

Draft

CITY OF LAFAYETTE HOUSING ELEMENT UPDATE

Program Environmental Impact Report

Prepared for
City of Lafayette

February 2021



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CHAPTER 1

Introduction

This Environmental Impact Report (EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA), California Public Resources Code Sections 21000, et seq., and the Guidelines for the California Environmental Quality Act (CEQA Guidelines), California Code of Regulations, Title 14, Sections 15000, et seq., to disclose the potential environmental consequences of implementing the proposed City of Lafayette Housing Element Update (HEU), referred to hereafter as the “project.” As required under CEQA, the EIR evaluates and describes the potentially significant environmental effects (“impacts”) of the project, identifies mitigation measures to avoid or reduce the significance of potential impacts, and evaluates the comparative effects of potentially feasible alternatives to the project.

1.1 Project Overview

The HEU project analyzed in the EIR would include adoption of General Plan amendments that would add or modify goals, objectives, policies, and implementation programs related to housing that would apply Citywide, and that would address the maintenance, preservation, improvement, and development of housing in the City.

In addition, the HEU would identify specific sites appropriate for the development of multifamily housing at a variety of income levels,, and the City would rezone those sites if/as necessary to meet the requirements of State law. Both the existing and proposed sites that can accommodate development of multifamily housing are located in a subset of the City, mostly in areas within and around downtown.

Based on the draft Regional Housing Needs Assessment (RHNA) allocations, the HEU will need to plan for at least an additional 2,114 dwelling units plus a “buffer”, which has been initially identified at 50 percent or about 1,000 units for planning purposes. The EIR evaluates a slightly higher buffer in order to consider a maximum build-out scenario for purposes of the CEQA evaluation. The final buffer size will be determined by the City Council upon adoption of the HEU. While the City may retain and reuse some sites in the current Housing Element that have not been built-upon, it is clear that Lafayette will also need to identify and rezone new sites not previously identified in order to meet the State mandates.

In addition to the amendments that would take place within the General Plan’s Housing Element, a number of other amendments to other elements of the General Plan would be required to fully conform those elements to the changes made in the Housing Element or comply with other changes in State law.

1.2 Purpose and Use of this EIR

CEQA requires a public agency to prepare an EIR describing the environmental effects of a project before a public agency can approve a project that may have potentially significant, adverse physical effects on the environment. The EIR is a public information document that identifies and evaluates potential environmental impacts of a project, recommends mitigation measures to lessen or eliminate significant adverse impacts, and examines feasible alternatives to the project. The information contained in the EIR must be reviewed and considered by the City of Lafayette and by any responsible agencies (as defined in CEQA) prior to a decision to approve or modify the project.

1.3 This is a Program EIR

This EIR is a Program EIR, as provided for in CEQA Guidelines Section 15168. Section 15168(a) of the CEQA Guidelines states that a Program EIR is appropriate for projects which are "... a series of actions that can be characterized as one large project and are related either:

1. Geographically;
2. A logical part in the chain of contemplated actions;
3. In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or
4. As individual activities carried out under the same authorizing statutory or regulating authority and having generally similar environmental effects which can be mitigated in similar ways."

Section 15168(b) of the CEQA Guidelines further states: "Use of a Program EIR can provide the following advantages. The Program EIR can:

1. Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action;
2. Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis;
3. Avoid duplicate consideration of basic policy considerations;
4. Allow the Lead Agency to consider broad policy alternative and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and
5. Allow reduction in paperwork."

Future discretionary actions that would be facilitated by the HEU's adoption, particularly those related to the development of housing, would require additional assessment to determine consistency with the analysis provided in this Program EIR. Potential future actions would also be subject to the mitigation measures established in this Program EIR unless superseded by a

subsequent environmental document that is required to analyze significant environmental impacts not foreseen in this Program EIR.

It is important to note that while the law requires the HEU to include an inventory of housing sites and requires the City to zone those sites for multifamily housing, the City is not required to actually develop housing on these sites. Future development on the identified sites will be up to the property owners and will be largely dependent on market forces and (in the case of affordable housing) available subsidies.

1.4 Role and Standards of Adequacy of the EIR

The CEQA Guidelines define the role and standards of adequacy of an EIR as follows:

- **Informational Document.** An EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency (CEQA Guidelines Section 15121[a]).
- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (CEQA Guidelines Section 15151).

CEQA Guidelines Section 15382 defines a significant effect on the environment as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project...” Therefore, in identifying the significant impacts of the project, this EIR describes the potential for the project to result in substantial physical effects within the area affected by the project, and identifies mitigation measures that would avoid or reduce the magnitude of those effects.

1.5 Environmental Review Process

1.5.1 Notice of Preparation

Pursuant to the requirements of CEQA for the initiation of environmental review, on August 2, 2021, the City sent a Notice of Preparation (NOP) to the State Clearinghouse [SCH No. 2021080038], responsible and trustee government agencies, organizations, and individuals potentially interested in the project. The NOP requested that agencies with regulatory authority over any aspect of the project describe that authority and identify relevant environmental issues that should be addressed in the EIR. Interested members of the public were also invited to

comment. The comment period for the NOP was set for August 2, 2021 through September 2, 2021. A scoping meeting was scheduled before the City’s Planning Commission for August 16, 2021. The scoping meeting was available for remote participation via Zoom, and was also viewable on YouTube.

The NOP and the comments received on the NOP are included in **Appendix A** of this EIR. As discussed in the NOP and pursuant to the provisions of CEQA, the City did not prepare a CEQA Initial Study prior to preparation of the EIR, because the City determined that it was clear at the time of the issuance of the NOP that an EIR was required (CEQA Guidelines Section 15060[d]).

1.5.2 Public Review

This Draft EIR is available for public review and comment as set forth in the Notice of Availability and Notice of Completion circulated by the City. During the review and comment period, written comments (including email) regarding the Draft EIR may be submitted to the City at the address below.

Sarah Allen
Assistant Planning Director
City of Lafayette
Direct: (925) 299-3208 | Main: (925) 284-1976
SAllen@ci.lafayette.ca.us

The Draft EIR, Notice of Availability, and other supporting documents, such as technical reports prepared as part of the EIR process, are available for public review at the offices of the Lafayette Planning and Building Department, 3675 Mount Diablo Boulevard #21, Lafayette, CA 94549, on the City’s website at: <https://www.lovelafayette.org/CEQA>, and on the State Clearinghouse website at: <https://ceqanet.opr.ca.gov/2021080038>.

The City Planning Commission will hold a hearing on March 7, 2022, during which time verbal comments from the public on the Draft EIR will be accepted. Readers should consult the Planning Commission’s webpage for how they can listen and participate during the hearing. The webpage can be found at: <https://www.lovelafayette.org/city-hall/commissions-committees/planning-commission>.

1.5.3 Final EIR and EIR Certification

Following the public review and comment period for the Draft EIR, the City will prepare responses that address all substantive written and oral comments on the Draft EIR’s environmental analyses that are received within the specified review period. The responses to comments and any revisions to the Draft EIR initiated by City staff will be prepared as a Final EIR document. The Draft EIR and its Appendices, together with the Final EIR, will constitute the EIR for the project.

1.5.4 Mitigation Monitoring and Reporting Plan

Throughout this EIR, mitigation measures are identified where applicable and presented in language that will facilitate preparation of a Mitigation Monitoring and Reporting Plan (MMRP). As required under CEQA, a MMRP will be prepared and presented to the City Council for adoption at the same time they consider approval of the project, and will identify the timing and roles and responsibilities for implementation of adopted mitigation measures.

1.6 Organization of the Draft EIR

This *Introduction* (Chapter 1) presents an overview of the process by which this EIR will be reviewed and used by the decision-makers in their consideration of the project.

The *Summary* (Chapter 2) includes a brief project description and a summary table that lists the environmental impacts, proposed mitigation measures, and the level of significance after mitigation. Detailed analysis of these impacts and mitigation measures is provided in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*. The Summary also provides a summary of the alternatives to the project.

The *Project Description* (Chapter 3) describes the project location and boundaries; lists the project objectives; and provides a general description of the technical, economic, and environmental characteristics of the project. This chapter also includes a list of required approvals for the project and other agencies that may be responsible for approving aspects of the project. The project description evaluates two housing distribution scenarios at an equal level of detail: 1) Project with Distributed Sites; and 2) Downtown-Only Alternative.

The *Environmental Setting, Impacts, and Mitigation Measures* (Chapter 4) contains a description of the environmental setting (existing physical environmental conditions), the regulatory framework, and the environmental impacts (including cumulative impacts) that could result from the project. It includes the thresholds of significance used to determine the significance of adverse environmental effects. This chapter also identifies the mitigation measures that would avoid or substantially lessen these significant adverse impacts. The impact discussions disclose the significance of each impact both with and without implementation of mitigation measures.

Alternatives (Chapter 5) evaluates a range of reasonable alternatives to the project and identifies an environmentally superior alternative, consistent with the requirements of CEQA. The alternatives analysis evaluates each alternative's ability to meet the project objectives and its ability to reduce environmental impacts.

Other CEQA Considerations (Chapter 6) addresses growth-inducing effects, significant irreversible environmental changes, and significant unavoidable environmental effects of the Project.

Report Preparers, and Persons and Organizations Consulted (Chapter 7) identifies the authors of the EIR. Persons and documents consulted during preparation of the EIR are listed at the end of each analysis section.

Appendices. The appendices include environmental scoping information and technical reports and data used in the preparation of the Draft EIR. These documents are included on digital storage medium at the back of the Draft EIR.

1.7 References

California Environmental Quality Act (CEQA) Statutes and Guidelines; Public Resources Code 21000-21177) and California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387.

CHAPTER 2

Executive Summary

2.1 Introduction

As provided by Section 15123 of the California Environmental Quality Act (CEQA) Guidelines (CEQA *Guidelines*), this chapter provides a brief summary of the proposed City of Lafayette Housing Element Update (HEU) and its consequences. This chapter is intended to summarize in a stand-alone section the proposed project described in Chapter 3 (*Project Description*), the impacts and mitigation measures discussed in the various subsections of Chapter 4 (*Environmental Setting, Impacts, and Mitigation Measures*), and the alternatives analysis presented in Chapter 5 (*Alternatives*).

This Environmental Impact Report (Draft EIR) has been prepared to evaluate the anticipated environmental effects of the project in conformance with the provisions of CEQA and the CEQA *Guidelines*. The lead agency, the City of Lafayette, (City), is the public agency that has the principal responsibility for approving the HEU.

This EIR is a Program EIR, as provided for in CEQA Guidelines Section 15168. Section 15168(a) of the CEQA Guidelines states that a Program EIR is appropriate for projects which are "... a series of actions that can be characterized as one large project and are related either:

1. Geographically;
2. A logical part in the chain of contemplated actions;
3. In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or
4. As individual activities carried out under the same authorizing statutory or regulating authority and having generally similar environmental effects which can be mitigated in similar ways."

Section 15168(b) of the CEQA Guidelines further states: "Use of a Program EIR can provide the following advantages. The Program EIR can:

1. Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action;
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3. Avoid duplicate consideration of basic policy considerations;

4. Allow the Lead Agency to consider broad policy alternative and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and
5. Allow reduction in paperwork.”

Future discretionary actions that would be facilitated by the HEU’s adoption, particularly those related to the development of housing, would require additional assessment to determine consistency with the analysis provided in this Program EIR. Potential future actions would also be subject to the mitigation measures established in this Program EIR unless superseded by a subsequent environmental document that is required to analyze significant environmental impacts not foreseen in this Program EIR.

2.2 Regional Location and Project Area

2.2.1 Regional Setting

The City of Lafayette is located in the San Francisco Bay Area in the East Bay Region, approximately 22 miles east of downtown San Francisco and about four miles west of Walnut Creek (latitude 33°53'31"N, longitude 122°07'07"W). The City was incorporated in 1968, and encompasses approximately 15 square miles with a population of about 26,000 people. The City boundaries and regional location of the City are shown in **Figure 2-1**. The geographic extent of environmental analysis included in the EIR for the proposed project will be the City limits.

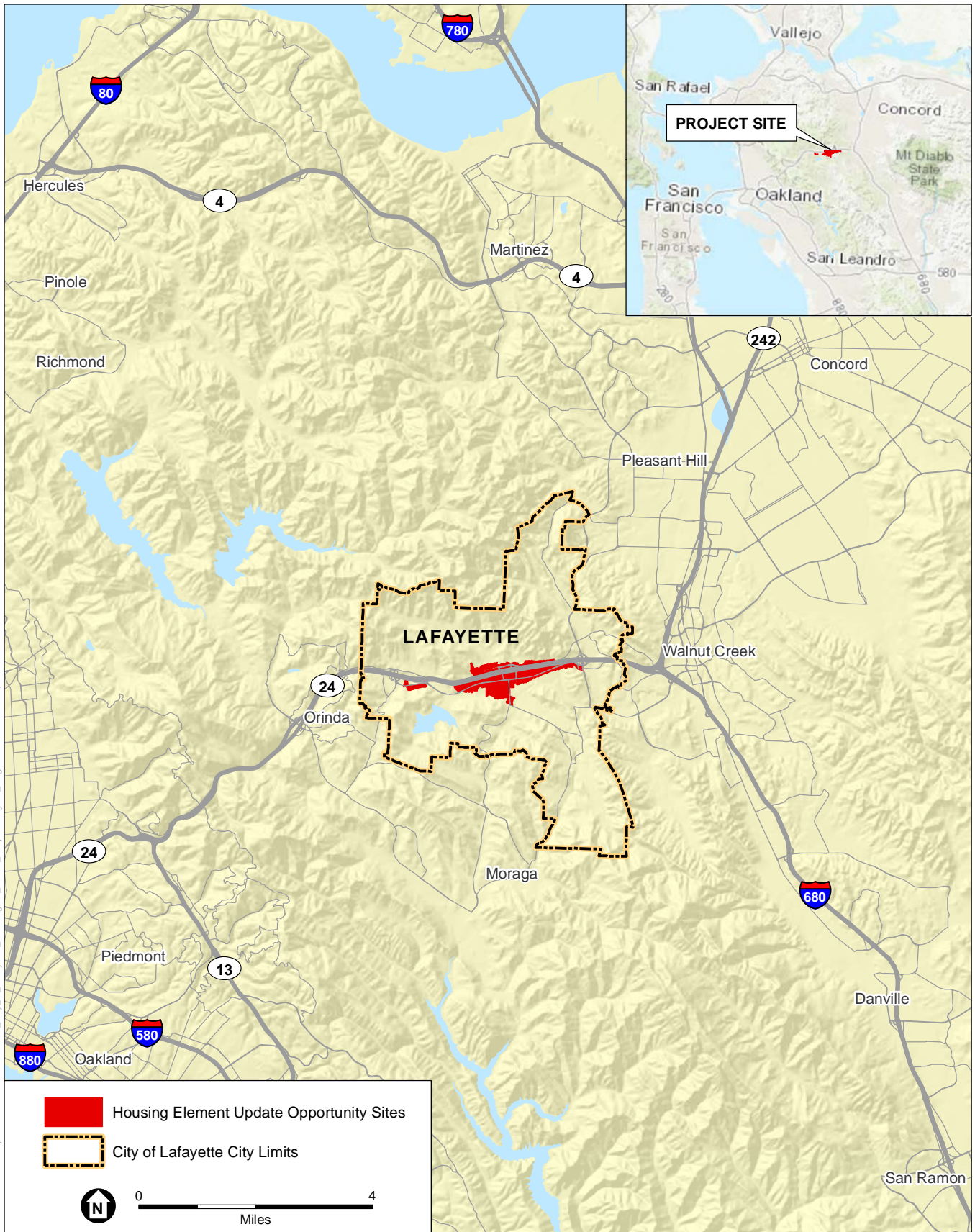
2.2.2 Project Site

the HEU would identify specific sites appropriate for the development of additional multifamily housing, and the City would rezone those areas if/as necessary to meet the requirements of State law. Both the existing and proposed sites that can accommodate development of multifamily housing are located in a subset of the City, mostly in areas within and around downtown. These areas appear in **Figure 2-2** as the “study areas” for the Housing Element’s housing sites inventory.

2.3 Project Description

2.3.1 Background

State law requires the City to have and maintain a general plan with specific contents in order to provide a vision for the City’s future, and inform local decisions at land use and development, including issues such as circulation, conservation, and safety. The City’s current General Plan was adopted in 2002 and contains eight chapters or “elements,” including one about housing. The City’s Housing Element was last updated in 2015, and covers the “5th Cycle” Housing Element planning period from 2014 through 2022. Because this period is drawing to a close, State law [Government Code Section 65588] requires the City to update its Housing Element and provides a deadline of January 31, 2023 for submission of an adopted Housing Element. In accordance with State law, the planning period for the updated Housing Element will extend from January 31, 2023 to January 31, 2031.



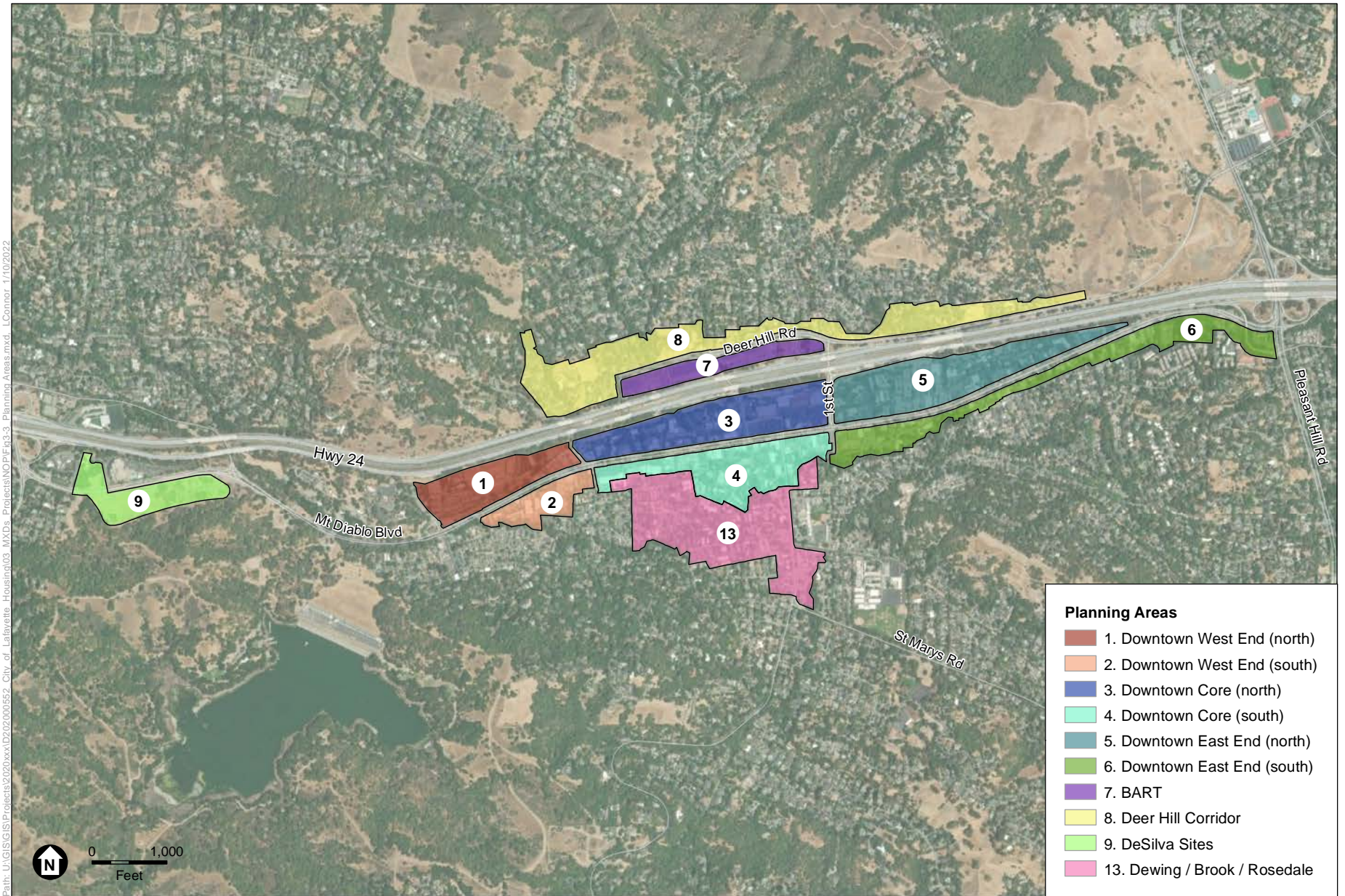
Path: U:\GIS\GIS\Projects\2020\202000552_City_of_Lafayette_Housing\03_MXDs\Projects\Fig3-1_Regional_Location.mxd, RTel: 6/2/2021

SOURCE: ESA, 2021; ESRI Data, 2021

Lafayette Housing Element Update EIR

Figure 2-1
Regional Location





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SOURCE: City of Lafayette, 2021

Lafayette Housing Element Update EIR

Figure 2-2
Housing Element Update Planning Areas



In addition to including goals, policies, and implementation programs regarding housing issues, Housing Elements must include an inventory or list of housing sites at sufficient densities to accommodate a specific number of units at various levels of affordability assigned to the City by the Association of Bay Area Governments (ABAG). This assignment is referred to as a Regional Housing Needs Allocation (RHNA).

