surrounding areas, and the historic yield from the previous well on-site was higher than other options in the surrounding area.

The project would demolish the existing chemical storage buildings, electrical control panel, and connection to the existing water main on-site. After demolition, the project would install a replacement groundwater well and construct a new, approximately 56,000-gallon steel water storage tank, three chemical storage enclosures, and several utility and right-of-way improvements, including a new discharge pipeline. The project would also include a 150 kilowatt (kW) diesel-powered emergency generator with a sound attenuation enclosure. These project components are described in further detail below.

The project is consistent with the existing General Plan land use and zoning designations on the site, therefore, no General Plan amendment or rezoning is required. As mentioned in Section 2.7 Project-Related Approvals, Agreements, and Permits, the project requires a use permit, building permits, and a hazardous materials storage permit, ~~and variance for the proposed height of the water tank which would exceed the height typically allowed for structures in this zone.~~



Source: California Water Service, Engineering Department, December 2, 2025.

PROPOSED PROJECT ELEVATIONS

FIGURE 3.2-2

~~After the well has been drilled and the casing installed, the project would conduct a standard water production test which would continuously pump water from the new well for 24 hours. The purpose of the production test would be to determine the yield of the aquifer as well as the size of the pump that would be necessary for the new well. It is anticipated that this would result in the pumping of approximately 1.7 million gallons of raw water from the aquifer. After the well is drilled and constructed, the drilling fluid that has intruded the formation and remained within the well structure above the aquifer would be removed, or “developed”. This initial development fluid would be circulated to the surface using airlift techniques to portable tanks before being discharged to the sanitary sewer system. The initial development fluid would be removed until the turbidity levels decrease enough to meet the standards necessary to discharge the fluid to the storm drain system. The total volume of water discharged to the sanitary sewer system would be approximately 1.3 to 1.5 million gallons over a four to five day period. At the conclusion of the airlifting process, the water produced from the well would have suitable turbidity levels to be discharged to the storm drain system. After the initial well development is complete, the final well development would be conducted using a test pump at increasing discharge rates until the rate is approximately 150 percent of the design capacity of the well. This would occur over another four to five day period and result in a total discharge volume of approximately three million gallons to the storm drain system. Testing to determine the final yield of the well would be conducted over the course of two days. The first day of testing would most likely require eight to 10 hours of pumping at varying discharge rates between 75 and 150 percent of the well design capacity. The second day of testing would be conducted at the design discharge capacity of the well for a period of eight to 24 hours. The total discharge volume during this two-day testing period would be up to approximately 2.4 million gallons. No water would be discharged over land.~~

The water pumped from the aquifer that would be discharged into the existing storm drain system on Carlisle Way would be done pursuant to Cal Water’s state-wide National Pollutant Discharge Elimination System (NPDES) discharge permit and existing regulations, including Chapter 12.60 (Stormwater Management) of the Sunnyvale Municipal Code (SMC). During operation of the new well, a discharge of the initial raw water would be required per Division of Drinking Water regulations to flush the ~~system~~ new well prior to filling up the new water storage tank. This initial draw of raw water would last for approximately 15 minutes and would result in the discharge of approximately 18,000 gallons of water to the existing storm drain system on Carlisle Way. After this initial discharge is complete, the water tank would begin storing the groundwater pumped from the new well on-site.

The project would construct a new, steel water storage tank in the center of the project site that would be connected to the new groundwater well. The storage tank would be ~~21~~ 28 feet in diameter, ~~24~~ 17 feet in height, and would have an approximate capacity of 56,000 gallons. ~~The dimensions of the water tank would allow for optimal operation of the booster pump while still~~

~~providing the necessary amount of freeboard for a tank of this size, which is four feet.~~⁵ The groundwater in the aquifer has entrained air, which causes aesthetic problems and maintenance issues in the distribution system. To address these issues, the water must be aerated after it is pumped from the ground to allow for the release of entrained air in the water. To facilitate release of the entrained air, the water would be discharged into the tank from a point close to the top of the tank and allowed to “splash”, which would agitate the water and expedite aeration.

Pages 11 of the Initial Study

REVISE the text in Section 3.3.3 as follows:

The project would construct three new chemical storage sheds with a maximum height of ~~110~~ feet that would be placed on concrete pads on the northwest portion of the project site. These chemical storage sheds would be used to store approximately 300 gallons of 12.5 percent sodium hypochlorite and 100 gallons of 19.5 percent ammonium hydroxide within their own separate chemical storage sheds. These chemicals would be stored within a double containment system that would reduce the risk of any chemical leaks and would be used to disinfect (or treat) the ~~treated~~ water ~~in the storage tank~~ prior to release into the distribution system. Most of the equipment operation required to disinfect the ~~treated~~ water would be done remotely; however, a staff member would visit the site daily to clean the chemical injector and ensure that the equipment is operating effectively.

Page 12 of the Initial Study

REVISE the text in Section 3.3.4 as follows:

The project would install an 150 kW emergency back-up generator on-site that would only be operational during power outages or during bi-weekly testing. Routine testing would consist of running the generator bi-weekly for approximately 30 minutes during daytime hours. The bi-weekly testing is necessary to ensure the generator would operate during an emergency scenario. The generator would have fuel stored in a double lined tank under the generator and would also utilize a double containment system to reduce the risk of accidental fuel leaks. The generator would comply with diesel engine requirements set by the Bay Area Air Quality Management District.

Page 12 of the Initial Study

REVISE the text in Section 3.3.7 as follows:

The proposed project would construct a new eight-inch distribution water line that would connect to an existing 10-inch water main on-site. In addition, the project would construct a new 15-inch storm drain lateral line that would connect to the existing 15-inch mainline in Carlisle Way. The point of connection to the existing storm drain would be within the public right-of-way on Carlisle Way. The project would also install a new manhole to provide maintenance access to the connection between the new storm drain lateral line and the existing storm drain main line. In addition, the project would install a ~~private~~ manhole in at the center of Carlisle Way property line. A

⁵Freeboard is the area within the tank that does not contain water, as measured from the water overflow height to the top of the tank.

portion of the sidewalk along Carlisle Way would be reconstructed concurrent with the new access driveway described in Section 3.3.5. During the discharge of the initial development fluid into the sanitary sewer system (as discussed in additional detail above), a temporary above-ground line would be extended to the nearest sanitary sewer manhole to provide a connection to the City's sanitary sewer system. This temporary above-ground line would be disconnected from the sanitary sewer line once the initial development fluid is able to be discharged into the storm drain system.

Electricity would be provided by the existing electrical utilities on-site, which would require an electrical utility application with the applicable electrical utility. No connections to natural gas are proposed.

Page 13 of the Initial Study

REVISE the text in Section 3.3.8 as follows:

The project site currently contains 38 trees, 15 of which are protected under the City of Sunnyvale's tree protection ordinance.⁶ The proposed project would remove a total of ~~eight~~ nine trees, including ~~five~~ seven protected trees and ~~three~~ two unprotected trees. Four of the trees proposed for removal are either diseased, dead, or dying. The other ~~four~~ five trees would be removed to construct the new well and storage tank. There are six street trees in front of the project site and none of them are proposed for removal. The project would plant ~~12~~ five camphor trees, five toyon trees, and four pepper trees for replacement, along the eastern, southern, and western borders of the project site consistent with the requirements outlined in Chapter 19.94 of the SMC.

Page 13 of the Initial Study

REVISE the text in Section 3.3.9 as follows:

The project site currently consists of approximately 524 square feet (or 1.6 percent) of impervious area. The remaining 33,276 square feet (or 98.4 percent) of the site consists of pervious area, which is comprised of landscaping and other permeable surfaces. The proposed project would result in an increase of impervious area by approximately ~~1,261~~ 535 square feet (or ~~3.7~~ 4.5 percent). The proposed improvements that would contribute to the increase in impervious area include the addition of the proposed tank, well, generator, panel, chemical shed, and booster pump ~~small, paved areas throughout the project site.~~

⁶ The provisions of Chapter 19.94 (Tree Preservation) of the Municipal Code identify and prescribe specific procedures and requirements for the filing, processing, and consideration of the removal and preservation of trees. A significant size tree (or protected tree) is defined as: Any single trunk tree 38 inches or greater in circumference (the circumference of the tree is measured at 4.5 feet above the ground); or any multi-trunk tree which has at least one trunk 38 inches or greater in circumference or where the measurements of the multi-trunks added together equal at least 113 inches.

REVISE the text in the last three sentences of Section 3.3.10 as follows:

The soil, drilling additive, and water expelled from the borehole during the drilling process would be collected in a mud tank, or stockpiled, as appropriate, and disposed of at an off-site landfill location or recycling facility. Collection and disposal of the drill cuttings and mud that would be produced during drilling activities on-site would require up to 17, 10-yard dump truck trips at the project site. These truck trips would occur during the City's allowed construction hours and would not coincide with other construction activities on-site (e.g., demolition, site preparation, etc.).

Construction for the remaining project components, including the chemical storage sheds, water storage tank, and required water storage tank discharge would take a total of approximately six months.

The project requires ~~excavation~~ drilling at a maximum depth of 1,000 feet bgs for the well and excavation of eight feet bgs for the remaining improvements, and would result in the off-haul of approximately 210 cubic yards of soil.