The City’s current Housing Element provides sites sufficient to accommodate the 2015 RHNA allocation of 400 units, along with a “buffer” of 392 units, meaning the current Housing Element identifies enough land zoned at appropriate densities to accommodate a total of 792 units.

On December 18, 2020, ABAG released its Draft Regional Housing Needs Assessment Methodology and Subregional Shares document (ABAG, 2020) which articulated ABAG’s recommended methodology for the distribution of the regional housing need issued by the State Department of Housing and Community Development (HCD). HCD allocated 441,176 housing units to the nine-county Bay Area (“bulk allocation”).

Subsequent to issuance of the Draft RHNA, HCD approved the recommended methodology and ABAG considered appeals from 27 local jurisdictions, including the City of Lafayette. Following public comments and appeal hearings, ABAG rejected all of the appeals except for one, which transferred units from Contra Costa County to the City of Pittsburg. Subsequently, ABAG adopted the Final RHNA on December 16, 2021.

Lafayette’s RHNA is 2,114 units, distributed among four income categories: very-low income, low income, moderate income and above moderate income, as shown in **Table 2-1**, below.

**TABLE 2-1
CITY OF LAFAYETTE RHNA ALLOCATIONS BY INCOME CATEGORIES**

Income Group				Total
Very Low Income (VLI)	Low Income (LI)	Moderate Income (MOD)	>Moderate Income (>MOD)	
599	344	326	845	2,114

SOURCE: Association of Bay Area Governments, *Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031*, November, 2021, adopted December 16, 2021.

This means that the City’s HEU will identify housing sites for that many units plus a “buffer” of additional units at appropriate densities. The City will also need to rezone the identified sites if/as necessary to accommodate the new units and amend other elements of the General Plan (for example the Land Use and Safety Elements) as needed to ensure that the General Plan as a whole remains consistent with the HEU.

In addition, AB 2923, adopted by the Legislature and signed by the Governor in 2018, requires local jurisdictions with BART stations to up-zone the land owned by BART around their stations to a minimum density of 75 dwelling units per acre (du/acre) by the deadline of July 1, 2022. In the case of Lafayette, BART owns approximately 11 acres of parking lots at the BART station

north of SR-24 that are subject to this requirement. Because these BART lands are within a mapped Very High Fire Hazard Severity Zone, the City has the option not to rezone the BART sites and to accommodate the same number of units that could be provided on the BART property somewhere else. In other words, the unit obligation that would exist on the BART site cannot be waived, but may be relocated. The HEU, with its inventory of housing sites, is intended to meet requirements of AB 2923.

2.3.2 Study Areas for the Housing Sites Inventory

The HEU will include a housing sites inventory with sufficient existing and new housing sites at appropriate densities to meet the City's RHNA requirement plus an ample buffer, and to meet the requirements of AB 2923. To determine where these potential housing sites will be and what densities will be required, City planners have identified a number of subareas in the City where housing sites could potentially be located. These areas are numbered 1 through 9 and 13 in **Figure 2-2**, and are described below. (Note that Areas 10, 11, and 12 are no longer being considered, as discussed in Chapter 5 of this Draft EIR, *Alternatives*.)

Downtown (Areas 1 through 6)

The Downtown subareas generally lies astride Mount Diablo Boulevard, and are comprised of that portion of the City that is a part of the Downtown Specific Plan (DSP) (City of Lafayette, 2012) and several peripheral areas. The City's principal commercial uses are located in this area, with some residential uses scattered within. This subarea contains a number of existing zoning designations, many of which are designated to accommodate multi-family housing in conjunction with commercial uses. Most of the Downtown area's zoning designations, for instance, allow residential dwelling units on upper floors above commercial uses.

BART Properties and Adjoining Parcels (Area 7)

This subarea is located north of State Route 24 (SR-24) and is comprised of the parking lots for the Lafayette BART Station and several adjoining parcels lying east of the parking lots. The two BART-owned parking lot parcels are bisected in a north-south direction by Oak Hill Road. These parcels are currently zoned R-10. The R-10 zoning designation provides for single-family residences on lots with a minimum lot size of 10,000 square feet, with second units allowed with a use permit.

Three additional parcels are located to the east of the BART parking lots. Two of the parcels are currently vacant and carry no zoning designation. The easternmost parcel is currently occupied by a parking lot that is noncontiguous from the other parcels to the west. This eastern parcel is currently zoned R-10.

Deer Hill Road Corridor (Area 8)

This subarea includes a series of parcels generally lying north of SR-24 and Deer Hill Road, along with a number of additional parcels lying further to the west. This area is almost wholly

developed with residential uses. This subarea contains several existing zoning designations, many of which are designated to accommodate varying densities of residential housing.

DeSilva Sites (Area 9)

This subarea is located near the western end of Mount Diablo Boulevard, and is comprised of the several parcels lying north and south of Mount Diablo Boulevard adjacent to and across from the Oakwood Athletic Club. The parcels west of the Athletic Club are zoned MRA (a multi-family designation) and LR-10 (a single-family residential designation with a minimum lot size of 10 acres), with the MRA-designated parcel currently occupied with multi-family residential housing. The parcels lying south of Mount Diablo Boulevard across from the Athletic Club are currently vacant and are zoned LR-10.

Dewing/Brook/Rosedale (Area 13)

This subarea is located south of Downtown and is almost wholly comprised of existing residential uses at varying densities.

2.3.3 Distribution Scenarios for Housing Sites

Various possible distributions of housing sites and densities in the study areas described above have been and will be considered for inclusion in the HEU by the community, planning staff, the Planning Commission, and the City Council. The Distributed Sites approach represents the “Project” that is analyzed in the EIR, and a Downtown-Only approach is analyzed as an alternative at an equal level of detail in the EIR in order to assess the impacts of the HEU if all of the housing sites were located in the Downtown-Only area.

Project with Distributed Sites

The Distributed Sites approach would accommodate growth by including sites throughout the Downtown (though at lower densities than the Downtown Only Alternative), the BART sites, the Deer Hill Road corridor, the neighborhoods adjacent to and immediately south of the Downtown Core, the Mount Diablo Boulevard East and West areas at the ends of Mount Diablo Boulevard, and the DeSilva sites (collectively, Areas 1 through 9, and 13 on **Figure 2-2**).

Sites included in the City’s existing Housing Element that have not been developed would be retained, and allowable densities on these sites would be increased from 35 to 50 units per acre. New sites would be identified in Downtown and planned for similar densities, and aside from the BART site, which would allow 75 units per acre consistent with AB 2923, no sites would allow densities higher than 50 units per acre. Sites in the Deer Hill Corridor (Area 8) and the DeSilva Sites (Area 9) would be limited to 20 units per acre, and the Dewing/Brook/Rosedale area (Area 13) would remain at its existing density of 35 units per acre. Sites included in the Distributed Sites Alternative are shown in **Figure 2-3** and summarized in **Table 2-2**.

**TABLE 2-2
PROJECT WITH DISTRIBUTED SITES**

Planning Area Name	Sites Acreage ¹	Existing Zoning	Allowable Density		Unit Yield ²
			Existing	Proposed	
1. Downtown West End (north)	5.29	MRA, C, P-1	35	50	198
2. Downtown West End (south)	2.75	C	35	50	103
3. Downtown Core (north)	4.73	RB, SRB, P-1	35	50	177
4. Downtown Core (south)	0.78	RB, SRB, P-1	35	50	29
5. Downtown East End (north)	12.53	C-1	35	50	470
6. Downtown East End (south)	4.19	C-1	35	50	157
7. BART	13.04	R-10	4	75	831
8. Deer Hill Corridor	17.85	R-10, R-20, D-1, P-1	6, 2	20	303
9. DeSilva Sites	18.0	LR-10, R-10	0.1, 4	20	306
13. ³ Dewing/Brook/Rosedale	4.64	MRA, MRO, P-1, MRT, R-10	35	35	138
Total Units					2,714
Scattered Sites ⁴					642
Total Inventory					3,356
Effective Buffer					59 %

NOTES:

¹ The estimated combined acreage of opportunity parcels within each sub-area as shown in Figure 3-4.

² Assumes parcels would be built out at 85 percent of the maximum mathematical capacity, except those along Mt. Diablo Blvd, in which 75 percent of maximum capacity is assumed to accommodate mixed use development.

³ Areas 10, 11, and 12 are no longer being considered, as discussed in Chapter 5, *Alternatives*.

⁴ Scattered sites includes anticipated Citywide development of single-family units, anticipated accessory dwelling units, and housing sites outside of the study areas.

Downtown-Only Alternative

The Downtown-Only Alternative would accommodate almost all of the HEU's growth within the existing limits of the Downtown commercial districts (Areas 1 through 6 in **Figure 2-2**). To do this, sites included in the City's existing Housing Element that have not been developed would be retained, additional sites added, and allowable densities would increase from 35 units per acre to approximately 115 units per acre. If more sites in the Downtown are added to the inventory, the maximum density needed to accommodate the units could be reduced from 115 units per acre. The planning areas encompassed by the Downtown Only Alternative is shown in **Figure 2-4**, and summarized in **Table 2-3**, below.

As shown in Table 2-3, approximately half of the total of units would be accommodated on sites at the east end of Downtown (Areas 5 and 6), with the remainder spread throughout Areas 1 through 4. All of the sites would be located south of the freeway, and the BART site would not be rezoned. Instead, requirements of AB 2923 would be met by the increased allowable densities on downtown sites.

**TABLE 2-3
DOWNTOWN ONLY ALTERNATIVE**

Area Name	Opportunity Sites Acreage ¹	Existing Zoning	Allowable Density		Unit Yield ²
			Existing	Proposed	
1. Downtown West End (north)	5.29	MRA, C, P-1	35	115	456
2. Downtown West End (south)	2.75	C	35	115	237
3. Downtown Core (north)	4.73	RB, SRB, P-1	35	115	408
4. Downtown Core (south)	0.78	RB, SRB, P-1	35	115	67
5. Downtown East End (north)	12.53	C-1	35	115	1,081
6. Downtown East End (south)	4.1	C-1	35	115	361
Total Units					2,611
Scattered Sites ³					782
Total Inventory					3,393
Effective Buffer					61 %

NOTES:

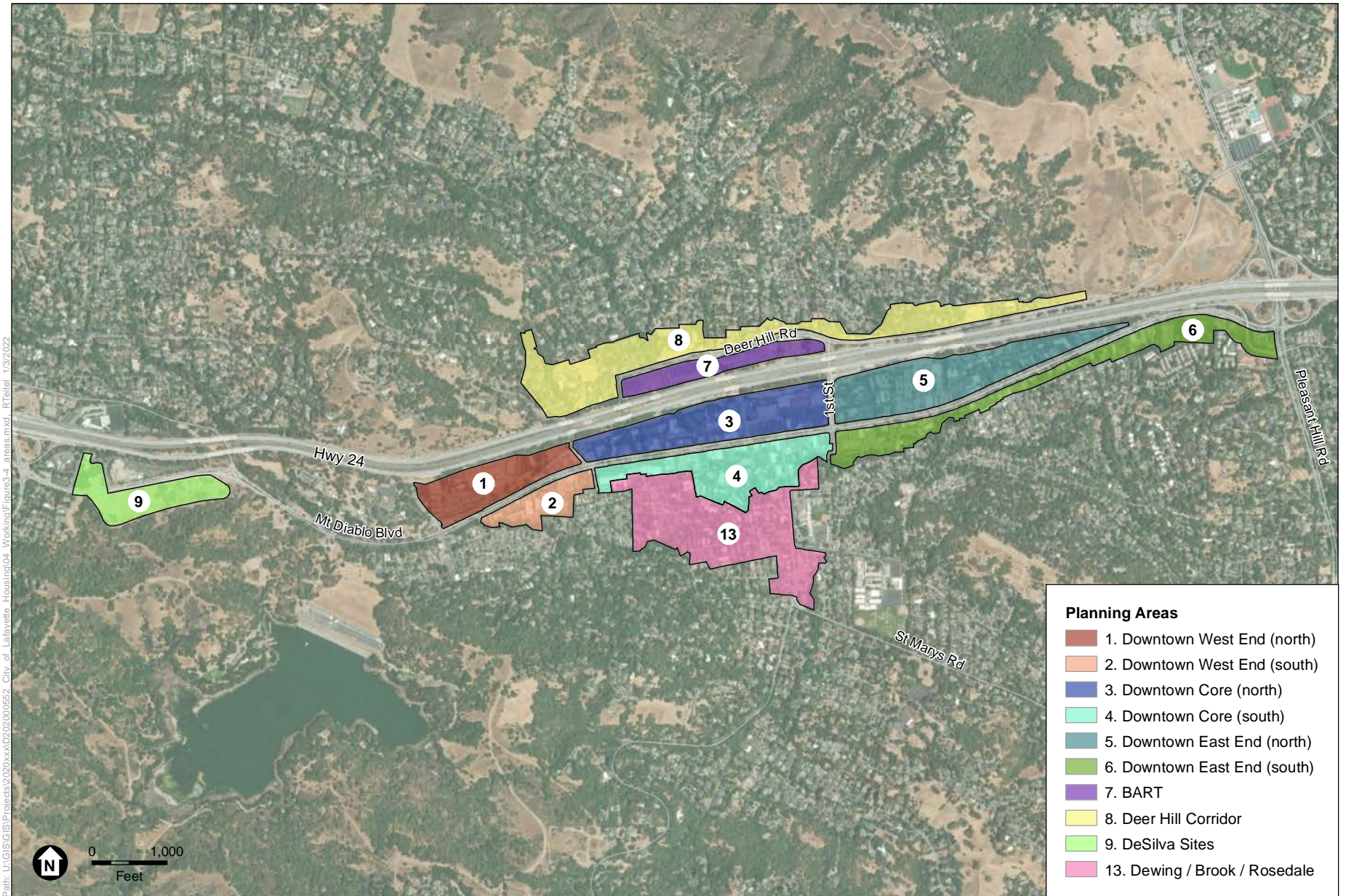
- ¹ The estimated combined acreage of opportunity parcels within each sub-area as shown in Figure 3-5.
- ² Assumes parcels would be built out at 85 percent of the maximum mathematical capacity, except those along Mt. Diablo Blvd, in which 75 percent of maximum capacity is assumed to accommodate mixed use development.
- ³ Scattered sites includes anticipated Citywide development of single-family units, anticipated accessory dwelling units, and housing sites outside of the study areas.

2.3.4 Future Development Actions and this HEU EIR

Because the Housing Element establishes policies, goals and guidelines, and describes potential housing development that may or may not be built on any particular site, environmental review of the HEU will necessarily be general. The CEQA Guidelines instruct that environmental review of a planning-level document need not contain the level of detail required for review of a specific construction project, for example. (CEQA Guidelines, Section 15146 (“[t]he degree of specificity required ... will correspond to the degree of specificity involved in the underlying activity”).

The Housing Element’s inventory of sites is a State-mandated requirement to ensure that the City’s RHNA can be accommodated. In other words, the housing inventory demonstrates that there is enough land zoned at appropriate densities to accommodate the RHNA allocation. However this inventory does not include all potential residential development sites within the City limits, and does not mean that sites in the inventory will be developed at the allowable densities. In addition, information about the design and placement of buildings on the sites will not be available unless/until a specific development is proposed.

It is important to note that while the law requires the HEU to include an inventory of housing sites and requires the City to zone those sites for multifamily housing, the City is not required to develop housing on these sites. Future development on the identified sites will be up to the property owners and will be largely dependent on market forces and (in the case of affordable housing) available subsidies.