DELETE the first bullet under the second paragraph on the page as follows:

- ~~Chapter 19.84 (Variances) outlines the purpose, restrictions, procedures, actions required, and findings required to grant a Variance. The application process allows for review of the requested Variance and requires that the three findings below are met.~~
 - ~~Because of exceptional or extraordinary circumstances or conditions applicable to the property, or use, including size, shape, topography, location or surroundings, the strict application of the ordinance is found to deprive the property owner of privileges enjoyed by other properties in the vicinity and within the same zoning district.~~
 - ~~The granting of the variance will not be materially detrimental to the public welfare or injurious to the property, improvements or uses within the immediate vicinity and within the same zoning district.~~
 - ~~Upon granting of the variance the intent and purpose of the ordinance will still be served and the recipient of the variance will not be granted special privileges not enjoyed by other surrounding property owners within the same zoning district.~~

REVISE the first sentence in the second paragraph under the Visual Character and Quality heading as follows:

As discussed in Section 3.0, the site is currently developed with a non-operational groundwater well, ~~booster pump, and two~~ eight-foot tall chemical storage buildings, ~~and an operational cellular communication tower.~~

The site previously included a 16-foot tall water storage tank with a capacity of 50,000 gallons, which was removed in 2016. The project includes constructing a new, ~~24~~17-foot tall water storage tank with a capacity of 56,000 gallons and replacing the existing chemical storage buildings. The existing chemical storage sheds are eight feet tall and would be replaced with ~~11~~0-foot tall chemical storage enclosures. Given that the project site is in an urban and developed area where views of the Santa Cruz Mountains are currently obstructed and the project would result in similar improvements on-site compared to what currently (as well as historically) been on-site, the project would not substantially affect the already obstructed views. The project, therefore, would result in a less than significant impact to scenic vistas. **(Less than Significant Impact)**

The height of the new water tank (~~24~~ 17 feet) would ~~exceed~~ be consistent with the maximum height allowed for structures in this zoning district (17 feet). ~~To construct a new 24-foot-tall water tank, the project would require a variance from the City for the proposed height, pursuant to SMC Chapter 19.84.~~ Based on the above discussion, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality. **(Less than Significant Impact)**

The proposed project would construct a new water storage tank (~~33~~ 28 feet in diameter and ~~24~~ 17 feet in height) and three new chemical storage enclosures with a maximum height of ~~11~~0 feet.

In addition, the project would include 32-foot-high acoustic barrier walls around the perimeter of the site during drilling activities (as required by mitigation measure MM NOI-1.1 in the Draft EIR prepared for the project) which would prevent the nighttime construction lighting from impacting any adjacent properties.

- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. ~~The Air District's phone number shall also be visible to ensure compliance with applicable regulations.~~

ADD the following text above the Operational Period Emissions heading:

In addition to mitigation measure LUTE DEIR MM 3.5.3, the project would be required to prepare and implement a Construction Management Plan (CMP) as a standard Condition of Approval to minimize effects of construction on surrounding land uses to the extent possible, including those caused by unnecessary emissions and excessive fugitive dust. The CMP would include requirements regarding notifying surrounding residents of scheduled construction activities and identifying a designated disturbance coordinator who would be responsible for responding to any local complaints about the construction process and identifying and implementing corrective measures, if needed.

REVISE the first paragraph under the Operation Period Emissions heading as follows:

Operation of the project would have long-term emissions from stationary sources (i.e., generators). While these emissions would not be as intensive at or near the site as construction activity, they would contribute to long-term effects to sensitive receptors. The project would include one 150 ~~230~~ kilowatt, ~~308-horsepower~~ stand-by emergency diesel generator to power the system in the event of a power failure. Operation of the diesel generators would be a source of TAC emissions. As discussed in Section 3.3.4, the generator would be tested bi-weekly for approximately 30 minutes at a time in order to ensure that it would be able to power the site in the event of a power failure.

REVISE the first sentence of the first paragraph under the Existing Conditions heading as follows:

The project site contains ~~consists of utility infrastructure (i.e., chemical storage buildings, cellular communication tower, and booster pump)~~, compact dirt, trees, and shrubs and is located within an urban area.

REVISE the second sentence under Impact BIO-1 as follows:

As discussed in Section 4.4.1.2 Existing Conditions, given the urbanized nature of the surrounding area, there are no sensitive habitats or special-status species on or adjacent to the project site. Of the existing 38 trees on-site, eight ~~nine~~ would be removed due to interference with the project design and required construction activities.

REVISE the first two sentences in the paragraph under the Sunnyvale Municipal Code heading as follows:

The proposed project would remove eight ~~nine~~ of the 38 existing trees on-site, including five ~~seven~~ protected trees, and replace them with 12 ~~14~~ new trees on ~~along~~ the eastern, southern, and western borders portion of the site. ~~The trees removed would be replaced at a 1:1 ratio.~~

REVISE the last sentence of the first paragraph under the Historic Resources heading as follows:

By the early to mid-1960's, the project site was surrounded by additional residential development and was developed with a groundwater well, water storage tank, and several accessory buildings. The project site currently contains a non-operational groundwater well, ~~a cellular communication tower, and~~ chemical storage buildings, and booster pump.

REVISE the last sentence under the Electricity heading as follows:

Electricity demand on-site is limited to the operation of irrigation equipment ~~and the cellular communication tower.~~

REVISE the second sentence of the paragraph under the Soils and Topography heading as follows:

The project site is located on relatively flat land that is generally level with the surrounding street, properties, and park. The site is generally unpaved, and contains a gravel parking area, non-operational groundwater well, and chemical storage buildings, ~~a cellular communication tower, and booster pump.~~

REVISE the third and fourth sentence under the Subsidence heading and **ADD** the following text:

As discussed in Section 3.3, ~~two initial drawings of raw water~~ a series of drawings and subsequent discharges of development fluid and groundwater would occur after the construction of the proposed well and water storage tank. Up to approximately 1.5 million gallons of initial development fluid would be pumped and discharged into the sanitary sewer system and up to approximately three million gallons of final development fluid would be pumped and discharged into the stormwater system. ~~These drawings~~ In addition, the testing to determine the final yield of the new groundwater well would result in the pumping of up to approximately 1.7 2.4 million gallons of water from the aquifer underneath the project site which would subsequently be discharged into the existing stormwater system.

REVISE the last sentence in the last paragraph on the page and **ADD** the following text:

Given that a total of 200,000 AF of groundwater could be pumped annually without causing land subsidence, a total of 112,200 AF of groundwater was pumped from the subbasin in recent years, and the project's proposed a maximum of 1,935 AF of additional of groundwater per year that could be pumped (with up to an additional 6.9 million gallons, or approximately 21 AF, as part of the initial development/testing process), the project would not result in substantial regional subsidence. In addition, the new groundwater well on-site would be engineered and constructed to

specifically prevent the movement of sand and other materials into the well structure, which would maximize yield, efficiency, sand control, and longevity of the well without inducing localized subsidence.⁷ **(Less than Significant Impact)**

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REVISE the sentence under Impact GEO-5 as follows:

The project would not construct any plumbing fixtures on-site or generate wastewater during operation of the groundwater well and water tank; therefore, the project would not need to support septic tanks or alternative wastewater disposal systems on-site.

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REVISE the second sentence in the first paragraph under the Operation heading as follows:

As discussed in Section 3.3.4, the project would include one 150 ~~230~~ kilowatt, ~~308-horsepower~~ stand-by emergency diesel generator to power the system in the event of a power failure.

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REVISE the third sentence under the Hazardous Materials Storage and Use heading as follows:

Remaining, inoperable, infrastructure includes the chemical storage buildings ~~and a booster pump~~.

Page 88 of the Initial Study

REVISE the paragraph under the Electrical Equipment heading as follows:

The project site ~~contains~~ contained a cellular communication tower and associated electrical equipment prior to the removal of those improvements in January 2025 ~~that was constructed in 2006. In addition~~ Currently, there are three pole mounted electrical transformers on-site. No evidence of transformer oil leaks was observed on-site.

Page 91 of the Initial Study

REVISE the third sentence under Impact HAZ-5 as follows:

While the project site is located within the FAA's FAR Part 77 Notification Surface Area, the proposed maximum structure height of 24 ~~17~~ feet and the estimated maximum height of the construction equipment (50 feet) do not require notification and review by the FAA to determine potential aviation hazard.

⁷ Luhdorff & Scalmanini Consulting Engineers. *Response to Questions Regarding Potential for Subsidence Resulting from Pumping Proposed Cal Water Los Altos Well No. 20-02*. August 13, 2025.

Page 95 of the Initial Study

REVISE the first sentence of the paragraph under the Water Quality heading as follows:

The project site is developed with two chemical storage buildings, and a capped groundwater well, ~~and a cellular communication tower.~~

Page 97 of the Initial Study

REVISE the second sentence in the second paragraph under the Construction heading as follows:

To prevent this discharged material from reaching the stormwater system, the material would be collected in a mud tank, or stockpiled, as appropriate, prior to being disposed off-site.

Page 97 of the Initial Study

REVISE the first and second sentence of the third paragraph under the Construction heading as follows:

After the well is constructed, the initial development fluid in the well would be pumped and discharged into the sanitary sewer system. Once turbidity levels in the fluid are at an appropriate level, the final development fluid would be pumped and discharged into the stormwater system. Finally, a water production test would be performed which would continuously pump water from the new well for a 24-hour period over the course of two days. It is estimated that this test would produce approximately ~~1.7~~ 2.4 million gallons of raw water that would be discharged into the existing stormwater system.

Page 98 of the Initial Study

REVISE the first three sentences under the Surface Water heading as follows:

The project would increase the amount of impervious surface on-site from 524 to ~~1,785~~ 2,059 square feet. The remaining ~~32,015~~ 31,741 square feet of the site would consist of pervious surfaces such as gravel and landscaped areas. Although the project would result in a minor increase in impervious surface area (~~1,535~~261 square feet), this additional hardscaping would be surrounded by pervious surfaces that would allow for water infiltration on-site, which would limit the amount of runoff from the project site.

Page 98 of the Initial Study

REVISE the second sentence under the On-Site heading as follows:

As discussed in Impact HYD-1 above, although the project would result in a minor increase in impervious surface area on-site, the remaining ~~94~~ 95 percent of the site would remain pervious which would allow for water infiltration on-site.

In 2023, approximately 112,200 AF of groundwater was pumped from the Santa Clara Subbasin.⁸⁰ As discussed under Impact GEO-3, the maximum annual production of the proposed well would be approximately 1,935 AF of groundwater per year (with up to an additional 6.9 million gallons, or approximately 21 AF, as part of the initial development/testing process), which would account for approximately 1.7 percent of the total annual amount pumped from the Santa Clara Subbasin. Cal Water is permitted would obtain the necessary permits from Valley Water to pump groundwater from the Subbasin, and would disclose the amount of groundwater being pumped on-site to Valley Water through their required water production statement process. ~~and a~~ Although the project would result in a nominal increase in groundwater pumped from the Santa Clara Subbasin, the 1,935 additional AFY would not result in a significant increase in groundwater outflow and Valley Water would be able to continue to manage groundwater to sustainable levels. Based on this discussion, the project would have a less than significant impact on the sustainable groundwater management of the basin. **(Less than Significant Impact)**

As discussed in Section 3.3, the project would result in a minor increase of impervious area on-site of approximately 1,535,261 square feet. This increase represents a ~~3.7~~ 4.5 percent increase in impervious surfaces on-site compared to existing conditions.

- ~~• Chapter 19.84 (Variances) outlines the purpose, restrictions, procedures, actions required, and findings required to grant a Variance. The application process allows for review of the requested Variance and requires that the three findings below are met.~~
 - ~~○ Because of exceptional or extraordinary circumstances or conditions applicable to the property, or use, including size, shape, topography, location or surroundings, the strict application of the ordinance is found to deprive the property owner of privileges enjoyed by other properties in the vicinity and within the same zoning district.~~
 - ~~○ The granting of the variance will not be materially detrimental to the public welfare or injurious to the property, improvements or uses within the immediate vicinity and within the same zoning district.~~
 - ~~○ Upon granting of the variance the intent and purpose of the ordinance will still be served and the recipient of the variance will not be granted special privileges not enjoyed by other surrounding property owners within the same zoning district.~~

REVISE the discussion under the Sunnyvale Municipal Code heading as follows:

The project site is zoned R0/S (low-density residential) and is within the (S) combining district. The permitted uses and development standards for these designations are outlined in Chapter 19.18 and SMC Chapter 19.26.200. As discussed in Section 4.11.1.2 Existing Conditions, the proposed use on-site would be permitted in the zoning district with a Use Permit. The project would meet all applicable development standards listed in Chapter 19.18 and Chapter 19.26.200 of the SMC, ~~with the exception of the maximum height limits established for this zoning district.~~ As discussed in Section 4.1 Aesthetics, the project is subject to the City's design review process ~~the height of the new water tank (24 feet) would exceed the maximum height allowed for structures in this zoning district (17 feet). To construct a new 24-foot-tall water tank, the project would require an approved Variance from the City, pursuant to SMC Chapter 19.84.~~ This review would ensure that the project would not cause a significant environmental impact due to a conflict with the SMC. (Less than Significant Impact)

REVISE the third sentence under the Moffett Field CLUP heading as follows:

The proposed maximum building height of ~~24~~ 17 feet would not require notification and review by the FAA to determine potential aviation hazard.

REVISE the first sentence of the paragraph under the Existing Conditions heading as follows:

The project site is in an urban area and is currently developed with non-operational groundwater well infrastructure, ~~as well as a cellular communication tower.~~

REVISE the third sentence of the paragraph under the Existing Conditions heading as follows:

The project site is currently developed with a non-operational groundwater well, and chemical storage buildings, ~~and a cellular communication tower.~~

ADD the following text above the Potable Water heading:

Wastewater Treatment and Sanitary Sewer System

Wastewater within the City is treated at the Donald M. Somers Water Pollution Control Plant (WPCP), which collects wastewater from residential, commercial, and industrial sources in Sunnyvale, the Rancho Rinconada portion of Cupertino, and the Airfield. Sewage is collected through approximately 310 miles of gravity pipelines which direct the flow of wastewater through five interceptors (the Lawrence, Borregas, Lockheed, Moffett, and Cannery interceptors) to the

WPCP for treatment. Treated effluent from the WPCP is discharged into the San Francisco Bay via the Guadalupe Slough.

The WPCP has five different process areas, which are comprised of preliminary, primary, secondary, tertiary, and solid processing facilities. The Average Dry Weather Flow (ADWF) processing capacity of the WPCP is 19.5 million gallons per day (mgd). The amount of influent wastewater handled by the WPCP varies within the time of day and within seasonal changes in demand. In 2023, the ADWF was approximately 14.2 mgd.

No sewage is generated by the existing uses on-site; however, there is an existing sanitary sewer main line in Carlisle Way.

Page 128 of the Initial Study

REVISE the impact selections for Impact 3) as follows:

- 3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

☐☐☒☒

Page 129 of the Initial Study

REVISE the text under the Sanitary Sewer Infrastructure heading as follows:

The project would not create any wastewater during operation of the groundwater well and water tank, therefore, there would be no permanent impact to sanitary sewer infrastructure or wastewater treatment facilities as a result of the project. However, as discussed in Section 3.3.7, up to approximately 1.5 million gallons of initial development fluid would be discharged to the sanitary sewer system over a four-to-five-day period. To facilitate this process, a temporary above-ground line would be extended to the nearest sanitary sewer manhole during the discharge of the initial development fluid to allow for the discharge of this water into the sanitary sewer system. This temporary above-ground line would be disconnected from the sanitary sewer line once the initial development fluid is able to be discharged into the storm drain system. To prevent capacity issues in the sanitary sewer system during discharge of this initial development fluid, the project would implement the following conditions of approval.

Conditions of Approval

- The project applicant shall provide the City's Public Works Department with a minimum one-week advance notice prior to discharging any fluid into the sanitary sewer system to allow for sufficient maintenance work (e.g., removing potential blockages). The project applicant shall receive confirmation from the City's Public Works Department that the

necessary maintenance has been completed prior to initiating any discharges into the sewer system.

- During the discharge of initial development fluid, the project applicant shall continuously monitor the manhole at the sanitary sewer connection point to ensure that the system does not back-up or start to approach overflow levels. If it is observed that the system is near overflow, the project shall cease further discharges and notify the City's Public Works Department. Once the issue has been resolved, the City shall notify the applicant in writing that discharge to the system can recommence.

With implementation of these conditions of approval, the project would not result in significant impacts to the existing sanitary sewer infrastructure adjacent to the site because any blockages that could impede the temporary increase in sanitary sewer flow would be cleared in advance and ongoing monitoring would occur during the initial discharge to ensure that no overflow occurs. (No Less than Significant Impact)

Page 129 of the Initial Study

REVISE the second paragraph under the Stormwater Drainage Infrastructure heading as follows:

As discussed in Section 4.10 Hydrology and Water Quality, the project would increase the amount of impervious surface on-site from 524 square feet to ~~1,785~~ 2,059 square feet. Although the project would result in a minor increase in impervious surfaces, the remaining ~~32,015~~ 31,741 square feet of the site would consist of pervious surfaces such as gravel and landscaped areas that would allow for water infiltration on-site. This would limit the amount of runoff from the project site that would reach the stormwater drainage system.

Page 129 of the Initial Study

REVISE the first and second sentence and **ADD** the following text in third paragraph under the Stormwater Drainage Infrastructure heading:

After construction of the groundwater well is completed, the initial development fluid in the well would be pumped and discharged into the sanitary sewer system. Once turbidity levels in the fluid are at an appropriate level, approximately 3.0 million gallons of final development fluid would be pumped and discharged into the stormwater system. ~~the project would be required to conduct~~ Finally, a water production test would be performed over the course of two days and a discharge of initial raw water that would pump approximately 1.7 2.4 million gallons of water from the aquifer. This water would also be discharged into the storm drain system on Carlisle Way.

REVISE the paragraph under the Electric Power and Telecommunications Facilities heading as follows:

The project site would continue to be served by existing electric power facilities; no new improvements are proposed. ~~There is a cellular communication tower on-site that is owned and maintained separately by Sprint Nextel on a portion of the project site that is leased from Cal Water. Since~~ No improvements are proposed to these facilities, therefore, no impacts would result from project implementation.

REVISE the first paragraph under the Impact UTL-2 heading as follows:

As discussed in Section 4.10 Hydrology and Water Quality under Impact HYD-2, although the project would result in the pumping of a maximum of 1,935 AF of additional of groundwater per year, this would only account for approximately ~~2.4~~ 1.7 percent of the total annual amount pumped from the Santa Clara Subbasin and would result in a less than significant impact on the sustainable groundwater management of the basin.

REVISE the text under Impact UTL-3 as follows:

The project would not generate any wastewater during operation of the groundwater well and water tank.; ~~therefore,~~ However, as discussed above under Impact UTL-1, up to approximately 1.5 million gallons of initial development fluid would be discharged to the sanitary sewer system over a four-to-five-day period. This temporary discharge would end up being processed at the WPCP, which has a processing capacity of 19.5 mgd and an ADWF of approximately 14.2 mgd. Given the temporary sewage generation estimated for the project (approximately 1.5 million gallons over five days, or 0.3 mgd) and the available processing capacity at the WPCP (5.3 mgd), there is sufficient treatment capacity at the WPCP to accommodate the temporary discharge of sanitary sewer flow that would occur with implementation of the project. Therefore, the project would not result in a determination from the wastewater treatment provider that it does not have adequate capacity to continue meeting its existing commitments. **(~~No~~ Less than Significant Impact)**

REVISE the first sentence in the last paragraph on the page as follows:

As discussed in Section 4.10 Hydrology & Water Quality, the maximum amount of 1,935 AF of additional of groundwater pumped per year (with up to an additional 6.9 million gallons, or approximately 21 AF, as part of the initial development/testing process) would only account for approximately 1.7 percent of the total annual amount pumped from the Santa Clara Subbasin which would not result in a significant increase in groundwater outflow.