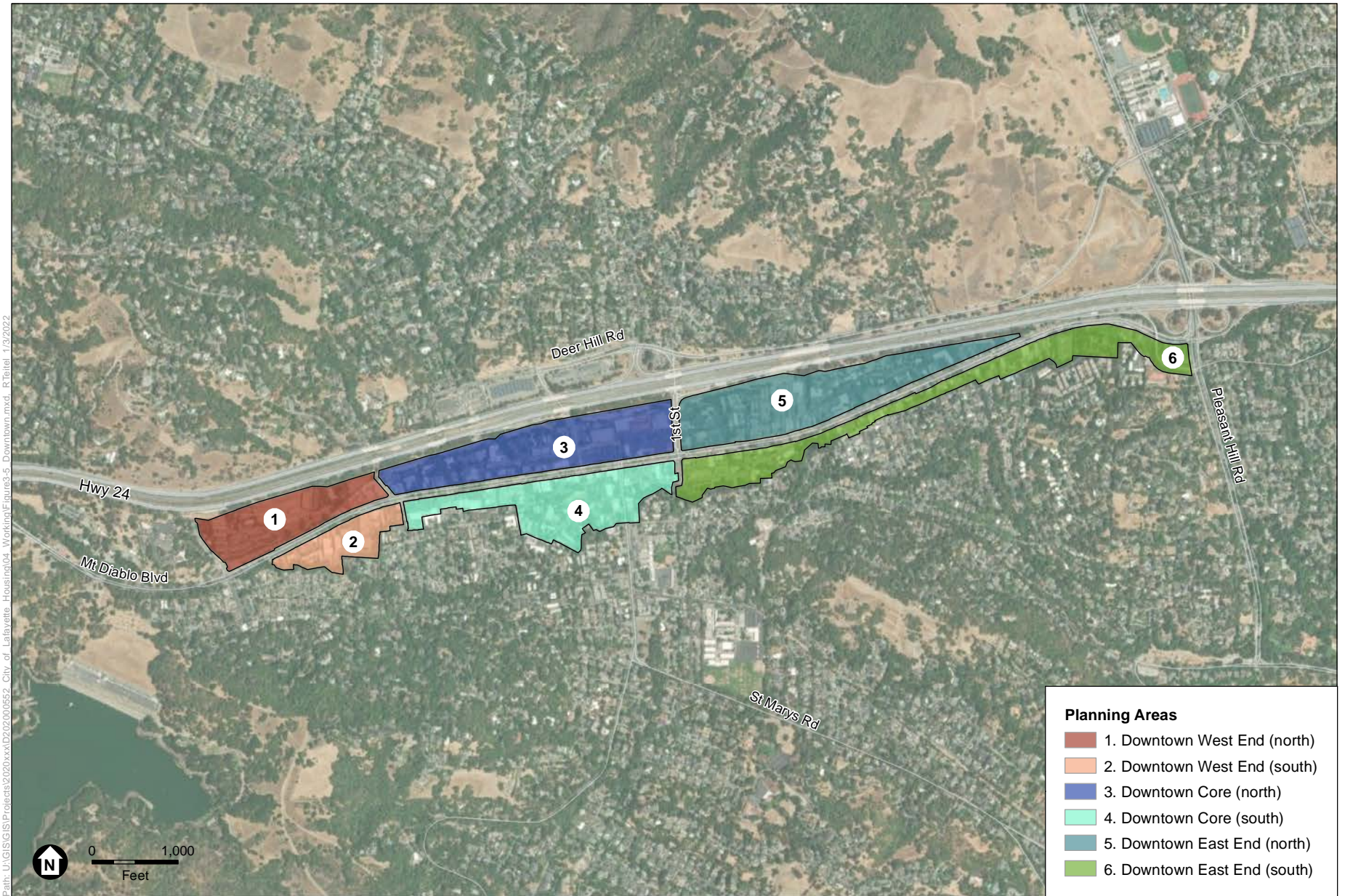


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SOURCE: City of Lafayette, 2021

Lafayette Housing Element Update EIR

Figure 2-3
HEU with Distributed Sites



SOURCE: City of Lafayette, 2021

Lafayette Housing Element Update EIR

Figure 2-4
Downtown Only Alternative

Future development proposals will be reviewed to determine whether their impacts fall within the scope of the analysis in this EIR or if additional site-specific environmental review will be required if new significant impacts would result. As provided for in CEQA Guidelines Sections 15152 and 15385, any subsequent environmental document that might be required could “tier” from this EIR and focus its analysis on the new significant impacts.

2.4 Project Objectives

CEQA Guidelines Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project.

“A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.”

In keeping with this requirement, the City’s project objectives are as follows:

- Update the General Plan’s Housing Element to comply with State-mandated housing requirements and to address the maintenance, preservation, improvement, and development of housing in the City between 2023 and 2031.
- Include an inventory of housing sites and rezone the sites as necessary to meet the required Regional Housing Needs Allocation and to provide an appropriate buffer.
- Up-zone BART-owned properties in the vicinity of the Lafayette Bart Station to meet the minimum 75 dwelling units per-acre requirements of AB 2923, or up-zone alternate properties to provide an equivalent number of units elsewhere in order to meet the City’s RHNA.
- Amend land use designations in the Land Use Element of the City’s General Plan as needed to maintain internal consistency between the elements and update the Safety Element to improve consistency with the County’s Local Hazard Mitigation Plan and comply with recent changes in State law.
- Make necessary General Plan amendments and zoning changes in a manner that affirmatively furthers fair housing while preserving the character of Lafayette and perpetuating the safety and welfare of both existing and future residents.

2.5 Identified Significant Impacts

As provided by the CEQA *Guidelines* Section 15123(b)(1), an EIR must provide a summary of the impacts, mitigation measures and significant impacts after mitigation for a proposed project. This information is presented in the various subsections within Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR, and summarized in **Table 2-4** at the end of this chapter. The proposed project would result in the following significant and unavoidable impacts:

Aesthetics Impact 4.1-1: Implementation of the HEU could have a substantial adverse effect on a scenic vista. (*Significant and Unavoidable Impact*)

Aesthetics Impact 4.1-3: Implementation of the HEU could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. *(Significant and Unavoidable Impact)*

Aesthetics Impact 4.1-5: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could result in a substantial adverse effect on a scenic vista. *(Significant and Unavoidable Impact)*

Aesthetics Impact 4.1-7: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. *(Significant and Unavoidable Impact)*

Air Quality Impact 4.2-3: Construction and operation of individual development projects following adoption of the HEU could result in a cumulatively considerable net increase in criteria pollutants for which the region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard. *(Significant and Unavoidable Impact, with Mitigation)*

Cultural Resources Impact 4.4-1: Implementation of the HEU could cause a substantial adverse change in the significance of an architectural historic resource pursuant to CEQA Guidelines Section 15064.5. *(Significant and Unavoidable Impact, with Mitigation)*

Cultural Resources Impact 4.4-3: Implementation of the HEU, in combination with other cumulative development, could cause a substantial adverse change in the significance of architectural historic resources pursuant to CEQA Guidelines Section 15064.5. *(Significant and Unavoidable Impact, with Mitigation)*

Transportation Impact 4.14-2: Implementation of the HEU could generate home-based VMT per resident that is greater than 85 percent of the Countywide average home-based VMT per resident. *(Significant and Unavoidable Impact, with Mitigation)*

2.6 Alternatives to the Proposed Project

Chapter 5, Alternatives, analyzes a range of reasonable alternatives to the proposed project, including the No Project Alternative (Alternative 1), the Downtown-Only Alternative (Alternative 2), and the Transit Priority Area Alternative (Alternative 3).

The analysis of the alternatives is summarized and compared in **Chapter 5**, which provides a summary of impact levels within all environmental topic areas. Overall, the analysis shows that the Transit Priority Area Alternative would reduce some of the project's significant impacts.

Based on the evaluation described in Chapter 5, the No Project Alternative and the Transit Priority Area Alternative would both be environmentally superior to the proposed project. The No Project Alternative would be the most environmentally superior alternative with the fewest environmental impacts. However, the No Project Alternative would not meet any of the basic objectives of the project and would run counter to the requirements of State law.

CEQA requires that that a second alternative be identified when the “No Project” alternative is the environmentally superior alternative (CEQA *Guidelines*, Section 15126.6(e)). Therefore, the Transit Priority Area would be the Environmentally Superior Alternative for the purpose of this analysis.

2.7 Comments on Notice of Preparation

Pursuant to the requirements of CEQA for the initiation of environmental review, on August 2, 2021, the City sent a Notice of Preparation (NOP) to the State Clearinghouse [SCH No. 2021080038], responsible and trustee government agencies, organizations, and individuals potentially interested in the project. The NOP requested that agencies with regulatory authority over any aspect of the project describe that authority and identify relevant environmental issues that should be addressed in the EIR. Interested members of the public were also invited to comment. The comment period for the NOP was set for August 2, 2021 through September 2, 2021. A scoping meeting was scheduled before the City’s Planning Commission for August 16, 2021. The scoping meeting was available for remote participation via Zoom, and was also viewable on YouTube.

The NOP and the comments received on the NOP are included in **Appendix A** of this EIR. As discussed in the NOP and pursuant to the provisions of CEQA, the City did not prepare a CEQA Initial Study prior to preparation of the EIR, because the City determined that it was clear at the time of the issuance of the NOP that an EIR was required (CEQA *Guidelines* Section 15060[d]).

2.8 Areas of Controversy

Section 15123(b)(2) of the CEQA *Guidelines* requires that an EIR summary identify areas of controversy known to the lead agency, including those issues raised by other agencies and the public. Issues known to have been raised by the public include concerns regarding land use and density, aesthetics, public services, wildfire, and transportation and circulation. As a result, these issues are potential areas of controversy.

2.9 Issues to be Resolved

Section 15123(b)(3) of the CEQA *Guidelines* requires that an EIR present the issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects. The major issues to be resolved for the proposed project include decisions by the City of Lafayette, as the Lead Agency, as to whether:

- This EIR adequately describes the environmental impacts of the proposed project;
- Recommended mitigation measures should be adopted or modified;
- Additional mitigation measures need to be applied to the proposed project;
- Feasible alternatives exist that would achieve the objectives of the project and reduce significant environmental impacts;

- Selection of different housing distribution scenarios would meet the City’s RHNA requirements;
- Significant and unavoidable impacts would occur if the HEU is adopted and implemented; and
- The HEU should or should not be approved.

**TABLE 2-4
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)**

Impacts	Mitigation Measures	Significance after Mitigation
4.1. Aesthetics		
Impact 4.1-1: Implementation of the HEU could have a substantial adverse effect on a scenic vista.	None feasible	Significant and Unavoidable
Impact 4.1-2: Implementation of the HEU would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	None required	Less than Significant Impact
Impact 4.1-3: Implementation of the HEU could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality.	None available	Significant and Unavoidable
Impact 4.1-4: Implementation of the HEU would not create a new source of substantial light or glare which would adversely affect day or nighttime views.	None required	Less than Significant Impact
Cumulative Impact Impact 4.1-5: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could result in a substantial adverse effect on a scenic vista.	None available	Significant and Unavoidable Impact
Cumulative Impact Impact 4.1-6: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	None required	Less than Significant Impact
Cumulative Impact Impact 4.1-7: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality.	None available	Significant and Unavoidable Impact
Cumulative Impact Impact 4.1-8: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not create a new source of substantial light or glare which would adversely affect day or nighttime views.	None required	Less than Significant Impact

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.2 Air Quality		
Impact 4.2-1: The HEU would not conflict with or obstruct implementation of the 2017 Clean Air Plan	None required	Less than Significant Impact
Impact 4.2-2: The HEU would not result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard	None required	Less than Significant Impact
Impact 4.2-3: Construction and operation of individual development projects following adoption of the HEU could result in a cumulatively considerable net increase in criteria pollutants for which the region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard.	<p>Mitigation Measure 4.2-3a: Best Management Practices.</p> <p>All subsequent projects, regardless of size, shall implement best management practices to reduce construction impacts, particularly fugitive dust, to a less-than-significant level. Specifically, in addition to the City's Dust Control and Watering technical provisions in its Standard Specifications (City of Lafayette 2013), the project sponsor shall require all construction plans to specify implementation of the following best management practices:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • 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. 	Significant and Unavoidable Impact, with Mitigation

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.2 Air Quality (cont.)		
<p>Impact 4.2-3 (cont.)</p>	<p>Mitigation Measure 4.2-3b: Emission Reduction Measures for Subsequent Projects Exceeding the Significance Thresholds for Criteria Pollutants.</p> <p>Project sponsors proposing projects that exceed BAAQMD screening levels shall prepare a project-level criteria air pollutant assessment of construction and operational emissions at the time the project is proposed. The project-level assessment could include a comparison of the project with other similar projects where a quantitative analysis has been conducted, or a project-specific criteria air pollutant analysis to determine whether the project exceeds the air district’s criteria air pollutant thresholds.</p> <p>In the event that a project-specific analysis finds that the project could result in significant construction and/or operational criteria air pollutant emissions that exceed significance thresholds, the project sponsor shall implement the following emission reduction measures to the degree necessary to reduce the impact to less than significance thresholds, and shall implement other feasible measures as needed to reduce the impact to less than the significance thresholds.</p> <p>Clean Construction Equipment.</p> <ol style="list-style-type: none"> 1) Diesel off-road equipment shall have engines that meet the Tier 4 Final off-road emission standards, as certified by CARB, as required to reduce the emissions to less than the thresholds of significance shown in Table 2-1 of the BAAQMD CEQA Guidelines (BAAQMD 2017b). This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Verified Diesel Emission Control Strategy (VDECS) information if applicable and other related equipment data. A Certification Statement is also required to be made by the Contractor for documentation of compliance and for future review by the air district as necessary. The Certification Statement must state that the Contractor agrees to compliance and acknowledges that a violation of this requirement shall constitute a material breach of contract. 2) The City may waive the equipment requirement above only under the following unusual circumstances: if a particular piece of off-road equipment with Tier 4 Final standards is technically not feasible or not commercially available; the equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or there is a compelling emergency need to use other alternate off-road equipment. If the City grants the waiver, the contractor shall use the next cleanest piece of off-road equipment available, as detailed in Table 4.2-8, below. 3) For purposes of this mitigation measure, “commercially available” shall mean the availability of Tier 4 Final engines similar to the availability for other large-scale construction projects in the region occurring at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction for the project and (ii) geographic proximity to the project site of Tier 4 Final equipment. 	

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation												
4.2. Air Quality (cont.)														
<p>Impact 4.2-3 (cont.)</p>	<p>4) Table 4.2-8 describes the Off Road Compliance Step Down approach. If engines that comply with Tier 4 Final off-road emission standards are not commercially available, then the Contractor shall meet Compliance Alternative 1. If off-road equipment meeting Compliance Alternative 1 are not commercially available, then the Project sponsor shall meet Compliance Alternative 2. If off-road equipment meeting Compliance Alternative 2 are not commercially available, then the Project sponsor shall meet Compliance Alternative 3 as demonstrated below.</p> <p align="center">TABLE 4.2-8 OFF ROAD EQUIPMENT COMPLIANCE STEP DOWN APPROACH</p> <table border="1" data-bbox="758 607 1556 773"> <thead> <tr> <th>Compliance Alternative</th> <th>Engine Emissions Standard</th> <th>Emissions Control</th> </tr> </thead> <tbody> <tr> <td align="center">1</td> <td align="center">Tier 4 Interim</td> <td align="center">N/A</td> </tr> <tr> <td align="center">2</td> <td align="center">Tier 3</td> <td align="center">ARB Level 3 VDECS</td> </tr> <tr> <td align="center">3</td> <td align="center">Tier</td> <td align="center">ARB Level 3 VDCES</td> </tr> </tbody> </table> <p>5) The project sponsor shall require the idling time for off-road and on-road equipment be limited to no more than 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the 2-minute idling limit.</p> <p>Electric Vehicle Charging – Operational Emissions. The project sponsor shall demonstrate compliance with EV charging requirements in Tier 2 CalGreen standards in effect at the time of project review (consistent with GHG mitigation measure 4.71b). The installation of all EV charging equipment shall be included on the project drawings submitted for the construction-related permits or on other documentation submitted to the City of Lafayette.</p>	Compliance Alternative	Engine Emissions Standard	Emissions Control	1	Tier 4 Interim	N/A	2	Tier 3	ARB Level 3 VDECS	3	Tier	ARB Level 3 VDCES	
Compliance Alternative	Engine Emissions Standard	Emissions Control												
1	Tier 4 Interim	N/A												
2	Tier 3	ARB Level 3 VDECS												
3	Tier	ARB Level 3 VDCES												
<p>Impact 4.2-4: Implementation of the HEU would not result in exposure of new sensitive receptors to substantial pollutant concentrations.</p>	<p>Not applicable</p>	<p>Non-CEQA Impact</p>												
<p>Impact 4.2-5: Construction and operation of individual development projects following adoption of the HEU would result in emissions of fine particulate matter (PM_{2.5}) and TACs that could result in exposure of sensitive receptors to substantial pollutant concentrations.</p>	<p>Mitigation Measure 4.2-5a Emission Reduction Measures for Subsequent Projects Exceeding the Significance Thresholds for Health Risks associated with TAC Emissions.</p> <p>Project sponsors proposing projects within 1,000 feet of sensitive receptors, including residences, schools, day care centers, and hospitals, shall prepare a project-level health risk assessment at the time the project is proposed. The project-level assessment could include a comparison of the project with other similar sized projects located a similar distance from receptors where a quantitative analysis has been conducted, or a project-specific analysis to determine whether the project exceeds the air district's health risk thresholds.</p>	<p>Less than Significant Impact, with Mitigation</p>												

**TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)**

Impacts	Mitigation Measures	Significance after Mitigation
4.2 Air Quality (cont.)		
Impact 4.2-5 (cont.)	In the event that a project-specific analysis finds that the project could result in health risks that exceed significance thresholds, the project sponsor shall implement the clean construction equipment requirement of Mitigation Measure 4.2-3b to the degree necessary to reduce the impact to less than significance thresholds, and shall implement other feasible measures as needed to reduce the impact to less than the significant thresholds.	
Impact 4.2-6: The HEU would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	None required	Less than Significant Impact
Impact 4.2-7: The HEU, in conjunction with cumulative sources, would not result in exposure of sensitive receptors to substantial levels of fine particulate matter (PM _{2.5}) and TACs under cumulative conditions.	None required	Less than Significant Impact
Impact 4.2-8: The HEU, in combination with cumulative projects, would not combine with other sources of odors that would adversely affect a substantial number of people.	None required	Less than Significant Impact
4.3 Biological Resources		
Impact 4.3-1: Implementation of the HEU would not have a substantial adverse effect, either directly, indirectly, or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS (nesting birds, special-status bats).	<p>Mitigation Measure 4.3-1a, Avoid and Minimize Impacts on Special-Status Plant Species</p> <p>To ensure protection of special-status plants, the following measures will be implemented.</p> <ul style="list-style-type: none"> • Prior to the start of construction in the DeSilva Sites Planning Area and two grassland habitat areas – one east and south of Brown Avenue and the other east of Elizabeth Street – within the Deer Hill Corridor Planning Area, including clearing and grubbing, and grading, a qualified biologist shall conduct a properly timed special-status plant survey for bent-flowered fiddleneck, Mount Diablo fairy lantern, and Diablo helianthella within the species' suitable habitat within the project work limits. The survey will follow the CDFW <i>Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities</i> (CDFW, 2018). If special-status plant species occur within the project work limits, then the biologist will establish an adequate buffer area for each plant population to exclude activities that directly remove or alter the habitat of, or result in indirect adverse impacts on, the special-status plant species. A qualified biologist will oversee installation of a temporary, plastic mesh-type construction fence (Tensor Polygrid or equivalent) at least 4 feet (1.2 meters) tall around any established buffer areas to prevent encroachment by construction vehicles and personnel. The qualified biologist will determine the exact location of the fencing. The fencing will be strung tightly on posts set at maximum intervals of 10 feet (3 meters) and will be checked and maintained weekly until all construction is complete. The buffer zone established by the fencing will be marked by a sign stating: 	Less than Significant Impact, with Mitigation

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.3 Biological Resources (cont.)		
Impact 4.3-1 (cont.)	<ul style="list-style-type: none"> – “This is habitat of [list rare plant(s)] and must not be disturbed. This species is protected by [the Endangered Species Act of 1973, as amended/CESA/California Native Plant Protection Act].” • As required by the CDFW <i>Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities</i>, the qualified botanist shall determine the potential presence and distribution of sensitive natural communities. • If direct impacts cannot be avoided, the City shall prepare a plan for minimizing the impacts by one or more of the following methods: 1) salvage and replant plants at the same location following construction; 2) salvage and relocate the plants to a suitable off-site location with long-term assurance of site protection; 3) collect seeds or other propagules for reintroduction at the site or elsewhere; or 4) payment of compensatory mitigation, e.g., to a mitigation bank. • The success criterion for any seeded, planted, and/or relocated plants shall be full replacement at a 1:1 ratio after five years. Monitoring surveys of the seeded, planted, or transplanted individuals shall be conducted for a minimum of five years, to ensure that the success criterion can be achieved at year 5. If it appears the success criterion would not be met after five years, contingency measures may be applied. Such measures shall include, but not be limited to: additional seeding and planting; altering or implementing weed management activities; or, introducing or altering other management activities. <p>Any special-status plant species observed during surveys will be reported to the USFWS and CDFW and submitted to the CNDDDB.</p> <p>Mitigation Measure 4.3-1b: Avoid and Minimize Impacts on Nesting Birds.</p> <p>Adequate measures shall be taken to avoid inadvertent take of raptor nests and other nesting birds protected under the Migratory Bird Treaty Act when in active use. This shall be accomplished by taking the following steps.</p> <ul style="list-style-type: none"> • If construction is proposed within 500 feet of areas of well-developed riparian or oak woodlands during the nesting season (February 15 to August 31), a pre-construction survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 7 days prior to the onset of vegetation removal or construction, to identify any active nests on the project site and in the vicinity of proposed construction. Surveys shall be performed for the project area, vehicle and equipment staging areas, and suitable habitat within 250 feet to locate any active passerine (e.g., songbird) nests and within 500 feet to locate any active raptor (bird of prey) nests. • If no active nests are identified during the survey period, or if development is initiated during the non-breeding season (September 1 to February 14), construction may proceed with no restrictions. 	