INSERT the following page at the end of Appendix A:

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality

429 E. Cotati Ave
Cotati, CA 94931

Tel: 707-794-0400
www.illingworthrodkin.com

Fax: 707-794-0405
illro@illingworthrodkin.com

M E M O

Date: January 21, 2026

To: Nick Towstopiat
Project Manager
David J. Powers & Associates, Inc.
ntowstopiat@davidjpowers.com

From: Casey Divine
Senior Consultant
Illingworth & Rodkin, Inc.

RE: 800 Carlisle Way Well & Water Tank Project, Sunnyvale, CA

SUBJECT: Air Quality Assessment I&R Job #22-163

This memo addresses the potential air quality, health risk, and greenhouse gas (GHG) impacts associated with the site plan changes to the proposed well and water tank project located at 800 Carlisle Way in Sunnyvale, California. Illingworth & Rodkin Inc. (I&R) completed a health risk and GHG assessment for the project in June 2023.¹ The analysis concluded that, with the implementation of the City's *Land Use and Transportation Element (LUTE) Draft Environmental Impact Report (DEIR) Mitigation Measure 3.5.3*² and *Mitigation Measure AQ-1*,³ project air pollutant emissions and health risk impacts would be below the Bay Area Air District's recommended significance threshold levels.

The project's site plans have been updated slightly since the original air quality assessment. The generator is planned to be located on its own generator pad slightly further north than where it was previously analyzed, which would be further away from the maximally exposed individual (MEI) identified in the original analysis. Also, the size of the generator has been reduced from a 230-kilowatt (kW) diesel-powered generator to a 150-kW diesel-powered generator. Therefore, the emissions and health risk impact from the generator would be less than what was analyzed in the original assessment. Additionally, project construction activities are not expected to change due to the updated site plans. Therefore, with the same construction activities and a smaller generator located further from receptors, the impact findings would be the same or less than what was analyzed in the June 2023 assessment, the mitigation measures identified in the original assessment would not change due to the updated site plans, and no further analysis is required.

¹ Illingworth & Rodkin, Inc, *800 Carlisle Way Well & Water Tank Project Health Risk & Greenhouse Gas Assessment*, June 29, 2023.

² Implementing the Bay Area Air District's basic construction best management practices for dust control.

³ All diesel-powered construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total would meet U.S. EPA Tier 4 Interim emission standards for particulate matter.

Appendix A: Draft EIR Comment Letters

State Water Resources Control Board

June 23, 2025

Mary Jeyaprakash
City of Sunnyvale
456 West Olive Avenue
Sunnyvale, CA 94088-3707

CITY OF SUNNYVALE (WATER SYSTEM), ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE 800 CARLISLE WAY WELL & WATER TANK PROJECT (PROJECT), STATE CLEARINGHOUSE #2023020080

Dear Mary Jeyaprakash:

Thank you for the opportunity to review the EIR for the proposed Project. The State Water Resources Control Board, Division of Drinking Water (DDW), issues domestic water supply permits under the Safe Drinking Water Act. This Project falls under DDW's Santa Clara District jurisdiction. The Santa Clara District issues permit amendments according to the Title 22 California Code of Regulations (Cal. Code Regs) chapter 16. Public water systems need a permit amendment for modification of the water supply including new sources, new reservoirs with 100,000-gallon capacity or greater, service area expansions of twenty percent or more, and treatment design capacity or process changes as per Cal. Code Regs. § 64556.

The State Water Board, DDW is a responsible agency under the California Environmental Quality Act (CEQA) for this Project. The Project will require approval of a domestic water supply permit amendment from the Santa Clara District for the new drinking water source and change in treatment (Cal. Code Regs §64556). Please list "domestic water supply permit amendment" in the EIR, under Section 2.2.2 Project Overview (PDF page 22) and Section 2.4 Uses of the EIR (PDF page 29) and in the Initial Study, under Section 2.7 Project Related Approvals, Agreements, and Permits (PDF page 10).

When the CEQA process is completed, please forward the following items with the permit application to the State Water Board, DDW Santa Clara District at DWPDIST17@waterboards.ca.gov:

- The EIR, Mitigation Monitoring and Reporting Plan (MMRP),
- The Resolution or Board Minutes certifying the EIR, adopting the MMRP, and approving the Project; and

E. JOAQUIN ESQUIVEL, CHAIR | ERIC OPPENHEIMER, EXECUTIVE DIRECTOR

- The Notice of Determination filed at the County Clerk's Office and the State Clearinghouse.

Please contact Lori Schmitz of the State Water Board at (916) 449-5285 or Lori.Schmitz@waterboards.ca.gov, for questions regarding this comment letter.

Sincerely,

Lori Schmitz
Environmental Scientist
Division of Financial Assistance
Special Project Review Unit
1001 I Street, 16th floor
Sacramento, CA 95814

Cc:

State Clearinghouse

Van Tsang
District Engineer
Santa Clara District

Rory Klinger
Water Resource Control Engineer
Santa Clara District

California Department of Transportation

DISTRICT 4
OFFICE OF REGIONAL AND COMMUNITY PLANNING
P.O. BOX 23660, MS-10D | OAKLAND, CA 94623-0660
www.dot.ca.gov



June 30, 2025

SCH #: 2023020080
GTS #: 04-SCL-2023-01414
GTS ID: 28859
Co/Rt/Pm: SCL/82/15.312

Mary Jeyaprakash, Senior Planner
City of Sunnyvale
P.O. Box 60607
Sunnyvale, CA 94088
Phone: (408) 738-5507

Re: 800 Carlisle Way Well & Water Tank Project – Draft Environmental Impact Report (DEIR)

Dear Mary Jeyaprakash:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the 800 Carlisle Way Well & Water Tank Project. The Local Development Review (LDR) Program reviews land use projects and plans to ensure consistency with our mission and state planning priorities. The following comments are based on our review of the May 2024 DEIR.

Please note this correspondence does not indicate an official position or approval by Caltrans on this project and is for informational purposes only.

Project Understanding

The proposed project would reactivate the project site as a groundwater extraction site by constructing a replacement well that would be deeper than the current one.

Construction-Related Impacts

Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans. To apply, please visit Caltrans Transportation Permits ([link](#)).

Prior to construction, coordination may be required with Caltrans to develop a Transportation Management Plan (TMP) to reduce construction traffic impacts to the STN.

Mary Jeyapragash, Senior Planner
June 30, 2025
Page 2

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Marley Mathews, Associate Transportation Planner, via LDR-D4@dot.ca.gov. For future early coordination opportunities or project referrals, please visit Caltrans LDR website ([link](#)) or contact LDR-D4@dot.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Luo Yunsheng".

YUNSHENG LUO
Branch Chief, Local Development Review
Office of Regional and Community Planning

c: State Clearinghouse

From: [Mary Jeyaprakash](#)
To: [Shree Dharasker](#)
Cc: [Geoffrey Tick](#); [Jason Gurdak](#); [Noren Caliva-Lepe](#)
Subject: RE: 800 Carlisle Way Well and Water Tank Project
Date: Tuesday, June 17, 2025 2:17:00 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Hello Shree,

Good afternoon. Thank you for your email. I'll pass this information on to the applicant, Cal Water Co. At the time of Planning entitlement, we'll include a Condition of Approval (COA) for Cal Water to get required permits/inspections through Valley Water for the water production well. Please let me know if there is anything else the City should do to make this easy for all of us.

Thank you,



MARY JEYAPRAKASH
Senior Planner
Community Development Department

Follow us on:



Phone: 408-730-7449
Sunnyvale.ca.gov

*** The Sunnyvale Planning Division continues to provide virtual services, such as [electronic permit submittals](#) and virtual meetings. In-person services are also available at the [One Stop Permit Center](#), located on the second floor of the new City Hall building at 456 W. Olive Avenue. Underground parking is available and can be accessed on W. Olive Avenue. Masks and appointments (pcappointment@sunnyvale.ca.gov) are strongly encouraged.**

General zoning information is also available on the [Planning Division webpage](#).

From: Shree Dharasker <sdharasker@valleywater.org>
Sent: Tuesday, June 17, 2025 12:58 PM
To: Mary Jeyaprakash <MJeyaprakash@sunnyvale.ca.gov>
Cc: Geoffrey Tick <GTick@valleywater.org>; Jason Gurdak <JGurdak@valleywater.org>
Subject: 800 Carlisle Way Well and Water Tank Project

WARNING - This email came from an EXTERNAL source. Confirm the sender and its contents are safe before responding, opening attachment or links.

Santa Clara Valley Water District (Valley Water) has reviewed the Notice of Availability of

a Draft Environmental Impact Report (EIR) for the 800 Carlisle Way Well and Water Tank Project in Sunnyvale, received on May 9, 2025, and has the following comments:

1. The proposed water production well must be permitted and inspected by Valley Water. Please find additional information about the well permitting process on Valley Water's Well Permit and Inspection web page (<https://www.valleywater.org/contractors/doing-businesses-with-the-district/wells-well-owners/well-permits-and-inspections>) or by calling the Well Permitting and Inspections Hotline at: 408-630-2660.

Valley Water's District Action requires that the amount of groundwater being pumped be disclosed by well owners to Valley Water in a water production statement. Please find additional information on Valley Water's web page about groundwater production reporting methods and requirements (<https://www.valleywater.org/contractors/doing-businesses-with-the-district/wells-well-owners/reporting-methods-and-requirements>) or by contacting Valley Water's Revenue Unit staff at 408-630-2770 or email: WaterRevenue@valleywater.org

2. Valley Water has no right of way at this location, and no encroachment permit will be needed in accordance with the Water Resources Protection Ordinance.
3. Valley Water records indicated that there is 1 properly destroyed well at this site. Because the well is considered properly destroyed, no action is necessary to protect them or to bring them into compliance with the Valley Water's Well Ordinance. While Valley Water has records for most wells located in the County, it is always possible that a well exists that is not in Valley Water's records. If previously unknown wells are found on the subject property during development, they must be properly destroyed under permit from the Valley Water or registered with the Valley Water and protected from damage. For more information, please call the Valley Water's Well Ordinance Program Hotline at 408-630-2660.
4. The site is in FEMA Flood Zone X (area determined to be outside the 500-year flood and protected by levee from 100- year flood)

Please contact me if there are any other questions,

Shree Dharasker
Associate Engineer Civil
Community Projects Review Unit
(408)630-3037

From: [REDACTED]
To: [Mary Jeyapragash](#)
Subject: 800 Carlisle Way We'll & Water Tank Project
Date: Tuesday, May 13, 2025 9:48:16 AM

WARNING - This email came from an EXTERNAL source. Confirm the sender and its contents are safe before responding, opening attachment or links.

Good day Mary, my name Thomas Gill and I live at [REDACTED] adjacent to the planned project. I live in an Eikler home and have recently discovered that these style homes were built without using rebar in the construction of there foundations. All the adjacent home properties around the site are Eikler homes as well. These homes are subject to heating issues because of radiant heat pipes running through the foundation due to earth movement. When the earth moves, the foundation moves to create these leaks in the pipes. My concern is that the Vibrations and Noise that will exceed the city established thresholds will cause damage to not just my home but also all the others. Over time the movement can take place from these exceeded noises/vibrations after the fact. I also have a swimming pool adjacent to the site as do some other homes around the site. What guarantees do we have that this movement over time will not happen?

Thank You
Thomas Gill
[REDACTED]
Sunnyvale, Ca. 94087

Sent from my iPhone

From: [REDACTED]
To: [Mary Jeyapragash](#)
Subject: questions and Comments regarding Draft EIR for the proposed Well & Water Tank Project at 800 Carlisle Way, Sunnyvale
Date: Monday, May 19, 2025 11:19:12 PM

WARNING - This email came from an EXTERNAL source. Confirm the sender and its contents are safe before responding, opening attachment or links.

Dear Mary:

In this email I am providing my views, comments and concerns on the Draft EIR for the proposed Well & Water Tank Project at 800 Carlisle Way, Sunnyvale. This email reflects my views as well as those of my husband, Uli Palli, and my son, Max Palli.

I would ask that my questions and concerns are addressed well before the deadline of June 30 so that if there are any follow-on comments or questions they can be addressed as well.

Here are my concerns:

Concern about the Geotechnical Report's Preliminary Nature

I have reviewed the Geotechnical Feasibility Study, and it says clearly that its recommendations are “preliminary” and “should not be used for project design” [see section 5.4. of the Geotechnical Feasibility Study], because no actual subsurface exploration was done yet. It says a full design-level investigation is needed later. But the EIR seems to say impacts like liquefaction and expansive soils are less than significant based on following the recommendations of this future, not-yet-done study. How can the EIR conclude these impacts are minor when the specific safety measures based on real site conditions haven't even been figured out or analyzed yet? This feels like putting the cart before the horse.

Please address this glaring inconsistency and the timeline for conducting a full design-level geotechnical investigation including exploration, laboratory testing, and analysis.

Health Concerns

A critical area of concern that needs further rigorous review and mitigation is the potential for harmful effects on neighbors in general and sensitive populations in particular, specifically children and the elderly, from construction noise and pollution. The Initial Study and Health Risk Assessment explicitly identify “sensitive receptors”, defining them as groups “more affected by air pollution than others, including “children under 16, the elderly over 65”, as well as individuals with respiratory or cardiovascular diseases. There are several “sensitive receptors” are located in the adjacent and nearby houses.

The reports highlight Toxic Air Contaminants (TACs), such as diesel exhaust (DPM), which is estimated to cause “about three-quarters of the cancer risk from TACs”. Diesel exhaust contains chemicals known as carcinogens and can lead to serious health effects. Concerns about health effects from diesel equipment, including the smell and inability to breathe in nearby homes, have been raised by residents.

Crucially, the health risk assessment modeling acknowledges that “For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs”. The modeling incorporated “age-sensitivity factors” reflecting this greater sensitivity. The analysis found that the “unmitigated maximum cancer risks from

construction activities at the project MEI [maximally exposed individual] location would exceed the single-source significance threshold". The calculated unmitigated risk for the MEI, was 13.65 per million, exceeding the threshold of 10 per million. While mitigation measures are proposed to reduce this calculated risk below the threshold, the initial finding demonstrates a significant potential impact on the health of the most vulnerable nearby residents.

Beyond air quality, construction noise is also a concern. High noise levels, particularly at night, can interfere with sleep, impacting the health and well-being of all residents, including vulnerable individuals. The EIR states that nighttime drilling noise would be a "significant and unavoidable impact" even with mitigation. The proposed mitigation for this significant noise impact—hotel vouchers—is limited to only the "two nearest residences" and, importantly, the EIR notes that this measure does not actually reduce the significant noise level itself. **How are the health and well-being of all neighbors who may be affected by unavoidable construction noise and pollution being adequately protected?**

Concerns about Ground Instability

Neighbor concerns were raised regarding localized ground instability resulting from the extraction of water from the new deep well. While the Geotechnical Feasibility Study addresses settlement from structural loads and seismic events, does the EIR include a specific, localized geotechnical or hydrogeological analysis of the potential for subsidence or ground instability caused directly by pumping the deep 810-foot well, distinct from regional subsidence or settlement under building loads?

Questioning Analysis of Pumping-Induced Subsidence

Some neighbors are worried about the ground around our homes potentially becoming unstable because of pumping water from that new, deep well. The Geotechnical Study talks about settlement from buildings or earthquakes, but it doesn't seem to specifically look at whether pumping water from 810 feet deep could cause the ground to settle or become unstable near the well. Also, one of the other reports mentioned the previous well had problems with 'excessive sanding' and casing issues, which might suggest some local ground issues.

The Geotechnical Study does not address how subsurface conditions related to foundation work, excavation (potentially through pesticide-contaminated soil), or drilling the deep well might be affected by or interact with existing or nearby contamination.

Has there been a specific study done to analyze the risk of subsidence or instability just from the deep well pumping right at the site and next door?

Undocumented Fill Assessment

The GeoTech study acknowledges the likely presence of undocumented fill that could cause structural distress if not mitigated, recommending its extent and mitigation methods (removal/reuse) be evaluated in the design-level study. Similar to other geotechnical hazards, the specifics of dealing with this potential issue are deferred to a future study, impacting the completeness of the analysis in the EIR regarding potential impacts like disposal of fill material, especially if it's contaminated (e.g., with pesticides).

Concern about Potential Contamination Risks

The Phase I Environmental Site Assessment says the site was historically used for orchards, and there's a "potential that residual pesticides could remain in Site soil". It also mentions

nearby contaminated sites, like a Shell gas station that had groundwater contamination. The report didn't get a questionnaire back from the owner or interview previous owners, but concluded there were "no significant data gaps". Could pumping the new deep well potentially change how groundwater flows and maybe pull or spread any old contamination, either from pesticides on site or those nearby plumes? **Has the EIR really looked closely at this specific risk, especially since the initial site assessment was missing some information?**

Lack of Analysis for Catastrophic Tank Failure

While the reports say the area isn't in a flood zone usually, my concern, and others have mentioned this too, is about what happens if the 2.5 million-gallon water tank *breaks*. Would that flood our homes? Standard flood maps don't show this kind of event. **Has a specific analysis been done to show how a sudden, catastrophic failure of this large water tank would affect flooding and property damage in the immediate neighborhood?"**

Information Gaps Relating to Environmental Questionnaire

The Phase I ESA notes that the owner's environmental questionnaire was not returned and previous owners/occupants were not interviewed, yet concludes "No significant data gaps were identified". How can the EIR rely on the Phase I ESA's findings regarding the absence of past spills or significant environmental concerns when key information from current and previous site users was not obtained?

Need for Specific, Enforceable Nighttime Construction Noise Mitigation

The EIR materials acknowledge that construction noise, especially from drilling, could be a "significant and unavoidable impact". Residents, including myself, are extremely concerned about this impacting our sleep and health, especially at night. The current plan talks about mitigation measures, but they seem general. **What specific, mandatory, and enforceable mitigation measures will be in the Mitigation Monitoring and Reporting Program (MMRP) specifically for the drilling phase, and how will nighttime noise limits be monitored and enforced to prevent sleep disruption?**

Concerns about Tank Height, Privacy, Optics and the Variance Process

The tank height was initially proposed at 12 feet and is now doubled to 24 feet. We live in a single-story district intended to protect our privacy, especially with our large glass windows facing the backyards. A 24-foot structure with people working on it is like a two-story building, raising serious privacy and security concerns. Cal Water is seeking a variance for this. **How will the EIR analysis, and specifically the proposed landscaping and screening, definitively guarantee that our privacy and security from overlooking won't be negatively impacted by the final 24-foot tank and its maintenance activities?"**

Also, while screening the tank from the view of residents on Carlisle Way was discussed during the April information meeting, no plan seems to exist to do the same for the residents of Coventry Court. How will the tank be obscured from view? How will it be covered to avoid reflection and glaring and sounds bouncing off of it increasing noise levels even more? Why has no consideration been given so far to how the tank will look from the perspective of the residents of Kingfisher Way and Coventry Court?