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.3 Biological Resources (cont.)		
Impact 4.3-1 (cont.)	<ul style="list-style-type: none"> • If bird nests are found, an adequate no-disturbance buffer shall be established around the nest location and construction activities restricted within the buffer until the qualified biologist has confirmed that any young birds have fledged and are able to leave the construction area. Required setback distances for the no-disturbance zone shall be established by the qualified biologist and may vary depending on species, line-of-sight between the nest and the construction activity, and the birds' sensitivity to disturbance. As necessary, the no-disturbance zone shall be fenced with temporary orange construction fencing if construction is to be initiated on the remainder of the development site. • Any birds that begin nesting within the project area and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and no work exclusion zones shall be established around active nests in these cases; however, should birds nesting nearby being to show disturbance associated with construction activities, no-disturbance buffers shall be established as determined by the qualified wildlife biologist. • Any work that must occur within established no-disturbance buffers around active nests shall be monitored by a qualified biologist. If adverse effects in response to project work within the buffer are observed and could compromise the nest's success, work within the no-disturbance buffer shall halt until the nest occupants have fledged. • A report of findings shall be prepared by the qualified biologist and submitted to the City for review and approval prior to initiation of construction within the no-disturbance zone during the nesting season. The report shall either confirm absence of any active nests or shall confirm that any young within a designated no-disturbance zone and construction can proceed. <p>Mitigation Measure 4.3-1c: Avoid and Minimize Impact on Roosting Bats.</p> <p>A qualified biologist (as defined by CDFW¹) who is experienced with bat surveying techniques (including auditory sampling methods), behavior, roosting habitat, and identification of local bat species shall be consulted prior to demolition or building relocation activities or tree work to conduct a pre-construction habitat assessment of the project area (focusing on buildings to be demolished or relocated) to characterize potential bat habitat and identify potentially active roost sites. No further action is required should the pre-construction habitat assessment not identify bat habitat or signs of potentially active bat roosts within the project area (e.g., guano, urine staining, dead bats, etc.).</p> <p>The following measures shall be implemented should potential roosting habitat or potentially active bat roosts be identified during the habitat assessment in buildings to be demolished or relocated, or in trees adjacent to construction activities that could be trimmed or removed within the study area for the HEU with Distributed Sites:</p>	

¹ CDFW defines credentials of a qualified biologist within permits or authorizations issued for a project. Typical qualifications include a minimum of four years of academic training leading to a degree and a minimum of 2 years of experience conducting surveys for each species that may be present within the project area.

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.3 Biological Resources (cont.)		
Impact 4.3-1 (cont.)	<ul style="list-style-type: none"> • In areas identified as potential roosting habitat during the habitat assessment, initial building demolition, relocation, and any tree work (trimming or removal) shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15, to the extent feasible. These dates avoid the bat maternity roosting season and period of winter torpor.² • Depending on temporal guidance as defined below, the qualified biologist shall conduct pre-construction surveys of potential bat roost sites identified during the initial habitat assessment no more than 14 days prior to building demolition or relocation, or any tree trimming or removal. • If active bat roosts or evidence of roosting is identified during pre-construction surveys for building demolition and relocation or tree work, the qualified biologist shall determine, if possible, the type of roost and species. A no-disturbance buffer shall be established around roost sites until the qualified biologist determines they are no longer active. The size of the no-disturbance buffer would be determined by the qualified biologist and would depend on the species present, roost type, existing screening around the roost site (such as dense vegetation or a building), as well as the type of construction activity that would occur around the roost site. • If special-status bat species or maternity or hibernation roosts are detected during these surveys, appropriate species- and roost-specific avoidance and protection measures shall be developed by the qualified biologist in coordination with CDFW. Such measures may include postponing the removal of buildings or structures, establishing exclusionary work buffers while the roost is active (e.g., 100-foot no-disturbance buffer), or other compensatory mitigation. • The qualified biologist shall be present during building demolition, relocation, or tree work if potential bat roosting habitat or active bat roosts are present. Buildings and trees with active roosts shall be disturbed only under clear weather conditions when precipitation is not forecast for three days and when daytime temperatures are at least 50 degrees Fahrenheit. • The demolition or relocation of buildings containing or suspected to contain bat roosting habitat or active bat roosts shall be done under the supervision of the qualified biologist. When appropriate, buildings shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost, likely in the evening and after bats have emerged from the roost to forage. Under no circumstances shall active maternity roosts be disturbed until the roost disbands at the completion of the maternity roosting season or otherwise becomes inactive, as determined by the qualified biologist. • Trimming or removal of existing trees with potential bat roosting habitat or active (non-maternity or hibernation) bat roost sites shall follow a two-step removal process (which shall occur during the time of year when bats are active, according to a) above and, depending on the type of roost and species present, according to c) above). 	

² Torpor refers to a state of decreased physiological activity with reduced body temperature and metabolic rate.

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.3 Biological Resources (cont.)		
Impact 4.3-1 (cont.)	<ul style="list-style-type: none"> • On the first day and under supervision of the qualified biologist, tree branches and limbs not containing cavities or fissures in which bats could roost shall be cut using chainsaws. • On the following day and under the supervision of the qualified biologist, the remainder of the tree may be trimmed or removed, either using chainsaws or other equipment (e.g., excavator or backhoe). • All felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape, or be inspected once felled by the qualified biologist to ensure no bats remain within the tree and/or branches. 	
Impact 4.3-2: Implementation of the HEU would not have a substantial adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS.	<p>Mitigation Measure 4.3-2a: Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities.</p> <p>Project development shall be avoided in or adjacent to riparian habitat whenever possible. For work occurring within 20 feet of riparian habitat or sensitive natural communities, these areas shall be clearly delineated with flagging by a qualified biologist. Riparian habitat and sensitive natural communities shall be separated and protected from the work area through silt fencing, amphibian-friendly fiber rolls (i.e., no monofilament), or other appropriate erosion control material. Material staging, and all other Project-related activity shall be located as far possible from riparian habitat and sensitive natural communities. If these areas cannot be avoided, any temporarily impacted areas shall be restored to pre-construction conditions or better at the end of construction (see <i>Mitigation Measure 4.3-2b: Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan</i>).</p> <p>Mitigation Measure 4.3-2b: Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan.</p> <p>Where temporary construction impacts on riparian habitat or sensitive natural communities cannot be avoided, revegetation and restoration measures will be developed as part of a revegetation plan approved by CDFW, RWQCB, and if applicable, USACE, and City of Lafayette, pursuant to regulatory agency permitting. The revegetation plan will include specific plans for the revegetation and restoration of impacted riparian woodland. Upon approval by applicable agencies, the City of Lafayette shall develop and implement a Riparian Revegetation Plan. Revegetation measures will include the use of locally obtained plant materials, detailed descriptions of installation methods, after-installation care, weed control measures, success criteria, and corrective measures if the success criteria are not met. Temporarily impacted areas will be restored to pre-construction conditions with equivalent or greater habitat quality. Revegetation will include a 3:1 replacement ratio (or ratio otherwise specified by resource agency permits) of the acreage of riparian woodland lost and for all trees lost as result of the Project to account for the reduced habitat values of smaller trees compared with mature vegetation. Success criteria for replanting will be less than 20 percent mortality annually over a period of 5 years. Replanting will be conducted each year that plantings exceed 20 percent mortality, such that at least 80 percent plant survival is maintained each year</p>	Less than Significant Impact, with Mitigation

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.3 Biological Resources (cont.)		
Impact 4.3-2 (cont.)	of the 5-year monitoring period. Cover provided by invasive, non-native plant species shall not exceed 5 percent during each year of the 5-year monitoring period. Mitigation for permanent impacts may occur via restoration, creation, or preservation of wetlands or waters. Mitigation will occur at a site acceptable to permitting agencies and pursuant to the Project's permit requirements. If the compensatory mitigation includes restoration, enhancement, or creation of riparian habitat or the sensitive natural community, a qualified biologist will monitor the mitigation site for a minimum of five years to ascertain if the mitigation is successful. Annual reports will be submitted to permitting agencies by December 31 of each monitoring year (or as otherwise specific in permits), describing the results of the monitoring and any remedial actions needed to achieve the specified habitat replacement ratio, or equivalent for permanent impacts on riparian vegetation or sensitive natural communities.	
Impact 4.3-3: Implementation of the HEU would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Implementation of Mitigation Measures 4.3-2a and 4.3-2b would reduce construction-related impacts by requiring pre-construction surveys to demarcate and avoid of riparian habitat and sensitive natural communities, if present; where avoidance is not possible, development of a Riparian and Sensitive Natural Community Revegetation Plan to guide restoration of temporarily impacted riparian habitat and sensitive natural communities to pre-construction conditions; restoration monitoring to ensure that success criteria are met; and mitigation for permanent impacts to riparian habitat or sensitive natural communities.	Less than Significant Impact, with Mitigation
Impact 4.3-4: Implementation of the HEU would not interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.	None required	Less than Significant Impact
Impact 4.3-5: Implementation of the HEU would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Implement Mitigation Measures 4.3-1a, 4.3-1b, 4.3-1c, 4.3-2a and 4.3-2b	Less than Significant Impact
Cumulative Impact Impact 4.3-C: Implementation of the HEU, in combination with past, present, and reasonably foreseeable future development would not result in a cumulatively significant impact related to biological resources.	Implement Mitigation Measures 4.3-1a, 4.3-1b, 4.3-1c, 4.3-2a, 4.3-2b	Less than Significant Impact, with Mitigation
4.4 Cultural Resources		
Impact 4.4-1: Implementation of the HEU could cause a substantial adverse change in the significance of an architectural historic resource pursuant to CEQA Guidelines Section 15064.5.	Mitigation Measure 4.4-1A: Identify Architectural Historic Resources. Prior to any demolition work or significant alterations to any building or structure that is 45 years old or older, the City shall ensure that a qualified architectural historian who meets the Secretary of the Interior's Professional Qualification Standards evaluate the building or structure for eligibility for listing on the National Register, California Register, and as a City Historic Landmark.	Significant and Unavoidable Impact, with Mitigation

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
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Impacts	Mitigation Measures	Significance after Mitigation
4.4 Cultural Resources (cont.)		
<p>Impact 4.4-1 (cont.)</p>	<p>Mitigation Measure 4.4-1B: Identify Character-Defining Features.</p> <p>Prior to any demolition work or significant alterations initiated at known historical resource or a resource identified via implementation of Mitigation Measure 4.4-1A, the City shall ensure that a qualified architectural historian who meets the Secretary of the Interior’s Professional Qualification Standards identifies character-defining features of each historical resource. Despite being presumed or having been previously determined eligible for listing in the National Register and/or California Register, character-defining features of the historical resources that would be demolished or may be significantly altered may not have been explicitly or adequately identified. According to guidance from the National Park Service, a historical resource “must retain... the essential physical features [i.e., character-defining features] that enable it to convey its historic identity. The essential physical features are those features that define both <i>why</i> a property is significant...and <i>when</i> it was significant” (National Park Service, 1997). The identification of character-defining features is necessary for complete documentation of each historical resource as well as appropriate public interpretation and salvage plans.</p> <p>Mitigation Measure 4.4-1C: Document Architectural Historic Resources Prior to Demolition or Alteration.</p> <p>Prior to any demolition work or significant alterations initiated of a known historical resource or a resource identified via implementation of Mitigation Measure 4.4-1A, the City shall ensure that a qualified architectural historian who meets the Secretary of the Interior’s Professional Qualification Standards thoroughly documents each building and associated landscaping and setting. Documentation shall include still photography and a written documentary record of the building to the National Park Service’s standards of the Historic American Buildings Survey (HABS) or the Historic American Engineering Record (HAER), including accurate scaled mapping and architectural descriptions. If available, scaled architectural plans will also be included. Photos include large-format (4”x5”) black-and-white negatives and 8”x10” enlargements. Digital photography may be substituted for large-format negative photography if archived locally. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site-specific and comparative archival research and oral history collection as appropriate. Copies of the records shall be submitted to the Northwest Information Center at Sonoma State University.</p>	
<p>Impact 4.4-2: Implementation of the HEU would not cause a substantial adverse change in the significance of an archaeological historical resource or a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5 21074 or could disturb human remains, including those interred outside of formal cemeteries.</p>	<p>Mitigation Measure 4.4-2A: Cultural Resources Review Requirements.</p> <p>For all discretionary projects that require ground disturbance (i.e. excavation, trenching, grading, etc.), any projects that meet General Plan Program LU-22.1.5 criteria (within mapped archaeological sensitivity areas, or within 200 feet of a stream), a cultural resources records search must be performed at the Northwest Information Center (NWIC) of the California Historical Resources Information System for the project area. An archaeologist meeting the U.S. Secretary of the Interior’s Standards (SOIS) for Archeology, must review the results and identify if the project would potentially impact cultural resources. If the archaeologist determines that known cultural resources or</p>	<p>Less than Significant Impact, with Mitigation</p>

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.4 Cultural Resources		
<p>Impact 4.4-2 (cont.)</p>	<p>potential archaeological sensitivity areas may be impacted by the project, a pedestrian survey must be conducted under the supervision of SOIS-qualified archaeologist of all accessible portions of the project area, if one has not been completed within the previous 5 years. Additional research, subsurface testing, and/or a cultural resources awareness training may be required to identify, evaluate, and mitigate impacts to cultural resources, as recommended by the SOIS qualified archaeologist. A cultural report detailing the results of the research shall be prepared and submitted for review by the City and a final draft shall be submitted to the NWIC.</p> <p>Mitigation Measure 4.4-2B: Inadvertent Discovery of Cultural Resources and/or Human Remains.</p> <p>If pre-contact or historic-age archaeological resources are encountered during project construction and implementation, all construction activities within 100 feet shall halt and the City shall be notified. Pre-contact archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-age materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. An archaeologist meeting the U.S. Secretary of the Interior’s Standards (SOIS) for Archeology shall inspect the findings within 24 hours of discovery.</p> <p>If the City determines that the resource qualifies as a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines) and that the Project has potential to damage or destroy the resource, mitigation shall be implemented in accordance with PRC Section 21083.2 and CEQA Guidelines Section 15126.4, with a preference for preservation in place. If preservation in place is feasible, this may be accomplished through one of the following means as per Program LU-22.1.6 of the General Plan: (1) siting improvements to completely avoid the archaeological resource; (2) incorporating the resource into a park or dedicated open space, or by deeding the resource into a permanent conservation easement; (3) capping and covering the resource before building the project on the resource site after the resource has been thoroughly studied by a SOIS qualified archaeologist and a report written on the findings.</p> <p>If avoidance is not feasible, the City shall consult with appropriate Native American tribes (if the resource is pre-contact), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3).</p>	

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
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Impacts	Mitigation Measures	Significance after Mitigation
4.4 Cultural Resources		
Impact 4.4-2 (cont.)	In the event of discovery of any human remains during project implementation, project construction activities within 100 feet of the find shall cease until the Contra Costa County Coroner has been contacted to determine that no investigation of the cause of death is required. The Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, if the Coroner determines the remains to be Native American in origin. The NAHC will then identify the person or persons it believes to be the most likely descendant from the deceased Native American (PRC Section 5097.98), who in turn would make recommendations to the City for the appropriate means of treating the human remains and any associated funerary objects (CEQA Guidelines Section 15064.5[d]).	
Impact 4.4-3: Implementation of the HEU, in combination with other cumulative development, could cause a substantial adverse change in the significance of architectural historic resources pursuant to CEQA Guidelines Section 15064.5.	Implement Mitigation Measures 4.4-1A, 4.4-1B, and 4.4-1C.	Significant and Unavoidable Impact, with Mitigation
Impact 4.4-4: Implementation of the HEU, in combination with other cumulative development, would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5 or a tribal cultural resource as defined in Public Resources Code Section 21074 or could disturb human remains, including those interred outside of formal cemeteries.	Implement Mitigation Measures 4.4-2A and 4.4-2B.	Less than Significant Impact, with Mitigation
4.5 Energy		
Impact 4.5-1: Implementation of the HEU would not result in the inefficient, wasteful, or unnecessary use of energy resources.	None required.	Less than Significant Impact
Cumulative Impact Impact 4.5-2: Implementation of the HEU, in conjunction with cumulative development in the City, would not result in energy use that would be considered wasteful and unnecessary or conflict with or obstruct a state or local plan for renewable energy or energy efficiency under cumulative conditions.	None required	Less than Significant Impact
4.6 Geology, Soils, and Paleontological Resources		
Impact 4.6-1: Implementation of the HEU would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	None required	Less than Significant Impact
Impact 4.6-2: Implementation of the HEU would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.	None required	Less than Significant Impact