Unconsidered Social Impact

While environmental impacts are assessed, the direct social and economic impacts on neighboring residents stemming from these environmental effects (e.g., health impacts from noise-induced sleep deprivation, quality of life degradation from odors/fumes, potential

effects on property values from perceived risks or aesthetic changes) are not explicitly quantified or analyzed in the sources provided. How were these resident concerns about the direct effects of environmental impacts on their well-being and property considered in the overall CEQA determination?

I am looking forward to having my questions answered and the short-comings of this report addressed.

Best regards,

Tina Baumgartner

[REDACTED]

Sunnyvale

Tina Baumgartner, Ph.D., MBA

[REDACTED]

From: [Mary Jeyaprakash](#)
To: [REDACTED]
Bcc: [Noren Caliva-Lepe](#)
Subject: RE: Tour of Water Tank/Pump Site at 1322 Warner Avenue, Sunnyvale – Courtesy Notice
Date: Monday, June 2, 2025 8:44:00 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Dear Mr. Burney,

Thank you for your email. I'll forward your comments to our environmental consultant team to prepare a response which will be added in the final environmental impact report. This report will be part of the consideration when the Planning Commission and City Council review the proposal.

Thank you,



MARY JEYAPRAKASH
Senior Planner
Community Development Department

Follow us on:



Phone: 408-730-7449
Sunnyvale.ca.gov

*** The Sunnyvale Planning Division continues to provide virtual services, such as [electronic permit submittals](#) and virtual meetings. In-person services are also available at the [One Stop Permit Center](#), located on the second floor of the new City Hall building at 456 W. Olive Avenue. Underground parking is available and can be accessed on W. Olive Avenue. Masks and appointments (pcappointment@sunnyvale.ca.gov) are strongly encouraged.**

General zoning information is also available on the [Planning Division webpage](#).

From: Roger Burney [REDACTED] >
Sent: Sunday, June 1, 2025 12:02 PM
To: Mary Jeyaprakash <MJeyaprakash@sunnyvale.ca.gov>
Subject: Re: Tour of Water Tank/Pump Site at 1322 Warner Avenue, Sunnyvale – Courtesy Notice

WARNING - This email came from an EXTERNAL source. Confirm the sender and its contents are safe before responding, opening attachment or links.

Preventing the build an industrial site needlessly in a multi-million dollar area where housing should go, must be the purpose of a planning organization.

When this site was originally built, it serviced 3 streets among miles of orchards.

The water district would never consider buying a home in this area and building it into an industrial site.

If it must be built here, the solution is clear. Build it all below ground level.
Ultimately the neighborhood pays the costs.

Thus well and tank could go anywhere. Put it in an industrial area.

On May 28, 2025, at 13:19, Mary Jeyaprakash <MJeyaprakash@sunnyvale.ca.gov> wrote:

Hello All,

Good afternoon. I am looking forward to seeing you all this Thursday at 6pm, at the Water Tank/Pump Site at 1322 Warner Avenue, Sunnyvale.

Thank you,

<image001.png>

Follow us on:

<image002.png>

MARY JEYAPRAKASH

Senior Planner

Community Development Department

<image003.png>

Phone: 408-730-7449

Sunnyvale.ca.gov

<image004.png>

*** The Sunnyvale Planning Division continues to provide virtual services, such as [electronic permit submittals](#) and virtual meetings. In-person services are also available at the [One Stop Permit Center](#), located on the second floor of the new City Hall building at 456 W. Olive Avenue. Underground parking is available and can be accessed on W. Olive Avenue. Masks and appointments (pcappointment@sunnyvale.ca.gov) are strongly encouraged.**

General zoning information is also available on the [Planning Division webpage](#).

From: Mary Jeyaprakash <MJeyaprakash@sunnyvale.ca.gov>

Sent: Friday, May 16, 2025 9:19 AM

To: Mary Jeyaprakash <MJeyaprakash@sunnyvale.ca.gov>

Cc: Schmidt, Melinda <mschmidt@calwater.com>

Subject: Tour of Water Tank/Pump Site at 1322 Warner Avenue, Sunnyvale – Courtesy Notice

Hello All,

Good morning.

Tour of Water Tank/Pump Site at 1322 Warner Avenue, Sunnyvale – Courtesy Notice

The applicant, Cal Water, has scheduled to tour a water tank and pump site at 1322 Warner Avenue, which is similar to the project site at 800 Carlisle Way. This request came up at the community outreach meeting we had last month, to show neighbors a water tank and pump site that is in operation. The proposed project includes construction of a replacement groundwater extraction well at approximately 800 to 1,000 feet below the ground surface, an approximately 24-foot-tall water storage tank (56,000 gallons), storage cabinets, and associated utility and right-of-way improvements.

Join the tour to see a similar site in operation and to learn more about the project.

When: Thursday, May 29, 2025, from 6 to 7 p.m.

Where: 1322 Warner Avenue, Sunnyvale

Contact me for more information. If you are unable to attend the tour or have any questions, [contact Melinda Schmidt](#), Cal Water Superintendent, 650-390-0284 x74201.

Thank you,

<image001.png>

Follow us on:

<image002.png>

<image003.png>

<image004.png>

MARY JEYAPRAKASH

Senior Planner

Community Development Department

Phone: 408-730-7449

Sunnyvale.ca.gov

*** The Sunnyvale Planning Division continues to provide virtual services, such as**

[electronic permit submittals](#) and virtual meetings. In-person services are also available at the [One Stop Permit Center](#), located on the second floor of the new City Hall building at 456 W. Olive Avenue. Underground parking is available and can be accessed on W. Olive Avenue. Masks and appointments (pcappointment@sunnyvale.ca.gov) are strongly encouraged.

General zoning information is also available on the [Planning Division webpage](#).

To: [REDACTED]; Mary Jeyaprakash <MJeyaprakash@sunnyvale.ca.gov>
Subject: Carlisle Well and Water Tank

WARNING - This email came from an EXTERNAL source. Confirm the sender and its contents are safe before responding, opening attachment or links.

Hello Mary,

I have a few questions regarding the Carlisle Well and Water Tank Project. I have read through the documents on the website.

1. Utility Sheds

- Why are there three utility sheds proposed?
- How will these sheds be safeguarded against vandalism?
- How will these sheds be monitored to ensure that the chemicals are not leaking?
- Will the fire department be notified of the chemicals being stored in case the sheds are on fire?

2. Soil

- How will you ensure that the soil dust from loading on to the trucks is not dispersed into the air and the surrounding neighborhoods.

3. Two to Three Week Period of Non-Stop (24 Hours) Work on the Project

- How will you ensure the noise level does not rise above the acceptable levels defined by the Environment Protection Agency during the day and at night.
- There are studies that show continuous disruption of sleep for a short duration can cause significant negative affects on both the physical and mental health. The long-term health risks associated with interrupted sleep increase the risk of high blood pressure, cardiovascular disease, diabetes, etc.

Noise events at night become more intrusive, since the noise level of the event over background noise is greater than during the daytime. Have you done a noise assessment to account for the differences between daytime and nighttime exposure?

4. Pump Activity

- It is our understanding that the pumps may be run 24/7 during peak periods. How are peak periods defined? Is it possible that the pumps will run for a six month period or

longer? Has there been an assessment addressing how the continuous noise level will affect the physical and mental health of the residents in the area and what mitigation will be put in place?

5. Diesel Exhaust

- Diesel exhaust is known as a highly toxic air contaminant. Many of the homes in the surrounding area do not have air conditioning therefore the residents have to open the windows to cool down their homes. Why aren't solar power and electric vehicles being used for this project?

Jill Willard



(A).Incomplete or insufficient impact analyses and mitigations:

- 1. Night-time lighting:** Instead of dismissing night-time lighting as only temporary, CaWater should provide the location, height, specific type and brightness of each night-time lighting device during the 24/7 drilling for up to 27 days, and mitigation measures.

It is well known that bright light at night suppresses the production of the sleep hormone melatonin. Sleep deprivation has consequences. CaWater property is adjacent to the back of Eichler houses, with master bedrooms and mostly floor to ceiling glass construction.

- 2. Disposal of 1.7 million gallons of water:** How much of the initial draw of 1.7 million gallons of water will be discharged on land and at what rate? How would the volume and force of water discharged on land affect the structure of nearby soil, which is further disturbed by ground vibrations? Has CaWater considered the option of discharging water to the East Channel? Note additional information not in the DEIR: I asked, "1.7 million gallons of water will first be drawn, and 18,000 gallons of it will go down the storm drain. Where will the rest of the water go?" CaWater's response (6/2/2025 email): "Water generated during well drilling and well testing operations will go to three potential destinations. 1. Storm Drain. 2. Sanitary Sewer. 3. Land Discharge. In the case of storm drain and land discharges, we will work under our NPDES permit and City permit, as required. For sewer discharge, we will work with City for permit. Final volumes of each are still undetermined though an initial estimate of 18,000 gallons may have been provided to the City by my predecessor in engineering" Note that 1.7 million gallons of water is equivalent to 5.2 acre-foot, and the CaWater property is about 0.77 acre.

3. Noise analysis and mitigation**(a) Drilling operation (24/7 for up to 27 days total)**

Table 7-1 in Appendix B lists the equipment modeled in the noise analysis. Trucks have been omitted in the noise analysis, though trucks will be used to move mud off site. The schedule of the trucks (within construction hours or at night) should also be made clear. Even though trucks will not be running continuously, their peak noise should be added to the noise estimate (not the averaged noise for the duration of the drilling operation).

Noted to facilitate the discussion in (b): With mitigation measure DEIR MM NOI-1.1 with acoustic barriers installed as shown in Appendix B Fig. 7-3, reproduced here, modeling shows that for all except two of the nearby residences, the modeled noise levels in DEIR Table 3.1-4 can be below 50 dBA, satisfying the night-time noise limit. Hotel vouchers can be provided to the two.

Equipment	Quantity Model
Rig Engine	1
Rig Engine Exhaust	1
Cooling Fan	1
Drawworks	1
Rotary Table	1
Mud Pump Shaker	1
Mud Pump Motor	1
Mud Pump Engine & Fan	1
Air Compressor	1
Genset	1

p25/73

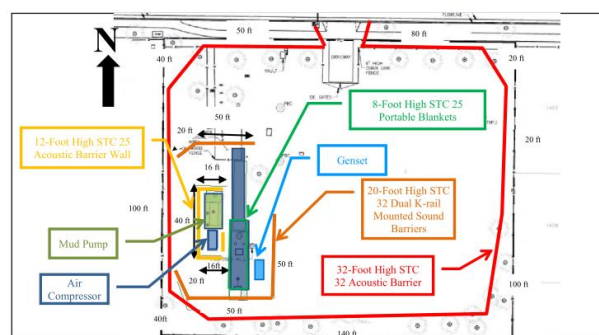


Figure 7-3 Modeled Noise Mitigation Sound Barrier Layout at Proposed Well Site
Appendix B, p28/73

- (b) Demolition, grading & excavation, trenching & foundation, water tank construction (approx 6 months) **DEIR MM NOI-1.3 for these construction phases is very unsatisfactory.**

Again, the noise generated by trucks has been neglected in the modeling.[1]

DEIR Table 3.1-5, reproduced below, shows high levels of noise, some exceeding the significant threshold established as 80 dBA. Yet DEIR MM NOI-1.3 is only “Ongoing Noise Monitoring and Implementation of Portable Acoustic Barriers”. Are residents to be tested to the limit of their endurance, before some acoustic barriers are placed here and there?

If there is confidence in the modeling, an acoustic barrier around the perimeter, as shown in the figure above, should be planned and installed before any resident suffers. Since the measurements at the monitoring sites may not reflect the real noise level at residences, it is all the more important to bring down the overall predicted noise level to have a safety margin for uncertainties in modeling, and realistic deviations not included in modeling.

Unfortunately for residents, there is an issue with using 80.0 dBA as the significant noise threshold. The World Health Organization recommends no more than 40 hours per week of exposure time at 80 dBA to avoid hearing loss.[2] And there are also noise-related health risks other than hearing loss, to be discussed later.

Table 3.1-5: Estimated Noise Levels During Other Construction Activities (dBA)

Noise Receptor	Allowed Construction Hours Noise Threshold	Demolition	Grading and Excavation	Trenching and Foundation	Water Tank Construction
1	80.0	70.8	69.9	59.9	66.3
2	80.0	75.4	73.8	64.0	70.3
3	80.0	82.0	78.9	69.6	74.6
4	80.0	77.2	76.4	65.3	72.4
5	80.0	79.3	81.6	68.9	78.8
6	80.0	76.2	78.9	67.7	76.0
7	80.0	78.4	81.9	72.3	78.9
8	80.0	77.7	80.8	72.8	78.6
9	85.0	80.2	81.3	73.7	79.6

Note: **Bold** text indicates an exceedance of the allowed construction hours noise threshold. The location of each receptor is shown on Figure 3.1-2.

DEIR pdf p42/65

Construction hours allowed: M-F 7 am-6 pm, SAT 8 am-5pm)

4. Ground vibration analysis

It would be foolhardy, and unfair to residents, to take the calculated results literally and dismiss ground vibration as insignificant. We should be aware of the crude nature of the calculations as well as other uncertainties [3-5]. A simple phenomenological formula is used to calculate the peak particle velocity of soil as ground vibrations propagate from the source:

$$\text{Eq (1)} \quad PPV = PPV_{ref} \left(\frac{D_{ref}}{D} \right)^n$$

where PPV denotes the peak particle velocity to be determined at a distance D from the equipment; PPV_{ref} is the reference peak particle velocity at the reference distance D_{ref}

The exponent n in Eq(1) determines how fast the vibration decreases with distance. The U.S. Federal Transit Administration (FTA) uses a value of 1.5 [3], and this value is used in the DEIR analysis. However, observations have shown slower decays than predicted. The California Department of Transportation (Caltrans) has suggested $n = 1.1$ in general, and higher values in some soil types [6] Digging in my backyard in Coventry Ct, I would assign $n = 1.1$ to my soil.

The following is professional recommendation: [7]:

'Vibration velocity calculations - and representations of "vibration safety" based on them - should only be viewed as approximate, at best, in the absence of proper validation in the specific locale of interest. When such equations are used in an effort to prevent damage, a "safety factor" of at least 2 should be included in the calculated velocity and corresponding "safe distance".'

If we adopt this recommendation, then in Appendix Table 10-1, the receptor at 17 ft would experience 0.06 ips, above the distinctly perceptible threshold [8]. In Appendix Table 10-2, the receptor at 55 ft would also experience distinctly perceptible vibrations, except when the jack hammer is used alone.

Table 10-1 Water Well Drilling Vibration Analysis Results

Activity	Typical PPV at 100 ft (ips)	Distance to Nearest Structure (ft)	Distance to Vibration Limit for "Historic and Some Old Buildings" (ft)	Distance to "Distinctly Perceptible" for Fragile Buildings (ft)	Approximate Vibration Level at 17 feet from source (ips)
Water Well Drilling Equipment	0.0021	17	5	14	0.03
Vibration Limit for "Historic and Some Old Buildings" (ips)			0.25		
"Distinctly Perceptible Level" (ips)			0.04		

Based on the vibration thresholds of significance defined in Section 5.4 of this report, vibration produced by the projects will be less than 0.25 ips for the "Vibration Limit for Historic and some old building" and below the 0.04 ips "Distinctly Perceptible" level during the water well drilling activities. Since the results indicate that the approximate vibration levels are below the "Historic and some old building" vibration limit and the "distinctly perceptible" limit during the water well drilling phase, no vibration mitigation measures are recommended.

P53/73 of Appendix B pdf Some of these results are in DEIR Table 3.1-7

Table 10-2 Construction Demolition Vibration Analysis Results

Activity	Typical PPV at 25 ft (ips)	Distance to Nearest Structure (ft)	Distance to Vibration Limit for "Historic and Some Old Buildings" (ft)	Distance to "Distinctly Perceptible" for Fragile Buildings (ft)	Approximate Vibration Level at 55 feet from source (ips)
Excavator	0.058	55	10	30	0.02
Hoe Ram	0.089	55	13	40	0.03
Jack Hammer	0.035	55	7	23	0.01
Dozer	0.089	55	13	40	0.03
Vibration Limit for "Historic and Some Old Buildings" (ips)			0.25		
"Distinctly Perceptible Level" (ips)			0.04		

P56/73 of Appendix B pdf Some of these results are in DEIR Table 3.1-8

For both Tables 10.1 and 10.2, the contribution of trucks have been omitted. For loaded trucks, the reference source amplitude at 25 ft is 0.076 ips as given by CalTrans.[9] For Table 10.2, it should be clarified if the activities will occur separately, or will overlap in time. Moreover, for a hydraulic breaker (hoe ram), Caltrans has modified Eq (1) to account for differences in impact energy, and I would like to know if the hoe ram to be used indeed delivers 5000 ft-lbs like the reference hoe ram. [10]

With regard to Table 10.1 for the well drilling phase, is it valid to use Eq (1) and a PPV reference taken at 100 ft, to calculate the PPV at a distance of only 17 ft - much closer to the source than the reference? For other calculations, the receptor distance is larger than the reference distance of 25 ft.

Neighbor Tom Gill has raised concerns about the effects of ground vibrations on the unreinforced concrete slab foundations of Eichler houses, and the water pipes in the concrete slabs. Even discounting the potential of resonance vibrations, we do not know if 0.25 ips is a “safe” limit with regard to structural damage.[11]

Professionals recommend these measures :[12] **(i) pre-construction documentation** of existing conditions of adjacent buildings in detail, and **(ii) construction vibration monitoring** at critical locations around the construction site and near adjacent buildings; with limits agreed upon prior to construction. (Real-time monitoring results should be available to residents.)

5. Air quality

DEIR Impact AIR-3 states: “The project would not expose sensitive receptors to substantial pollutant concentrations with mitigation incorporated”. **MM Air 3.1 should be strengthened.**

Diesel exhaust contains both particulate matter and gaseous components which are toxic pollutants.[13] Diesel exhaust has many adverse health effects, not only cancer. EPA specifies diesel engine emission standards in particulate matter (PM), non-methane hydrocarbons (NMHC), nitrogen oxides (NO_x) and carbon monoxide (CO). Hydrocarbons in diesel exhaust include benzene, formaldehyde, and many other harmful or carcinogenic organic compounds. Nitrogen oxides can lead to smog formation. As for human health, nitrogen oxides irritate eyes, nose, throat and lungs; cause shortness of breath and nausea; even low-level exposure for 1-2 days can cause fluid build-up in the lungs.[13,14]

Tier 4 emission standard has been in effect since 2015 [15] and the California Air Resources Board has started working on Tier 5 to further reduce ultrafine particulate matter. Tier 4 provides drastically reduced emissions in both NMHC+ NO_x and PM [15] Tier 4 also requires the use of low-sulphur fuel, strongly reducing the emission of sulphur oxides (SO_x), which are harmful to both human health and our environment [16]

The table below compares, for a few cases, the results of reducing PM emissions by 30% in Tier 2 and 3 – with Tier 4 emissions. Such mitigation does not change the gaseous emissions- around 7-13 times that of Tier 4, and PM emissions are still as large as 5-21 times that of Tier 4.