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.6 Geology, Soils, and Paleontological Resources (cont.)		
Impact 4.6-3: Implementation of the HEU would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.	None required	Less than Significant Impact
Impact 4.6-4: Implementation of the HEU would not result in substantial soil erosion or the loss of topsoil.	None required	Less than Significant Impact
Impact 4.6-5: Implementation of the HEU would not result in projects that would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potential result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	None required	Less than Significant Impact
Impact 4.6-6: Implementation of the HEU would not result in projects that would be located on expansive soil creating substantial direct or indirect risks to life or property.	None required	Less than Significant Impact
Impact 4.6-7: Implementation of the HEU would not result in projects that would not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.	None required	Less than Significant Impact
Impact 4.6-8: Implementation of the HEU would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	<p>Mitigation Measure 4.6-1: Determination of Paleontological Potential.</p> <p>Prior to issuance of a grading permit for any project that requires ground disturbance (i.e., excavation, grading, trenching, etc.) to depths of 6 or more feet in previously undisturbed deposits of Holocene-age alluvium and/or the Orinda Formation, the project will undergo a CEQA-level analysis to determine the potential for a project to encounter significant paleontological resources, based on a review of site-specific geology and the extent of ground disturbance associated with each project. The analysis shall include, but would not be limited to: 1) a paleontological records search, 2) geologic map review, and 3) peer-reviewed scientific literature review. If it is determined that a site has the potential to disturb or destroy significant paleontological resources, a professional paleontologist (meeting the Society of Vertebrate Paleontology [SVP] standards), will be retained to recommend appropriate mitigation to reduce or avoid significant impacts to paleontological resources, based on project-specific information. Such measures could include, but would not be limited to: 1) preconstruction worker awareness training, 2) paleontological resource monitoring, and 3) salvage of significant paleontological resources.</p>	Less than Significant Impact, with Mitigation
<p>Cumulative Impact</p> <p>Impact 4.6-C: Implementation of the HEU, in combination with past, present, and reasonably foreseeable future development would not result in a cumulatively significant impact related to geology and paleontology.</p>	<p>Mitigation Measure 4.6-1: Determination of Paleontological Potential. Prior to issuance of a grading permit for any project that requires ground disturbance (i.e., excavation, grading, trenching, etc.) to depths of 6 or more feet in previously undisturbed deposits of Holocene-age alluvium and/or the Orinda Formation, the project will undergo a CEQA-level analysis to determine the potential for a project to encounter significant paleontological resources, based on a review of site-specific geology and the extent of ground disturbance associated with each project. The analysis shall include, but would not be limited to: 1) a paleontological records search, 2) geologic map review, and 3) peer-reviewed scientific literature review. If it</p>	Less than Significant Impact, with Mitigation

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.6 Geology, Soils, and Paleontological Resources (cont.)		
Impact 4.6-C (cont.)	is determined that a site has the potential to disturb or destroy significant paleontological resources, a professional paleontologist (meeting the Society of Vertebrate Paleontology [SVP] standards), will be retained to recommend appropriate mitigation to reduce or avoid significant impacts to paleontological resources, based on project-specific information. Such measures could include, but would not be limited to: 1) preconstruction worker awareness training, 2) paleontological resource monitoring, and 3) salvage of significant paleontological resources.	
4.7 Greenhouse Gas Emissions		
Impact 4.7-1: Implementation of the HEU would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment.	Mitigation Measure 4.7-1: Reduce GHG emissions from building energy use and motor vehicle trips. a) All new multifamily development proposed as part of the HEU shall be designed to be 100 percent electric with no natural gas infrastructure for appliances, including water heaters, clothes washers and dryers, HVAC systems, and stoves. b) Subsequent multifamily development projects proposed as part of the HEU shall be designed to be comply with EV requirements in the most recently adopted version of CALGreen Tier 2 at the time of project-specific CEQA review.	Less than Significant Impact, with Mitigation
Impact 4.7-2: Implementation of the HEU would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Mitigation Measure: Implement Mitigation Measure 4.7-1	Less than Significant Impact, with Mitigation
4.8 Hazards and Hazardous Materials		
Impact 4.8-1: Individual projects associated with the HEU's implementation would not create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.	None required	Less than Significant Impact
Impact 4.8-2: Individual projects associated with the HEU's implementation would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	None required	Less than Significant Impact
Impact 4.8-3: Individual projects associated with the HEU's implementation could be located on sites that are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, the project could create a significant hazard to the public or the environment.	Mitigation Measure 4.8-3A: Phase I Assessment. Prior to the initiation of any construction requiring ground-disturbing activities on industrial and commercial properties, as well as listed active hazardous materials cleanup sites, project applicants shall complete a Phase I environmental site assessment for that property in accordance with American Society for Testing and Materials Standard E1527 for those active hazardous materials sites to ascertain their current status. Any recommended follow up sampling (i.e., Phase II activities) set forth in the Phase I assessment shall be implemented prior to construction. The results of Phase II studies, if necessary, shall be submitted to the local overseeing agency and any required remediation or further delineation of identified contamination shall be completed prior to commencement of construction.	Less than Significant Impact, with Mitigation

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.8 Hazards and Hazardous Materials (cont.)		
<p>Impact 4.8-3 (cont.)</p>	<p>Mitigation Measure 4.8-3B: Health and Safety Plan.</p> <p>For those properties for which the Phase I assessment identifies hazardous materials issues, before the start of ground-disturbing activities, including grading, trenching, or excavation, or structure demolition, the project applicant for the specific work proposed shall require that the construction contractor(s) retain a qualified professional to prepare a site-specific health and safety plan (HASP) in accordance with federal Occupational Safety and Health Administration regulations (29 CFR 1910.120) and California Occupational Safety and Health Administration regulations (8 CCR Section 5192).</p> <p>The HASP shall be implemented by the construction contractor to protect construction workers, the public, and the environment during all ground-disturbing and structure demolition activities. The HASP shall include designation of a site health and safety officer, a summary of the anticipated risks, a description of personal protective equipment and decontamination procedures, and procedures to follow if evidence of potential soil or groundwater contamination is encountered.</p> <p>Mitigation Measure 4.8-3C: Soil and Groundwater Management Plan.</p> <p>In support of the HASP described in Mitigation Measure 4.8-1B, the project applicant shall require that its contractor(s) develop and implement a Soil and Groundwater Management Plan (SGMP) for the management of soil and groundwater before any ground-disturbing activity. The SGMP shall describe the hazardous materials that may be encountered, the roles and responsibilities of on-site workers and supervisors, training for site workers focused on the recognition of and response to encountering hazardous materials, and protocols for the materials (soil and/or dewatering effluent) testing, handling, removing, transporting, and disposing of all excavated materials and dewatering effluent in a safe, appropriate, and lawful manner.</p>	
<p>Impact 4.8-4: Implementation of the HEU would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</p>	<p>None required.</p>	<p>Less than Significant Impact</p>
<p>Cumulative Impact</p> <p>Impact 4.8-C: Implementation of the proposed project, in combination with past, present, and reasonably foreseeable future development would not result in a cumulatively significant impact related to hazards and hazardous materials</p>	<p>Implement Mitigation Measures 4.8-3A, 4.8-3B, and 4.8-3C.</p>	<p>Less than Significant Impact, with Mitigation</p>
4.9 Hydrology and Water Quality		
<p>Impact 4.9-1: Implementation of the HEU would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.</p>	<p>None required</p>	<p>Less than Significant Impact</p>

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.9 Hydrology and Water Quality (cont.)		
Impact 4.9-2: Implementation of the HEU would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.	None required	Less than Significant Impact
Impact 4.9-3: Implementation of the HEU would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would : i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.	None required	Less than Significant Impact
Impact 4.9-4: Implementation of the HEU would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	None required	Less than Significant Impact
4.10 Land Use and Planning		
Impact 4.10-1: Implementation of the HEU would not physically divide an established community.	None required	Less than Significant Impact
Impact 4.10-2: Implementation of the HEU would not cause a significant environmental impact due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	None required	Less than Significant Impact
Cumulative Impact Impact 4.10-3: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not physically divide an established community.	None required.	Less than Significant Impact
Cumulative Impact Impact 4.10-4: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	None required	Less than Significant Impact

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.11 Noise		
Impact 4.11-1: Construction activities associated with implementation of the HEU would not result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	None required	Less than Significant Impact
Impact 4.11-2: Stationary noise sources from development within the HEU area would not result in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	None required	Less than Significant Impact
Impact 4.11-3: Implementation of the HEU would not result in exposure of persons to or generation of excessive groundborne vibration levels.	None required	Less than Significant Impact
Impact 4.11-4: Transportation activities under the HEU would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	None required	Less than Significant Impact
<p data-bbox="96 849 302 873">Cumulative Impact</p> <p data-bbox="96 886 695 1049">Impact 4.11-5: Construction activities associated with implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</p>	None required	Less than Significant Impact
<p data-bbox="96 1065 302 1089">Cumulative Impact</p> <p data-bbox="96 1102 695 1265">Impact 4.11-6: Stationary noise sources from development within the HEU area, when combined with other past, present, or reasonably foreseeable projects, would not result in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</p>	None required	Less than Significant Impact
<p data-bbox="96 1281 302 1305">Cumulative Impact</p> <p data-bbox="96 1318 680 1432">Impact 4.11-7: Construction activities associated with implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not result in exposure of persons to or generation of excessive ground borne vibration levels.</p>	None required	Less than Significant Impact

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.11 Noise (cont.)		
<p>Cumulative Impact</p> <p>Impact 4.11-8: Transportation activities under the HEU, when combined with other past, present, or reasonably foreseeable projects, would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.</p>	None required	Less than Significant Impact
4.12 Population and Housing		
<p>Impact 4.12-1: Implementation of the HEU would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).</p>	None required	Less than Significant Impact
<p>Impact 4.12-2: Implementation of the HEU would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.</p>	None required	Less than Significant Impact
<p>Cumulative Impact</p> <p>Impact 4.12-3: Implementation of the HEU would not combine with other past, present, and reasonably foreseeable projects to create a significant impact to population and housing.</p>	None required	Less than Significant Impact
4.13 Public Services and Recreation		
<p>Impact 4.13-1: Implementation of the HEU would not result in an increase in demand for fire protection and emergency medical response services that would require new or physically altered fire protection facilities in order to maintain acceptable service ratios, response times, or other performance objectives, construction of which could have significant physical environmental impacts.</p>	None required	Less than Significant Impact
<p>Impact 4.13-2: Implementation of the HEU would not result in an increase in demand for police protection services that would require new or physically altered police facilities in order to maintain acceptable service ratios, response times, or other performance objectives, construction of which could have significant physical environmental impacts.</p>	None required	Less than Significant Impact
<p>Impact 4.13-3: Implementation of the HEU would not result in an increase in new students for public schools at a level that would require new or physically altered school facilities in order to maintain acceptable service ratios or other performance objectives, construction of which would have significant physical environmental impacts.</p>	None required	Less than Significant Impact

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.13 Public Services and Recreation (cont.)		
Impact 4.13-4: Implementation of the HEU would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	None required	Less than Significant Impact
Impact 4.13-5: Implementation of the HEU would not include recreational facilities or require the construction or expansion of parks or recreational facilities which might have an adverse physical effect on the environment.	None required	Less than Significant Impact
Cumulative Impact Impact 4.13-6: The HEU, combined with cumulative development in the vicinity and Citywide, would not result in an adverse cumulative increase in demand for public services that would require new or physically altered governmental facilities, construction of which could have significant physical environmental impacts.	None required	Less than Significant Impact
Cumulative Impact Impact 4.13-7: Implementation of the HEU, combined with cumulative development in the vicinity and citywide, would not result in significant cumulative impacts to parks and recreation.	None required	Less than Significant Impact
4.14 Transportation		
Impact 4.14-1: Implementation of The HEU would not conflict with an applicable program, plan, ordinance, or policy establishing measures of effectiveness for the performance of addressing the circulation system, including transit, bicycle, and pedestrian facilities.	None required	Less than Significant Impact
Impact 4.14-2: Implementation of the HEU could generate home-based VMT per resident that is greater than 85 percent of the Countywide average home- based VMT per resident.	Mitigation Measure 4.14-2: Implement VMT Reduction Measures. Individual housing project development proposals that do not screen out from VMT impact analysis shall provide a quantitative VMT analysis using the methods applied in this EIR, with modifications if appropriate based on future changes to City of Lafayette practices and CCTA VMT analysis methodology guidelines. Projects which result in a significant impact shall include travel demand management measures and physical measures to reduce VMT, including but not limited to the measures below, which have been identified as potentially VMT reducing in the California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (December 2021). Potential VMT reduction estimates are included below, but detailed requirements, calculation steps, and limitations are described in the CAPCOA Handbook. In addition, application of one or more measures is generally expected to result in a net VMT reduction of 10 percent or less for development projects in suburban settings such as Lafayette.	Significant and Unavoidable Impact, with Mitigation

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.14 Transportation (cont.)		
Impact 4.14-2 (cont.)	<ul style="list-style-type: none"> • Unbundle parking costs (i.e. sell or lease parking separately from the housing unit). Effectiveness: up to 15.7 percent reduction in GHG from VMT per the CAPCOA Handbook. • Provide car-sharing, bike sharing, or scooter sharing programs. Effectiveness: 0.15 – 0.18 percent reduction in GHG from VMT for car share, 0.02 – 0.06 percent for bike share, and 0.07 percent for scooter share, per the CAPCOA Handbook. The higher car share and bike share values are for electric car and bike share programs. • Subsidize transit passes for residents of affordable housing. Effectiveness: up to 5.5 percent reduction in GHG from VMT per the CAPCOA Handbook. <p>In addition to the on-site measures noted above, individual housing projects that are above the VMT threshold could potentially contribute to future VMT mitigation fee programs, banks, or exchanges. No regional VMT mitigation programs currently exist; however, the CCTA is currently evaluating different mitigation program frameworks which may lead to a Countywide or sub-regional VMT mitigation program. Should such a program be implemented, development projects could potentially pay into a fee program or purchase mitigation credits to achieve needed VMT mitigation instead of, or in addition to, onsite TDM measures.</p>	
Impact 4.14-3: Implementation of the HEU would not result in designs for on-site circulation, access, and parking areas that fail to meet City or industry standard design guidelines.	None required	Less than Significant Impact
Impact 4.14-4: Implementation of the HEU would not result in inadequate emergency access to development sites.	None required	Less than Significant Impact
4.15 Tribal Cultural Resources		
Impact 4.15-1: Ground disturbing activities associated with implementation of the HEU could cause a substantial adverse change to previously unknown archaeological resources that are also tribal cultural resources, as defined in Public Resources Code Section 21074(a).	<p>Mitigation Measure 4.4-2A: Cultural Resources Review Requirements.</p> <p>For all discretionary projects that require ground disturbance (i.e. excavation, trenching, grading, etc.), any projects that meet General Plan Program LU-22.1.5 criteria (within mapped archaeological sensitivity areas, or within 200 feet of a stream), a cultural resources records search must be performed at the Northwest Information Center (NWIC) of the California Historical Resources Information System for the project area. An archaeologist meeting the U.S. Secretary of the Interior’s Standards (SOIS) for Archeology, must review the results and identify if the project would potentially impact cultural resources. If the archaeologist determines that known cultural resources or potential archaeological sensitivity areas may be impacted by the project, a pedestrian survey must be conducted under the supervision of SOIS-qualified archaeologist of all accessible portions of the project area, if one has not been completed within the previous 5 years. Additional research, subsurface testing, and/or a cultural resources awareness training may be required to identify, evaluate, and mitigate impacts to cultural resources, as recommended by the SOIS qualified archaeologist. A cultural report detailing the results of the research shall be prepared and submitted for review by the City and a final draft shall be submitted to the NWIC.</p>	Less than Significant Impact, with Mitigation

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.15 Tribal Cultural Resources (cont.)		
Impact 4.15-1 (cont.)	<p>Mitigation Measure 4.4-2B: Inadvertent Discovery of Cultural Resources and/or Human Remains.</p> <p>If pre-contact or historic-age archaeological resources are encountered during project construction and implementation, all construction activities within 100 feet shall halt and the City shall be notified. Pre-contact archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-age materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. An archaeologist meeting the U.S. Secretary of the Interior’s Standards (SOIS) for Archeology shall inspect the findings within 24 hours of discovery.</p> <p>If the City determines that the resource qualifies as a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines) and that the Project has potential to damage or destroy the resource, mitigation shall be implemented in accordance with PRC Section 21083.2 and CEQA Guidelines Section 15126.4, with a preference for preservation in place. If preservation in place is feasible, this may be accomplished through one of the following means as per Program LU-22.1.6 of the General Plan: (1) siting improvements to completely avoid the archaeological resource; (2) incorporating the resource into a park or dedicated open space, or by deeding the resource into a permanent conservation easement; (3) capping and covering the resource before building the project on the resource site after the resource has been thoroughly studied by a SOIS qualified archaeologist and a report written on the findings.</p> <p>If avoidance is not feasible, the City shall consult with appropriate Native American tribes (if the resource is pre-contact), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3)</p> <p>In the event of discovery of any human remains during project implementation, project construction activities within 100 feet of the find shall cease until the Contra Costa County Coroner has been contacted to determine that no investigation of the cause of death is required. The Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, if the Coroner determines the remains to be Native American in origin. The NAHC will then identify the person or persons it believes to be the most likely descendant from the deceased Native American (PRC Section 5097.98), who in turn would make recommendations to the City for the appropriate means of treating the human remains and any associated funerary objects (CEQA Guidelines Section 15064.5[d]).</p>	

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.15 Tribal Cultural Resources (cont.)		
<p>Cumulative Impact</p> <p>Impact 4.15-2: Ground disturbing activities associated with implementation of the HEU in combination with other cumulative projects could cause a substantial adverse change to previously unknown archaeological resources that are also Tribal Cultural Resources, as defined in Public Resources Code Section 21074(a).</p>	Implement Measures 4.4-2A and 4.4-2B	Less than Significant Impact, with Mitigation
4.16 Utilities and Service Systems		
<p>Impact 4.16-1: Implementation of the HEU would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.</p>	None required	Less than Significant Impact
<p>Impact 4.16-2: Implementation of the HEU would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.</p>	None required	Less than Significant Impact
<p>Impact 4.16-3: Implementation of the HEU would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.</p>	None required	Less than Significant Impact
<p>Impact 4.16-4: Implementation of the HEU would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.</p>	None required	Less than Significant Impact
<p>Impact 4.16-5: Implementation of the HEU would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.</p>	None required	Less than Significant Impact
<p>Cumulative Impact</p> <p>Impact 4.16-6: Implementation of the HEU, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity, would not contribute considerably to cumulative impacts on utilities and service systems.</p>	None required	Less than Significant Impact

TABLE 2-4 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE CITY OF LAFAYETTE HOUSING ELEMENT UPDATE
(FOR BOTH THE HEU WITH DISTRIBUTED SITES AND THE DOWNTOWN-ONLY ALTERNATIVE)

Impacts	Mitigation Measures	Significance after Mitigation
4.17 Wildfire		
Impact 4.17-1: Implementation of the HEU would not substantially impair an adopted emergency response plan or emergency evacuation plan.	None required	Less than Significant Impact
Impact 4.17-2: For those HEU areas that are located in or near State Responsibility Areas and/or lands classified as Very High Fire Hazard Severity Zones, implementation of the HEU would not exacerbate wildfire risks and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	None required	Less than Significant Impact
Impact 4.17-3: Implementation of the HEU would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	None required	Less than Significant Impact
Impact 4.17-4: Implementation of the HEU would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	None required	Less than Significant Impact
Cumulative Impact Impact 4.17-5: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would/would not result in a cumulative impact related to wildfire.	None required	Less than Significant Impact

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CHAPTER 3

Project Description

3.1 Introduction

State law requires the City to have and maintain a general plan with specific contents in order to provide a vision for the City’s future, and inform local decisions at land use and development, including issues such as circulation, conservation, and safety. The City’s current General Plan was adopted in 2002 and contains eight chapters or “elements,” including one about housing.

The City is undertaking a community process to update its current General Plan, and expects the community engagement, planning, review, and approval process to take several years. In the interim, however, State law specifically requires the City to update the Housing Element by the end of January 2023, while making any changes to other elements of the General Plan needed to maintain internal consistency and comply with State law, as well as undertaking related changes to the City’s zoning ordinance. The Housing Element was last updated in 2015, and covers the “5th Cycle” Housing Element planning period from 2014 through 2022. Because this period is drawing to a close, State law [Government Code Section 65588] requires the City to update its Housing Element and provides a deadline of January 31, 2023 for submission of an adopted Housing Element. In accordance with State law, the planning period for the updated Housing Element will extend from January 31, 2023 to January 31, 2031.

<p style="text-align: center;"><u>Contents of the Lafayette General Plan^a</u></p> <p>Chapter 1: Land Use Chapter 2: Circulation Chapter 3: Open Space & Conservation Chapter 4: Parks, Trails, & Recreation Chapter 5: Housing Chapter 6: Safety Chapter 7: Noise Chapter 8: Growth Management</p> <p>^a As adopted (2002) and amended through June 2021.</p>

In addition, California Assembly Bill (AB) 2923 from 2018 requires the City to up-zone BART-owned properties around its station to accommodate residential development at densities of at least 75 dwelling units per acre (du/ac) by July 2022. If the BART sites are not rezoned, BART’s transit-oriented development requirements would still apply; but the City could not use the sites to accommodate any units to meet Housing Element requirement and those units would therefore have to be distributed elsewhere.

In order to comply with these State mandates, the City is proposing to update its Housing Element in advance of the rest of the General Plan via the City of Lafayette 2023-2031 Housing Element Update (HEU), which will be the subject of this EIR. The primary purpose of the HEU is to comply with the requirements of State law by analyzing existing and projected housing needs,

and updating goals, policies, objectives, and implementation programs for the preservation, improvement, and development of housing.

3.2 Regional Housing Needs Allocation

In addition to including goals, policies, and implementation programs regarding housing issues, Housing Elements must include an inventory or list of housing sites at sufficient densities to accommodate a specific number of units at various levels of affordability assigned to the City by the Association of Bay Area Governments (ABAG). This assignment is referred to as a Regional Housing Needs Allocation (RHNA).

The City's current Housing Element provides sites sufficient to accommodate the 2015 RHNA allocation of 400 units, along with a "buffer" of 392 units, meaning the current Housing Element identifies enough land zoned at appropriate densities to accommodate a total of 792 units.

A buffer is necessary to ensure that if one or more of the identified sites are developed at low densities or with non-housing uses, there is remaining capacity to ensure an ongoing supply of sites for housing during the eight-year-cycle of the Housing Element. If there were no buffer, then the City could be obliged to identify new sites (potentially requiring rezoning) and amend the Housing Element prior to the end of the cycle if an identified site were developed with a non-housing project or developed at a density less than that anticipated in the Housing Element.

The need for a substantial buffer is even more important during this cycle because of new rules in the Housing Accountability Act's "no net loss" provisions. SB 166 (2017) requires that the land inventory and site identification programs in the Housing Element always include sufficient sites to accommodate the unmet RHNA. This means that if a site identified in the Element as having the potential for housing development to accommodate the lower-income portion of the RHNA is actually developed for a higher income level, the locality must either: 1) identify and rezone, if necessary, an adequate substitute site; or 2) demonstrate that the land inventory already contains an adequate substitute site. An adequate buffer will be critical to ensuring that City remains compliant with these provisions.

On December 18, 2020, ABAG released its Draft Regional Housing Needs Assessment Methodology and Subregional Shares document (ABAG, 2020) which articulated ABAG's recommended methodology for the distribution of the regional housing need issued by the State Department of Housing and Community Development (HCD). HCD allocated 441,176 housing units to the nine-county Bay Area ("bulk allocation").

Subsequent to issuance of the Draft RHNA, HCD approved the recommended methodology and ABAG considered appeals from 27 local jurisdictions, including the City of Lafayette. Following public comments and appeal hearings, ABAG rejected all of the appeals except for one, which transferred units from Contra Costa County to the City of Pittsburg. Subsequently, ABAG adopted the Final RHNA on December 16, 2021.

Lafayette's RHNA is 2,114 units, distributed among four income categories: very-low income, low income, moderate income and above moderate income, as shown in **Table 3-1**, below.

**TABLE 3-1
CITY OF LAFAYETTE RHNA ALLOCATIONS BY INCOME CATEGORIES**

Income Group				Total
Very Low Income (VLI)	Low Income (LI)	Moderate Income (MOD)	>Moderate Income (>MOD)	
599	344	326	845	2,114

SOURCE: Association of Bay Area Governments, *Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031*, November, 2021, adopted December 16, 2021.

This means that the City’s HEU will identify housing sites for that many units plus a “buffer” of additional units at appropriate densities. The City will also need to rezone the identified sites if/as necessary to accommodate the new units and amend other elements of the General Plan (for example the Land Use and Safety Elements) as needed to ensure that the General Plan as a whole remains consistent with the HEU.

3.3 Requirements of AB 2923

AB 2923, adopted by the Legislature and signed by the Governor in 2018, requires local jurisdictions with BART stations to up-zone the land owned by BART around their stations to a minimum density of 75 dwelling units per acre (du/acre) by the deadline of July 1, 2022. In the case of Lafayette, BART owns approximately 11 acres of parking lots at the BART station north of SR-24 that are subject to this requirement. Because these BART lands are within a mapped Very High Fire Hazard Severity Zone, the City has the option not to rezone the BART sites and to accommodate the same number of units that could be provided on the BART property somewhere else. In other words, the unit obligation that would exist on the BART site cannot be waived, but may be relocated. The HEU, with its inventory of housing sites, is intended to meet requirements of AB 2923.

3.4 Project Objectives

CEQA *Guidelines* Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project.

“A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.”

In keeping with this requirement, the City’s project objectives are as follows:

- Update the General Plan’s Housing Element to comply with State-mandated housing requirements and to address the maintenance, preservation, improvement, and development of housing in the City between 2023 and 2031.
- Include an inventory of housing sites and rezone the sites as necessary to meet the required Regional Housing Needs Allocation and to provide an appropriate buffer.

- Up-zone BART-owned properties in the vicinity of the Lafayette BART Station to meet the minimum 75 dwelling units per-acre requirements of AB 2923, or up-zone alternate properties to provide an equivalent number of units elsewhere in order to meet the City's RHNA.
- Amend land use designations in the Land Use Element of the City's General Plan as needed to maintain internal consistency between the elements and update the Safety Element to improve consistency with the County's Local Hazard Mitigation Plan and comply with recent changes in State law.
- Make necessary General Plan amendments and zoning changes in a manner that affirmatively furthers fair housing while preserving the character of Lafayette and perpetuating the safety and welfare of both existing and future residents.

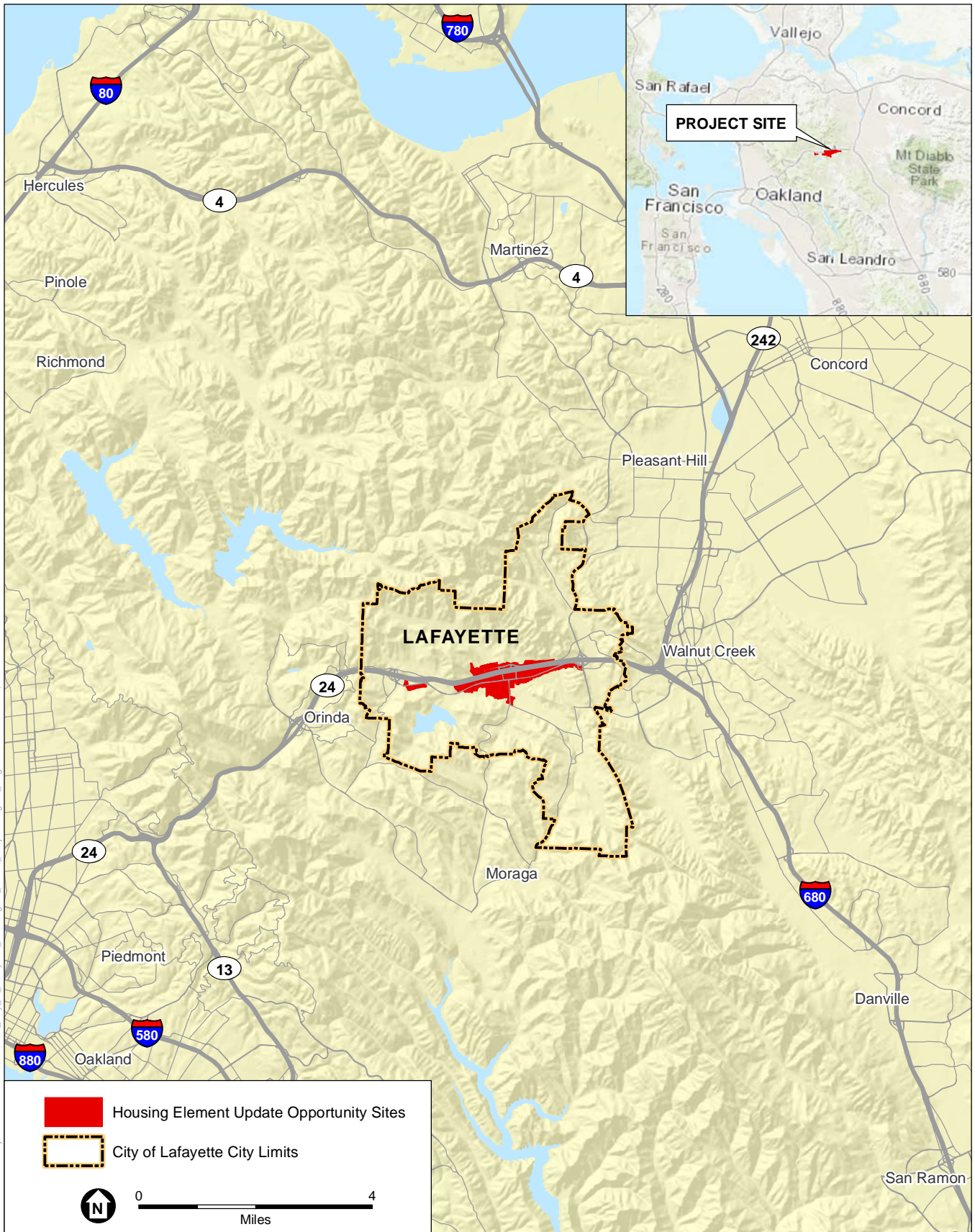
3.5 Project Location and Setting

The City of Lafayette is located in the San Francisco Bay Area in the East Bay Region, approximately 22 miles east of downtown San Francisco and about four miles west of Walnut Creek (latitude 33°53'31"N, longitude 122°07'07"W). The City was incorporated in 1968, and encompasses approximately 15 square miles with a population of about 26,000 people. The City boundaries and regional location of the City are shown in **Figure 3-1**. The geographic extent of environmental analysis included in the EIR for the proposed project will be the City limits.

The City includes approximately 10,000 residential dwelling units and an active downtown with a small-town character. Lafayette is noted for its high quality of life with top rated schools, low crime rate, clean air, mild climate, and oak tree-studded hills. The City is located between Berkeley and Walnut Creek, has a Bay Area Rapid Transit (BART) station, and is a 25-minute BART ride from San Francisco. The City's predominant land use is residential; the City also maintains parks within the City limits and is home to the 1,054-acre Lafayette Reservoir Recreational Area, which is maintained by the East Bay Municipal Utilities District (EBMUD). The City also borders the 6,255-acre Briones Regional Park, which is managed by the East Bay Regional Parks District.

State Route 24 (SR-24) passes through the middle of the City in an east-west direction. SR-24 is a major regional freeway that begins in Oakland and then passes through the Berkeley Hills via the Caldecott Tunnel before emerging near Orinda. The freeway then passes through Lafayette before merging with Interstate 680 (I-680) in Walnut Creek, east of Lafayette. SR-24 through Lafayette is generally configured as an eight-lane freeway, with four travel lanes in each direction and BART's Yellow Line (Antioch-SFO/Millbrae) occupying the freeway's median.

The City's downtown and principal commercial area lies south of SR-24, and generally lies alongside Mount Diablo Boulevard, which is an east-west roadway that roughly parallels SR-24. Areas lying north of SR-24 are predominately occupied by residential uses, though the extensive parking area for the Lafayette BART Station also lies north of the freeway. **Figure 3-2** shows the distribution of existing General Plan land use designations in the City, which roughly correspond to the distribution of existing land uses. (See Section 4-10, *Land Use and Planning*, for more discussion of existing land uses.)



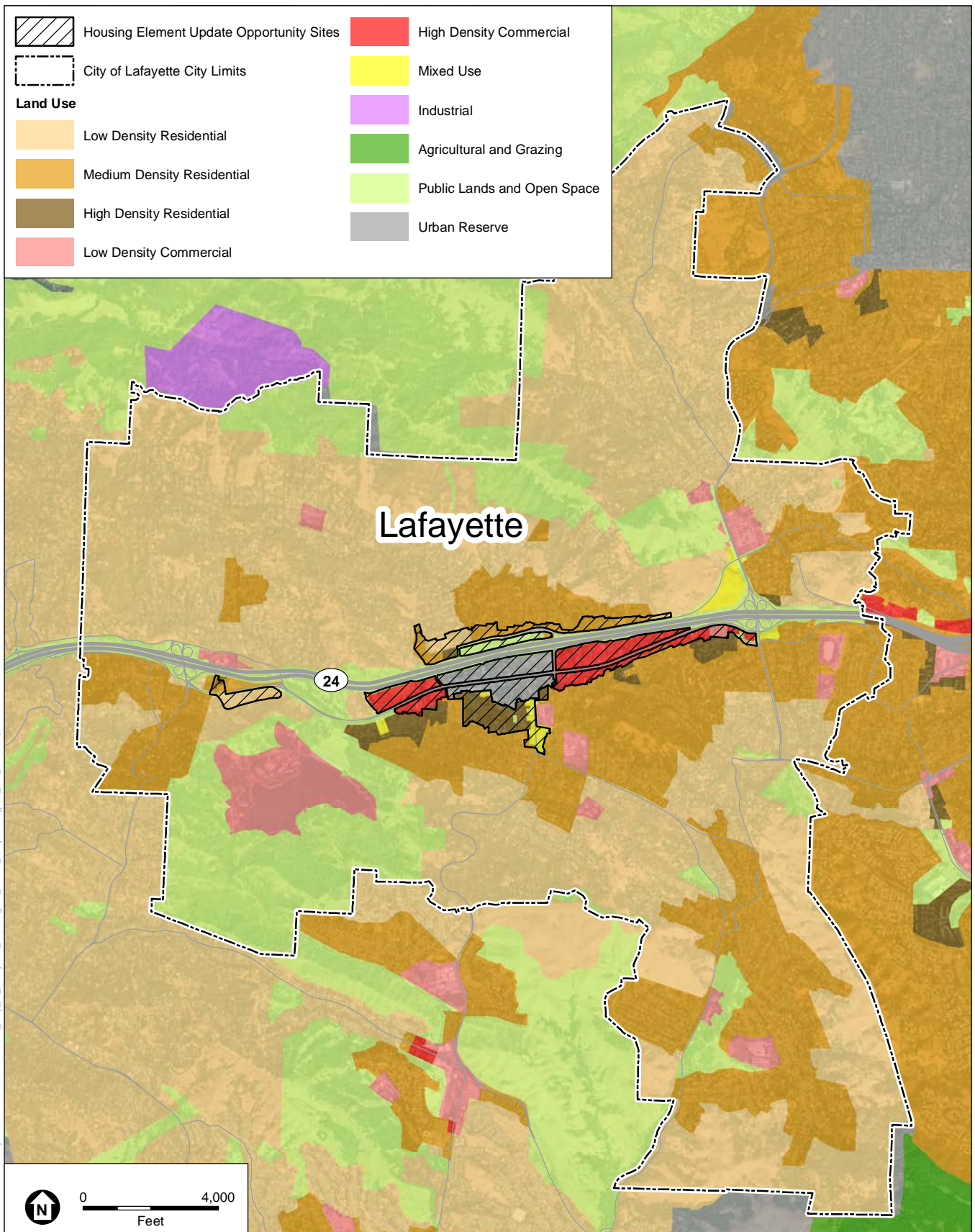
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SOURCE: ESA, 2021; ESRI Data, 2021

Lafayette Housing Element Update EIR

Figure 3-1
Regional Location





SOURCE: Contra Costa County

Lafayette Housing Element Update EIR

Figure 3-2
Existing General Plan Land Use Designations



3.6 Project Description

The HEU project analyzed in this EIR would include adoption of General Plan amendments that would add and/or modify goals, objectives, policies, and implementation programs related to housing that would apply Citywide, and that would address the maintenance, preservation, improvement, and development of housing in the City. These proposed amendments are described in Section 3.6.3 below.