Engine hp type	Tier 2		Tier 3		Tier 2 mitigated		Tier 3 mitigated		Tier 4	
	Gas	PM	Gas	PM	Gas	PM	Gas	PM	Gas	PM
75 <= hp <100	5.6	0.3	3.5	0.3	5.6	0.21	3.5	0.21	0.43	0.01
600 <= hp <= 750	4.8	0.15	3	0.15	4.8	0.105	3	0.105	0.44	0.01
750<= hp <=1207 (G)	4.8	0.15			4.8	0.105			0.64	0.02

Note: (i) emissions in g/bhp-hr (ii) "Gas"= NMHC+Nox (iii) "mitigated": 30% reduction in PM

(iv) "G" refers to generator

This would severely short-change residents, and would not sufficiently protect nearby residents from harm. Diesel exhaust can infiltrate our homes and get trapped. During the 24/7 drilling and days in the extended construction period, we shall have limited opportunities to open our windows to purge the trapped exhaust. Senior and very senior residents live in half of the households closest to CalWater. Among us is a 94-year-old neighbor in fragile health. A neighbor adjacent to CalWater was once sickened, years ago, by the emission from a diesel generator turned on by the cell phone company on site for a few days; she needed medication to recover. **To give us the best chance for survival, best efforts should be made to use electric or natural gas-powered equipment, and Tier 4 engines should be specified in diesel-powered equipment..**

Questions/comments on the following:

Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Is the Lead Agency contact responsible only for responding to dust complaints, and no other complaints? How do residents know what is not in compliance with applicable Air District regulations? In case we happen to know, how well will it work for us to call the Air District's number, and shall we go through being transferred from one staff member to another?

Only posting the contact information of the lead agency at the construction site may not be helpful enough. If residents feel any ill effects, it may not be safe to go to the construction site to find the information. Information on contact person(s), construction schedule, precautions residents should take and other communications, should be distributed beforehand to at least the residents in the immediate vicinity of CalWater, where the chances of ill effects may be greatest. The project is unique, and unprecedented in our lifetime in Sunnyvale. Depending on the situation, the promise of responding within 48 hours is not very assuring.

(B) Other considerations

1. When regulations fall short: health risks

(a) The high noise threshold of significance of 80 dBA is based on the risk of hearing loss. But we now know that, in addition to hearing loss, excessive noise exposure also causes or exacerbates many other health issues, including hypertension, damages to the nervous system, cardiovascular and mental health problems [17] (b) If these stressors – bright light at night, noise, bad air quality or sensations of vibration – act together, will the combined adverse effects on health be reached at lower thresholds than what might be suggested by the individually analyzed impacts? (c) Any of the stressors listed above can cause sleep deprivation during the 24/7 drilling for up to 27 days. Sleep deprivation is associated with an increased risk of chronic diseases, a weakened immune system, impaired cognitive functioning, and an increased risk of accidents. [18,19]

2. Feedback on Draft Mitigation Monitoring and Reporting Programs : In addition to dust control, and real-time noise monitoring results which should be available to residents, I would like to reiterate that real-time monitoring of ground vibrations is also warranted, as suggested in (A)4 above, together with pre-construction documentation of nearby building structures.

Acknowledgement: Thanks to: Tom Gill for discussions; Senior Planner Mary Jeyaprakash for sending LUTE DEIR_August 2016.pdf; Luis Zamudio (CalWater) for responses to my inquiries.

Notes and references:

- [1] Appendix B Tables 8-1 to 8-5 (starting at p31/73 of pdf) list what is modeled for noise analysis. Table 8-1 for demolition & construction phase: concrete saw, rubber-tired dozer, JD 444 loader, backhoe. Table 8-2 for the grading & excavation phase lists the same equipment. Table 8-3 lists the trenching & foundation construction equipment as backhoe. Tables 8-4 & 8-5 list tank construction phase equipment as a crane, 2 forklifts, a JD 444 loader, a backhoe, a welder and a generator set.
- [2] <https://www.who.int/news-room/questions-and-answers/item/deafness-and-hearing-loss-safe-listening>
- [3] "Vibration and Distance", [https://vibrationdamage.com/vibration_and_distance.htm#\[6\]](https://vibrationdamage.com/vibration_and_distance.htm#[6])
- [4] The simple, phenomenological formula does not consider the soil type and structure, or the physics of vibration wave propagation in soil. The measured reference PPV_{ref} for the same type of equipment can differ according to locale. Outside the scope of the formula is the potential of resonant vibrations of building structures; heavy equipment generates a range of frequencies, including typical resonant frequencies of building structures. These are just some of the complications.
- [5] The thresholds for adverse impacts come from statistical analysis, with intrinsic uncertainties, and a "correction" for continuous vibrations, which can sustain resonance vibrations or cause structural fatigue, is to halve the values obtained in studies of short-duration events causing vibrations. There are also variations and unknowns in the receptors.
- [6] "Transportation and Construction Vibration Guidance Manual", California Department of Transportation (Caltrans), 2020. <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>

$$PPV_{Vibratory\ Pile\ Driver} = PPV_{Ref} (25/D)^n \quad (\text{in/sec}) \quad (\text{Eq. 10})$$

Where:

$$PPV_{Ref} = 0.65 \text{ in/sec for a reference pile driver at 25 ft}$$

$$D = \text{distance from pile driver to the receiver in ft.}$$

$$n = 1.1 \quad (\text{the value related to the attenuation rate through ground})$$

The suggested value for "n" is 1.1, the same value used for impact pile drivers. If desired and if soil information is available, the value of "n" may be changed to reflect soil type classification, as shown in Table 17.

Table 17. Measured and Suggested "n" Values Based on Soil Class

Soil Class	Description of Soil Material	Value of "n" measured by Woods and Jedele	Suggested Value of "n"
I	Weak or soft soils: loose soils, dry or partially saturated peat and muck, mud, loose beach sand, and dune sand, recently plowed ground, soft spongy forest or jungle floor, organic soils, top soil. (shovel penetrates easily)	Data not available	1.4
II	Competent soils: most sands, sandy clays, silty clays, gravel, silts, weathered rock. (can dig with shovel)	1.5	1.3
III	Hard soils: dense compacted sand, dry consolidated clay, consolidated glacial till, some exposed rock. (cannot dig with shovel, need pick to break up)	1.1	1.1
IV	Hard, competent rock: bedrock, freshly exposed hard rock. (difficult to break with hammer)	Data not available	1.0

[7] "Vibration Regulation", [https://vibrationdamage.com/vibration_regulation.htm#\[15\]](https://vibrationdamage.com/vibration_regulation.htm#[15])

[8] Caltrans

Table 20. Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

[9] Caltrans

California Department of Transportation

Chapter 7: Vibration Prediction and Screening
Assessment for Construction Equipment

Table 18. Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV at 25 ft. (in/sec)
Vibratory roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
Crack-and-seat operations	2.4

Sources: Federal Transit Administration 2018 (except Hanson 2001 for vibratory rollers) and Caltrans 2000 for crack-and seat-operations.

Caltrans pdf p61/190 Large bulldozer is proxy for hoe ram

[10] CalTrans, Chapter 7.1.2

Based on the above discussion, vibration produced by hydraulic breakers can be estimated by the following formula:

$$PPV_{Hydraulic\ Breaker} = PPV_{Ref} (25/D)^n \times (E_{equip}/E_{Ref})^{0.5} \text{ (in/sec) (Eq. 11)}$$

Where:

$PPV_{Ref} = 0.24 \text{ in/sec}$ for a reference hydraulic breaker at 25 ft.

$D = \text{distance from hydraulic breaker to the receiver in ft.}$

$n = 1.1$ (the value related to the attenuation rate through ground)

$E_{Ref} = 5,000 \text{ ft-lbs.}$ (rated energy of reference hydraulic breaker)

$E_{equip} = \text{rated energy of hydraulic breaker in ft-lbs.}$

The suggested value for "n" is 1.1. Because vibration from the hydraulic breakers originates primarily near the ground surface, a value of "n" based on soil classification may not necessarily be applicable; however, a higher value of "n" based on site-specific soil conditions could be used for a less-conservative estimation of vibration amplitude.

[11] Caltrans

Table 19. Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

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[12] “Issues Related to Construction Vibrations in Densely Populated Cities”, American Bar Association, 9/20/2021. https://www.americanbar.org/groups/construction_industry/publications/under_construction/2021/summer2021/issues-related-to-construction-vibrations/

“Special attention should be given to events that cause vibration levels in excess of the approved thresholds. It is critical to understand the cause of these events in a timely manner and remediate any detrimental effects of the construction activities in a timely manner.” Numerous other professional websites also suggest pre-construction documentation and continuous monitoring of ground vibrations.

[13] “Health Effects of Diesel Exhaust”, <https://oehha.ca.gov/air/health-effects-diesel-exhaust>

[14] “Nitrogen Oxides”, ATSDR, CDC. <https://www.atsdr.cdc.gov/toxfags/tfacts175.pdf>

Though very unlikely to occur - high levels of nitrogen oxides damage the respiratory system, result in deoxygenation, and..

[15] “Non-road Diesel Engine Certification Tier Chart”, <https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart> Tier color chart can be downloaded.

[16] “Sulfur Dioxide Basics”, Us EPA <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics>

[17] “Noise: a public health problem”, published 2/22/2025. <https://www.nature.com/articles/s41370-025-00748-4>

[18] “The health hazards of insufficient sleep” <https://www.health.harvard.edu/staying-healthy/the-health-hazards-of-insufficient-sleep>

[19] “Drowsy driving statistics and facts” <https://www.bankrate.com/insurance/car/drowsy-driving-statistics/> An estimated 17.6% of fatal crashes were caused by drowsy driving between 2017-2021.