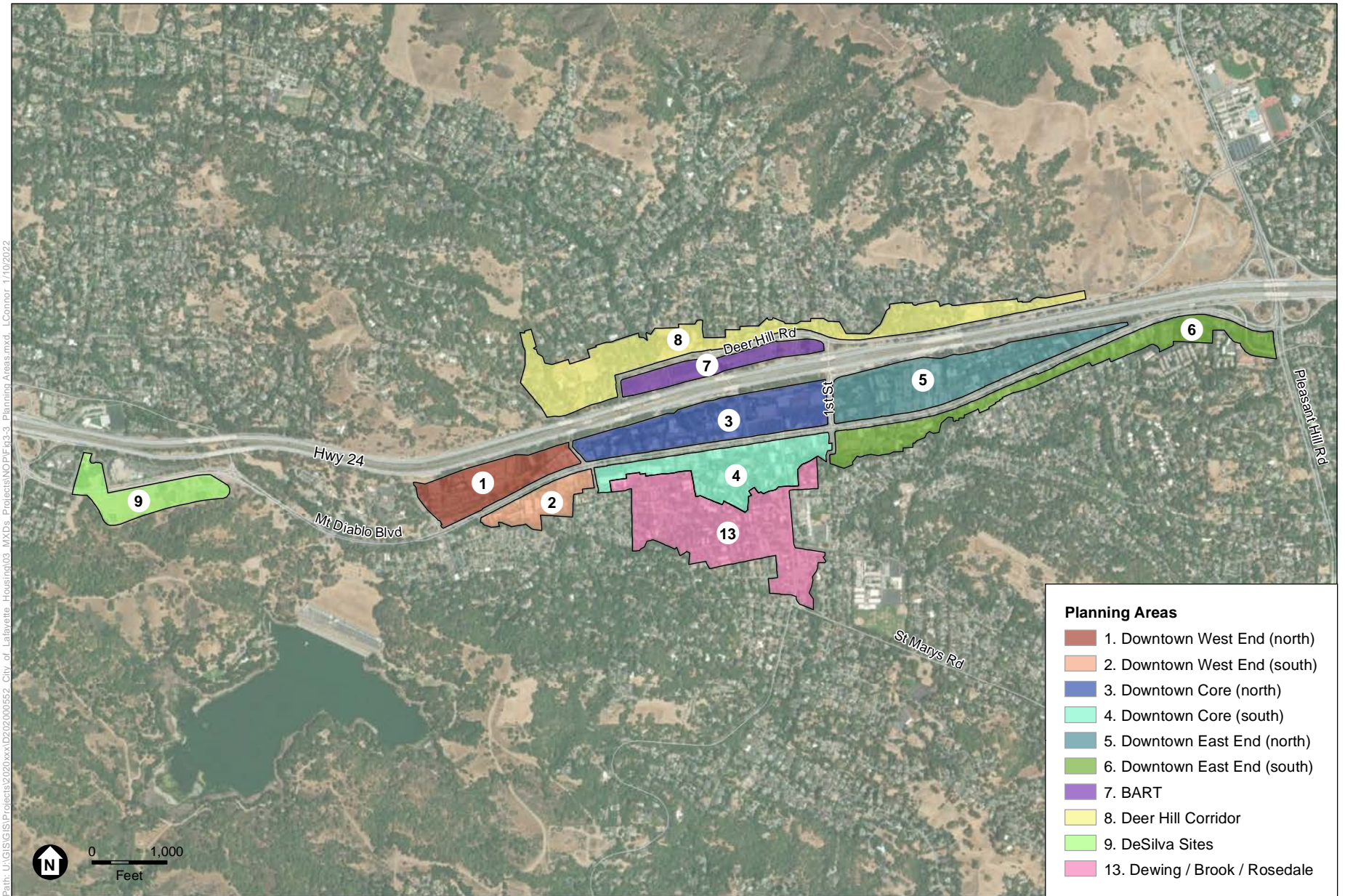
In addition, as discussed above, the HEU would identify specific sites appropriate for the development of additional multifamily housing, and the City would rezone those areas if/as necessary to meet the requirements of State law. Both the existing and proposed sites that can accommodate development of multifamily housing are located in a subset of the City, mostly in areas within and around downtown. These areas appear in **Figure 3-3** as the “study areas” for the Housing Element’s housing sites inventory, which is described in Section 3.6.1 below.

This section first describes areas of the City where there are or could be housing sites that meet or could meet density requirements and be included in the HEU’s housing sites inventory. It then describes a proposed project HEU scenario and an alternative HEU scenario that represents possible outcomes of the planning process, with a collection of sites and densities that would meet or exceed the State’s requirements. These two scenarios are used to assess the potential impacts of the HEU in Chapter 4, *Environmental Setting, Impacts, and Mitigation*, as explained further in that chapter.

Based on the final RHNA adopted in December 2021, the HEU will need to plan for at least an additional 2,114 dwelling units plus a “buffer” that has been initially identified at 50 percent, or about 1,000 units for planning purposes. While the City may retain and reuse some sites in the current Housing Element that have not been built-upon and can count some already approved housing projects as part of its inventory, Lafayette will also need to identify and rezone new sites not previously identified in order to meet the State mandates. Any sites that are reused from the current Housing Element may also need to be rezoned.

3.6.1 Study Areas for the Housing Sites Inventory

The HEU will include a housing sites inventory with sufficient existing and new housing sites at appropriate densities to meet the City’s RHNA requirement plus an ample buffer, and to meet the requirements of AB 2923. To determine where these potential housing sites will be and what densities will be required, City planners have identified a number of subareas in the City where housing sites could potentially be located. These areas are numbered 1 through 9 and 13 in **Figure 3-3**, and are described below. (Note that Areas 10, 11, and 12 are no longer being considered, as discussed in Chapter 5, *Alternatives*.)



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SOURCE: City of Lafayette, 2021

Lafayette Housing Element Update EIR

Figure 3-3
Housing Element Update Planning Areas

Downtown (Areas 1 through 6)

The Downtown subareas generally lies astride Mount Diablo Boulevard, and are comprised of that portion of the City that is a part of the Downtown Specific Plan (DSP) (City of Lafayette, 2012) and several peripheral areas. The City’s principal commercial uses are located in this area, with some residential uses scattered within. This subarea contains a number of existing zoning designations, many of which are designated to accommodate multi-family housing in conjunction with commercial uses. Most of the Downtown area’s zoning designations, for instance, allow residential dwelling units on upper floors above commercial uses. **Table 3-2** describes the various zoning designations within the Downtown area, along with allowed residential uses within them.

**TABLE 3-2
DOWNTOWN SUBAREA ZONING DESIGNATIONS**

Zoning Designation	Uses Permitted ¹
C	General Commercial District: general commercial uses with floor areas less than 7,500 square feet; restaurants; residential dwelling units; 35-foot height restriction
C-1	General Commercial District 1: general commercial uses with floor areas less than 7,500 square feet; 35 foot/2.5-story height restriction, except where residential uses would occupy the third floor
MRA	Multi-family Residential District A: duplexes; multi-family buildings; building height restrictions vary by lot size but generally no greater than 35 feet
P-1	Planned Unity District: integrated development with flexible standards; permitted residential densities in accordance with General Plan designation
RB	Retail Business District: retail and personal services establishments; residential dwelling units on upper floors along Mount Diablo Boulevard (between Mountain View Drive and First Street on the north side and between Mountain View Drive and Moraga Road on the south side), and on all floors elsewhere in the district; 35-foot height restriction
SRB	Special Retail Business District: retail and personal services with floor areas less than 2,000 square feet; general food sales; fast-food establishments (no drive-thru); residential dwelling units on upper floors along Mount Diablo Boulevard and on all floors elsewhere in the district

NOTES:

¹ Not all permitted uses and restrictions are listed; other uses may be allowed with permit

SOURCE: City of Lafayette Zoning Map, 2013.

BART Properties and Adjoining Parcels (Area 7)

This subarea is located north of SR-24 and is comprised of the parking lots for the Lafayette BART Station and several adjoining parcels lying east of the parking lots. The two BART-owned parking lot parcels are bisected in a north-south direction by Oak Hill Road. These parcels are currently zoned R-10. The R-10 zoning designation provides for single-family residences on lots with a minimum lot size of 10,000 square feet, with second units allowed with a use permit.

Three additional parcels are located to the east of the BART parking lots. Two of the parcels are currently vacant and carry no zoning designation. The easternmost parcel is currently occupied by a parking lot used by Whole Foods employees and is noncontiguous from the other parcels to the west. This eastern parcel is currently zoned R-10.

Deer Hill Road Corridor (Area 8)

This subarea includes a series of parcels generally lying north of SR-24 and Deer Hill Road, along with a number of additional parcels lying further to the west. This area is almost wholly developed with residential uses. This subarea contains several existing zoning designations, many of which are designated to accommodate varying densities of residential housing. **Table 3-3** describes the various zoning designations within the subarea, along with allowed residential uses within them.

**TABLE 3-3
DEER HILL ROAD CORRIDOR SUBAREA ZONING DESIGNATIONS**

Zoning Designation	Uses Permitted ¹
P-1	Planned Unity District: integrated development with flexible standards; permitted residential densities in accordance with General Plan designation
D-1	Two-family Residential District: detached two-family dwellings (duplexes) on lots that are 10,000 square feet in size or larger.
R-10	Single-family Residential District 10: single-family residences on lots greater than 10,000 square feet; second units allowed with a use permit; height generally restricted to 35 feet/2.5 stories.
R-20	Single-family Residential District 20: single-family residences on lots greater than 20,000 square feet; second units allowed with a use permit; height generally restricted to 35 feet/2.5 stories.

NOTES:

¹ Not all permitted uses and restrictions are listed; other uses may be allowed with permit

SOURCE: City of Lafayette Zoning Map, 2013.

DeSilva Sites(Area 9)

This subarea is located near the western end of Mount Diablo Boulevard, and is comprised of the several parcels lying north and south of Mount Diablo Boulevard adjacent to and across from the Oakwood Athletic Club. The parcels west of the Athletic Club are zoned MRA (a multi-family designation) and LR-10 (a single-family residential designation with a minimum lot size of 10 acres), with the MRA-designated parcel currently occupied with multi-family residential housing. The parcels lying south of Mount Diablo Boulevard across from the Athletic Club are currently vacant and are zoned LR-10.

Dewing/Brook/Rosedale (Area 13)

This subarea is located south of Downtown and is almost wholly comprised of existing residential uses at varying densities. **Table 3-4** describes the various zoning designations within the subarea, along with allowed residential uses within them.

**TABLE 3-4
DEWING/BROOK/ROSEDALE SUBAREA ZONING DESIGNATIONS**

Zoning Designation	Uses Permitted ¹
MRA	Multi-family Residential District A: duplexes; multi-family buildings; building height restrictions vary by lot size but generally no greater than 35 feet
MRO	Multi-family Residential/Professional Office District: duplexes; multi-family buildings; 3-story/35 foot height restriction
MRT	Multi-family Residential Townhouse District: townhouses; permitted residential densities in accordance with General Plan designation; 25-foot height restriction
P-1	Planned Unity District: integrated development with flexible standards; permitted residential densities in accordance with General Plan designation
R-10	Single-family Residential District 10: single-family residences on lots greater than 10,000 square feet; second units allowed with a use permit; height generally restricted to 35 feet/2.5 stories.

NOTES:

¹ Not all permitted uses and restrictions are listed; other uses may be allowed with permit

SOURCE: City of Lafayette Zoning Map, 2013.

3.6.2 Distribution Scenarios for Housing Sites

Various possible distributions of housing sites and densities in the study areas described above have been and will be considered for inclusion in the HEU by the community, planning staff, the Planning Commission, and the City Council. The Distributed Sites approach represents the “Project” that will be analyzed in the EIR, and a Downtown-Only approach will be analyzed as an alternative at an equal level of detail in the EIR in order to assess the impacts of the HEU if all of the housing sites were located in the Downtown-Only area.

The **Project with Distributed Sites** and the **Downtown-Only Alternative** each identify specific sites that could be included in the Housing Sites Inventory and rezoned to accommodate multi-family housing development at various densities in order to meet the project objectives. The two approaches share some features as follows:

- To be conservative, both alternatives include sites and densities sufficient to meet the draft RHNA of 2,114 units, plus an initial buffer of around 60 percent.
- Both alternatives include sites in the Downtown area that are identified in the City’s current Housing Element that have not yet been redeveloped. Most of these sites would be rezoned to allow higher densities.
- Both alternatives include the assumption that continued development of individual Accessory Dwelling Units (ADUs) in residential neighborhoods throughout the City will yield an estimated 240 dwelling units over the life of the new Housing Element. This assumption is based on the City’s recent track record of ADU production.
- Both alternatives include sites at densities substantially above 30 dwelling units per acre, which is the minimum density “deemed appropriate” in State law to accommodate housing for lower income households in a city of Lafayette’s size (Government Code Section 65583.2(c)(3)(B)).

- Both alternatives assume that the number of units that could be accommodated on each residentially zoned site is less than 100 percent of the maximum “mathematical capacity” of the site, instead assuming approximately 85 percent.¹
- Both alternatives assume that sites along Mount Diablo Boulevard would include ground floor commercial space and therefore would accommodate approximately 75 percent of their theoretical residential capacity.
- Both alternatives include some sites where housing development has already been approved and housing is assumed to be constructed and occupied after June 2022.

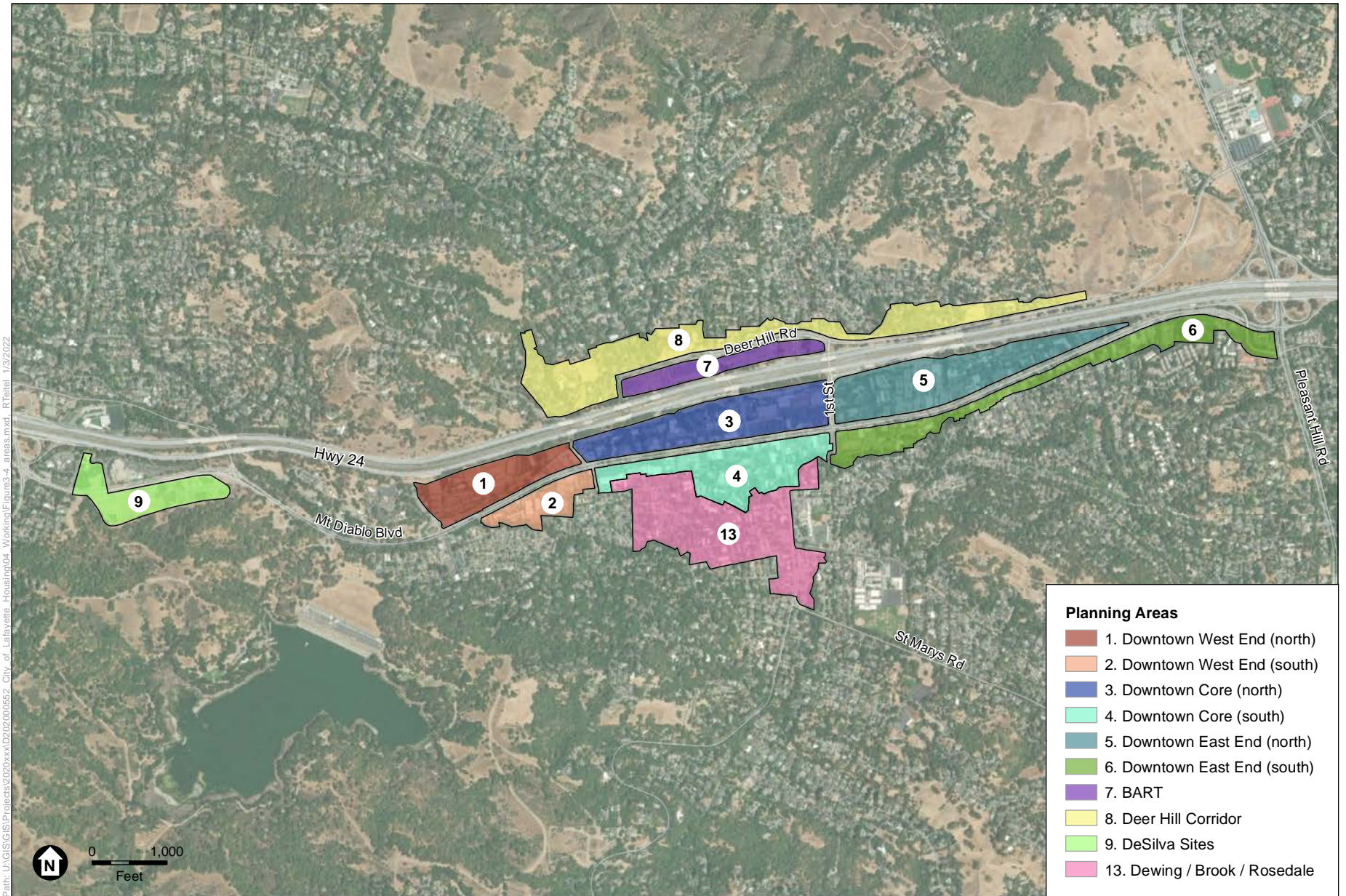
Again, it is important to note that the identification of housing sites in the City’s Housing Element does not mean that the City or someone else will necessarily develop housing on those sites at the planned unit count or level of affordability. Instead, the identification of housing sites is intended to plan for and encourage housing, but its development by property owners and developers is largely dependent on market forces and (in the case of affordable housing) available subsidies.

Project with Distributed Sites

The HEU with Distributed Sites approach would accommodate growth by including sites for multifamily housing throughout the Downtown (including Core, and the East and West Ends), on the BART sites, the Deer Hill Road corridor, the neighborhoods adjacent to and immediately south of the Downtown Core, and the DeSilva sites (collectively, Areas 1 through 9, and 13 on **Figure 3-3**).

Sites included in the City’s existing Housing Element that have not been redeveloped with new housing would be retained, and allowable densities on these sites could be increased from 35 to 50 units per acre. New sites would also be identified in Downtown and planned for similar densities. Aside from the BART site, which would allow 75 units per acre consistent with AB 2923, no sites would allow densities higher than 50 units per acre. Sites in the Deer Hill Corridor (Area 8) and the DeSilva Sites (Area 9) would be limited to 20 units per acre, and the Dewing/Brook/Rosedale area (Area 13) would remain at its existing density of 35 units per acre. Development on two sites in this area that were included in the previous housing element’s sites inventory would allow “by right” approval of projects that are at least 20 percent affordable. Planning areas included in the HEU with Distributed Sites are shown in **Figure 3-4** and summarized in **Table 3-5**.

¹ This is consistent with staff’s research of housing developments in the City over the few years, which demonstrates that new multi-family projects in the downtown have, on average, built out at 85 percent of the maximum mathematical capacity. This is largely a function of the fact that portions of any given development parcel must be used to accommodate non-housing components such as parking and circulation features, setbacks, common areas, and the like.



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SOURCE: City of Lafayette, 2021

Lafayette Housing Element Update EIR

Figure 3-4
HEU with Distributed Sites

**TABLE 3-5
PROJECT WITH DISTRIBUTED SITES**

Planning Area Name	Sites Acreage ¹	Existing Zoning	Allowable Density		Unit Yield ³
			Existing	Proposed ²	
1. Downtown West End (north)	5.29	MRA, C, P-1	35	50	198
2. Downtown West End (south)	2.75	C	35	50	103
3. Downtown Core (north)	4.73	RB, SRB, P-1	35	50	177
4. Downtown Core (south)	0.78	RB, SRB, P-1	35	50	29
5. Downtown East End (north)	12.53	C-1	35	50	470
6. Downtown East End (south)	4.19	C-1	35	50	157
7. BART	13.04	R-10	4	75	831
8. Deer Hill Corridor	17.85	R-10, R-20, D-1, P-1	6, 2	20	303
9. DeSilva Sites	18.0	LR-10, R-10	0.1, 4	20	306
13. ⁴ Dewing/Brook/Rosedale	4.64	MRA, MRO, P-1, MRT, R-10	35	35	138
Total Units					2,714
Scattered Sites ⁵					642
Total Inventory					3,356
Effective Buffer					59 %

NOTES:

¹ The estimated combined acreage of opportunity parcels within each sub-area as shown in Figure 3-3.

² Sites would be rezoned as needed to permit the proposed densities.

³ Assumes parcels would be built out at 85 percent of the maximum mathematical capacity, except those along Mt. Diablo Blvd, in which 75 percent of maximum capacity is assumed to accommodate mixed use development.

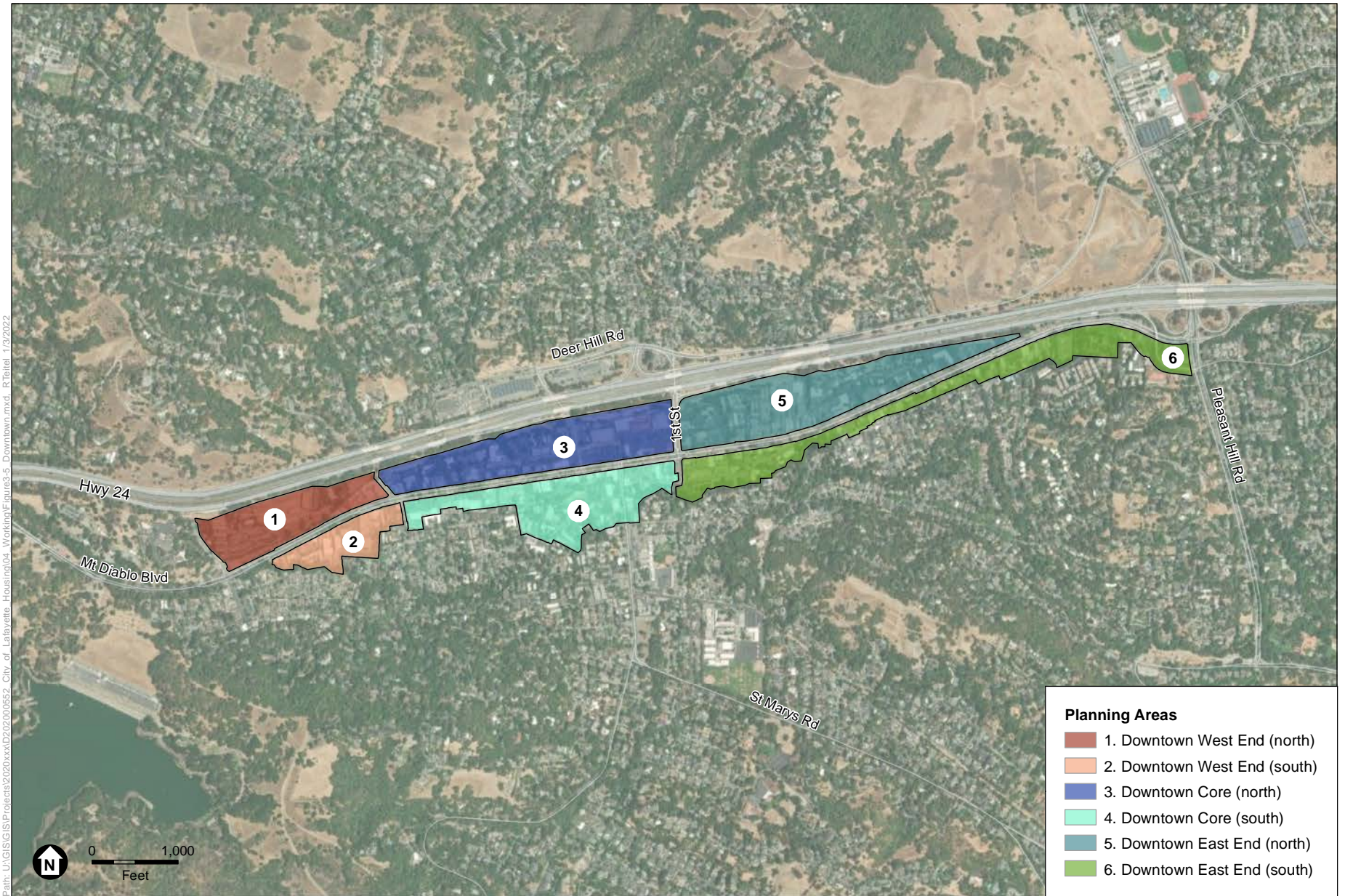
⁴ Areas 10, 11, and 12 are no longer being considered, as discussed in Chapter 5, *Alternatives*.

⁵ Scattered sites includes anticipated Citywide development of single-family units, anticipated accessory dwelling units, and housing sites outside of the study areas.

Downtown-Only Alternative

The Downtown-Only Alternative would accommodate all of the HEU's growth within the existing limits of the Downtown commercial districts (Areas 1 through 6 in **Figure 3-3**). To do this, sites included in the City's existing Housing Element that have not been developed would be retained, additional sites added, and allowable densities would increase from 35 units per acre to approximately 115 units per acre. If more sites in the Downtown are added to the inventory, the maximum density needed to accommodate the units could be reduced from 115 units per acre. The planning areas encompassed by the Downtown Only Alternative is shown in **Figure 3-5**, and summarized in **Table 3-6**, below.

As shown in Table 3-6, approximately half of the total of units would be accommodated on sites at the east end of Downtown (Areas 5 and 6), with the remainder spread throughout Areas 1 through 4. All of the sites would be located south of the freeway, and the BART site would not be rezoned. Instead, the units planned for the BART site under the HEU with Distributed Sites would be met by the increased allowable densities on downtown sites. In this alternative, it is assumed that the BART site would not develop within the timeframe of the 6th cycle housing element or by the year 2040.



SOURCE: City of Lafayette, 2021

Lafayette Housing Element Update EIR

Figure 3-5
Downtown Only Alternative

**TABLE 3-6
DOWNTOWN ONLY ALTERNATIVE**

Area Name	Opportunity Sites Acreage ¹	Existing Zoning	Allowable Density		Unit Yield ³
			Existing	Proposed ²	
1. Downtown West End (north)	5.29	MRA, C, P-1	35	115	456
2. Downtown West End (south)	2.75	C	35	115	237
3. Downtown Core (north)	4.73	RB, SRB, P-1	35	115	408
4. Downtown Core (south)	0.78	RB, SRB, P-1	35	115	67
5. Downtown East End (north)	12.53	C-1	35	115	1,081
6. Downtown East End (south)	4.1	C-1	35	115	361
Total Units					2,611
Scattered Sites ⁴					782
Total Inventory					3,393
Effective Buffer					61 %

NOTES:

¹ The estimated combined acreage of opportunity parcels within each sub-area as shown in Figure 3-4.

² Sites would be rezoned as needed to permit the proposed densities.

³ Assumes parcels would be built out at 85 percent of the maximum mathematical capacity, except those along Mt. Diablo Blvd, in which 75 percent of maximum capacity is assumed to accommodate mixed use development.

⁴ Scattered sites includes anticipated Citywide development of single-family units, anticipated accessory dwelling units, and housing sites outside of the study areas.

3.6.3 Other Elements of the General Plan

In addition to the amendments that would take place within the General Plan’s Housing Element, a number of amendments to other elements of the General Plan would be required to fully conform those elements to the changes made in the Housing Element or comply with other changes in state law. At a minimum, the City proposes to update land use designations and the land use map within the Land Use Element of the General Plan to be consistent with the housing sites inventory within the Housing Element. In addition, the City proposes to update the Safety Element of the General Plan to comply with recent changes in State law.

3.7 Future Development Actions and This HEU EIR

Because the Housing Element establishes policies, goals and guidelines, and describes potential housing development that may or may not be built on any particular site, environmental review of the HEU will necessarily be general. The CEQA Guidelines instruct that environmental review of a planning-level document need not contain the level of detail required for review of a specific construction project, for example. (CEQA Guidelines, Section 15146 (“[t]he degree of specificity required ... will correspond to the degree of specificity involved in the underlying activity”).

The Housing Element’s inventory of sites is a State-mandated requirement to ensure that the City’s RHNA can be accommodated. In other words, the housing inventory demonstrates that there is enough land zoned at appropriate densities to accommodate the RHNA allocation. However this inventory does not include all potential residential development sites within the

City limits, and does not mean that sites in the inventory will be developed at the allowable densities. In addition, information about the design and placement of buildings on the sites will not be available unless/until a specific development is proposed.

It is important to note that while the law requires the HEU to include an inventory of housing sites and requires the City to zone those sites for multifamily housing, the City is not required to develop housing on these sites. Future development on the identified sites will be up to the property owners and will be largely dependent on market forces and (in the case of affordable housing) available subsidies.

Future development proposals will be reviewed to determine whether their impacts fall within the scope of the analysis in this EIR or if additional site-specific environmental review will be required if new significant impacts would result. As provided for in CEQA Guidelines Sections 15152 and 15385, any subsequent environmental document that might be required could “tier” from this EIR and focus its analysis on the new significant impacts.

3.8 Required Approvals

3.8.1 City of Lafayette

While the City’s proposed HEU is subject to review and certification by the State’s Department of Housing and Community Development (HCD), adoption and implementation of the HEU would require a series of interrelated planning and regulatory approvals by the City of Lafayette, as Lead Agency. Specifically, the City would take the following approval actions:

- Certification of the HEU EIR pursuant to CEQA;
- Adoption of a resolution amending the General Plan to update the Housing Element, make corresponding changes to the Land Use Element required to preserve internal consistency, and to update the Safety Element to comply with recent changes in state law;
- Adoption of an ordinance (two readings) amending the City’s zoning ordinance and the City’s zoning map to reflect the location and density of land uses permitted by the General Plan amendment.

All of these proposed actions would require review and recommendation by the Planning Commission, followed by consideration and action by the City Council.

3.8.2 Other Governmental Agency Approvals

As the Lead Agency and as appropriate under CEQA, the City also intends the EIR to serve as the CEQA-required environmental documentation for consideration of the HEU by other Responsible Agencies and Trustee Agencies which may have discretionary approval authority over the HEU. Under the CEQA *Guidelines*, the term “Responsible Agency” includes all public agencies, other than the Lead Agency, which have discretionary approval power over aspects of the project for which the Lead Agency has prepared an EIR (CEQA Guidelines Section 15381); and the term “Trustee Agency” means a state agency having jurisdiction by law over natural resources affected

by the project which are held in trust by the people of California (Section 15386). Responsible Agencies and Trustee Agencies with approval actions associated with the project may include, but are not limited to, the following:

- Bay Area Regional Transit District (BART)
- California Department of Transportation (Caltrans)

3.9 References

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CHAPTER 4

Environmental Setting, Impacts, and Mitigation Measures

4.0 Introduction to the Environmental Analysis

This draft program environmental impact report (EIR) evaluates and documents the physical environmental effects that would potentially occur with the implementation of the proposed Housing Element Update (project) in accordance with the California Environmental Quality Act (CEQA), Public Resources Code (PRC) Sections 21000, et seq., and the Guidelines for the California Environmental Quality Act (CEQA Guidelines), California Code of Regulations, Title 14, Chapter 3, Section 15000, et seq.). Sections 4.1 through 4.17 consider the regulatory background, existing conditions, and environmental impacts associated with implementation of the project, as well as mitigation measures to reduce the impact of project-specific and cumulative environmental impacts, and the level of significance of impacts following mitigation. This EIR is a Program EIR, as provided for in CEQA Guidelines Section 15168. Section 15168(a) of the CEQA Guidelines states that a Program EIR is appropriate for projects which are "... a series of actions that can be characterized as one large project and are related either:

1. Geographically;
2. A logical part in the chain of contemplated actions;
3. In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or
4. As individual activities carried out under the same authorizing statutory or regulating authority and having generally similar environmental effects which can be mitigated in similar ways."

Future discretionary actions that would be facilitated by the HEU's adoption, particularly those related to the development of housing, would require additional assessment to determine consistency with the analysis provided in this Program EIR. The potential future actions would also be subject to the mitigation measures established in this Program EIR, unless superseded by a subsequent environmental document prepared to analyze environmental impacts not foreseen in this Program EIR.

4.0.1 Definitions of Terms Used in this EIR

This EIR uses a number of terms that have specific meaning under CEQA. Among the most important of the terms used in the EIR are those that refer to the significance of environmental impacts. The following terms are used to describe environmental effects of the project:

- **Significance Thresholds:** A set of standards used by the lead agency to determine whether an impact would be considered significant. (See CEQA Guidelines Section 15064.7.) Standards of significance used in this EIR were derived from Appendix G of the CEQA Guidelines unless otherwise noted. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, State, and local regulations and ordinances.
- **Significant Impact:** A project impact is considered significant if the project would result in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project-related physical change compared to specified significance criteria. A significant impact is defined as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.”¹
- **Less-than-Significant Impact:** A project impact is considered less than significant when the physical change caused by the project would not exceed the applicable significance criterion.
- **Significant and Unavoidable Impact:** A project impact is considered significant and unavoidable if it would result in a substantial adverse physical change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level.
- **Cumulative Impact:** Under CEQA, a cumulative impact refers to “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”² A significant cumulative impact is one in which the cumulative adverse physical change would exceed the applicable significance criterion and the project’s contribution is “cumulatively considerable.”³
- **Mitigation Measure:** A mitigation measure is an action that could be taken that would avoid or reduce the magnitude of a significant impact. Section 15370 of the CEQA Guidelines defines mitigation as:
 - a. Avoiding the impact altogether by not taking a certain action or parts of an action;
 - b. Minimizing impacts by limiting the degree of magnitude of the action and its implementation;
 - c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

¹ CEQA Guidelines, Section 15382.

² CEQA Guidelines, Section 15355.

³ CEQA Guidelines, Section 15130(a).

- e. Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.

4.0.2 Section Format

Chapter 4 is divided into technical sections (e.g., Section 4.1, *Aesthetics*) that present the physical environmental setting, regulatory setting, significance criteria, methodology and assumptions, and impacts on the environment for each environmental resource issue area. Where required, potentially feasible mitigation measures are identified to lessen or avoid potentially significant impacts. Each section includes an analysis of project-specific and cumulative impacts for each issue area.

The technical environmental sections each begin with a description of the project's **environmental setting** and the **regulatory setting** as it pertains to a particular issue. The environmental setting provides a point of reference for assessing the environmental impacts of the project and project alternatives. The environmental setting discussion addresses the conditions that existed at the time of issuance on the EIR's Notice of Preparation (NOP) and prior to implementation of the project. This setting establishes the baseline by which the project and project alternatives are measured for environmental impacts. The regulatory setting presents relevant information about federal, state, regional, and/or local laws, regulations, plans or policies that pertain to the environmental resources addressed in each section.

Next, each section presents **significance criteria**, which identify the standards used by the City of Lafayette to determine the significance of the environmental effects of the project.

A **methods and assumptions** description in each section presents the analytical methods and key assumptions used in the evaluation of effects of the project, and is followed by an **impacts and mitigation** discussion. The impact and mitigation portion of each section includes impact statements, prefaced by a number in bold-faced type. An explanation of each impact is followed by an analysis of its significance. The subsection concludes with a statement that the impact, following implementation of the mitigation measure(s) and/or the continuation of existing policies and regulations, would be reduced to a less-than-significant level or would remain significant and unavoidable.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the project. As required by Section 15126.2(a) of the CEQA Guidelines, direct, indirect, short-term, long-term, onsite, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed. Under CEQA, economic or social changes by themselves are not considered to be significant impacts, but may be considered in linking the implementation of a project to a physical environmental change, or in determining whether the physical change is significant.⁴

⁴ A "significant effect on the environment" is defined in CEQA Guidelines Section 15382.

Where enforcement exists and compliance can be reasonably anticipated, this EIR assumes that the project would meet the requirements of applicable laws and other regulations.

Mitigation measures pertinent to each individual impact, if available, appear after the impact discussion section. The magnitude of reduction of an impact and the potential effect of that reduction in magnitude on the significance of the impact is also disclosed. An example of the format is shown below.

Impacts and Mitigation Measures

Impact 4.X-1: Impact statement.

A discussion of the potential impact of the project on the resource is introduced in paragraph form. To identify impacts that may be site- or project element-specific, where appropriate, the discussion differentiates between construction effects and operational effects. Impacts of the HEU with Distributed Sites and the Downtown-Only Alternative are also discussed separately where appropriate. A statement of the level of significance before application of any mitigation measures is provided in bold.

Mitigation Measure

If the impact is determined to be less than significant, the text will say, “None required.” If the impact is determined to be significant or potentially significant, mitigation will be included in the following format:

Mitigation Measure 4.X-1:

Recommended mitigation measure, numbered in consecutive order.

Where appropriate, one or more potentially feasible mitigation measures are described. If necessary, a statement of the degree to which the available mitigation measure(s) would reduce the significance of the impact is included in **bold**.

Cumulative Impacts

An analysis of cumulative impacts follows the project-specific impacts and mitigation measures evaluation in each section. A cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other past, present and reasonably foreseeable projects causing related impacts.⁵

In this case, the Housing Element Update (HEU) itself is a plan-level document which provides for increased residential development within the City across a relatively broad geography, including potential housing development that exceeds the regional forecast included for the City

⁵ CEQA Guidelines Section 15355.

in regional plans (Plan Bay Area 2040)⁶ and the County’s transportation model. Indeed, the identification of housing sites as part of the HEU is intended to plan for and encourage housing which would be developed as part of numerous separate projects in various areas of the City.

The nature of the project does not alter the need to analyze cumulative impacts, and consistent with State CEQA Guidelines Section 15130(b)(1), regional growth projections prepared for Plan Bay Area 2040 and contained in the County’s transportation model are used for the analysis of VMT and related topics such as air quality, energy, greenhouse gas emissions, and noise.

The analysis of other topics also references a list of past, present, and probable future projects as shown in **Table 4.0-1**. Importantly, this list identifies already approved residential projects and pending applications, all of which are included in the development assumptions for the HEU itself because the City may count these developments towards its RHNA if they are permitted, constructed, and occupied after June of 2022. Nonetheless, they are identified as probable future projects that would occur whether or not the HEU is adopted as proposed. **Figure 4.0-1** shows the location of each project.

The beginning of the cumulative impact analysis in each technical section includes a description of the cumulative analysis methodology and the geographic or temporal context in which the cumulative impact is analyzed.

As noted above, where a cumulative impact is significant when compared to existing or baseline conditions, the analysis must address whether the project’s contribution to the significant cumulative impact is “considerable.” If the contribution of the project is considerable, then the EIR must identify potentially feasible measures that could avoid or reduce the magnitude of the project’s contribution to a less-than-considerable level. If the project’s contribution is not considerable, it is considered less than significant and no mitigation of the project contribution is required.⁷ The cumulative impacts analysis is formatted in the same manner as the project-specific impacts, as shown above.

Cumulative Impacts and Regional Planning

Lafayette is not the only Bay Area jurisdiction that has received a Regional Housing Needs Allocation (RHNA) from the nine-county Association of Bay Area Governments (ABAG). In all, 109 county and municipal jurisdictions in the Bay Area have received allocations from ABAG for the 6th Cycle, for a total housing regional allocation of 441,176 units. However, based on past experience, it is highly unlikely that all of those units will be constructed during the 2023-2031 6th Cycle planning period, and therefore using that total RHNA number for the region as the basis for the cumulative effects analysis would substantially overstate the level of impact. For this reason, and to more realistically assess the level of impact that could be reasonably foreseen

⁶ The Metropolitan Transportation Commission (MTC) and ABAG recently adopted an updated plan, Plan Bay Area 2050. However, it will take up to three years for the plan’s growth forecast to be integrated into MTC’s transportation model, after which updates to each county’s transportation model will take place. For these reasons, and for purposes of this EIR, Plan Bay Area 2040 is the regional plan which will form the basis for long range population, housing and employment projections in this EIR.

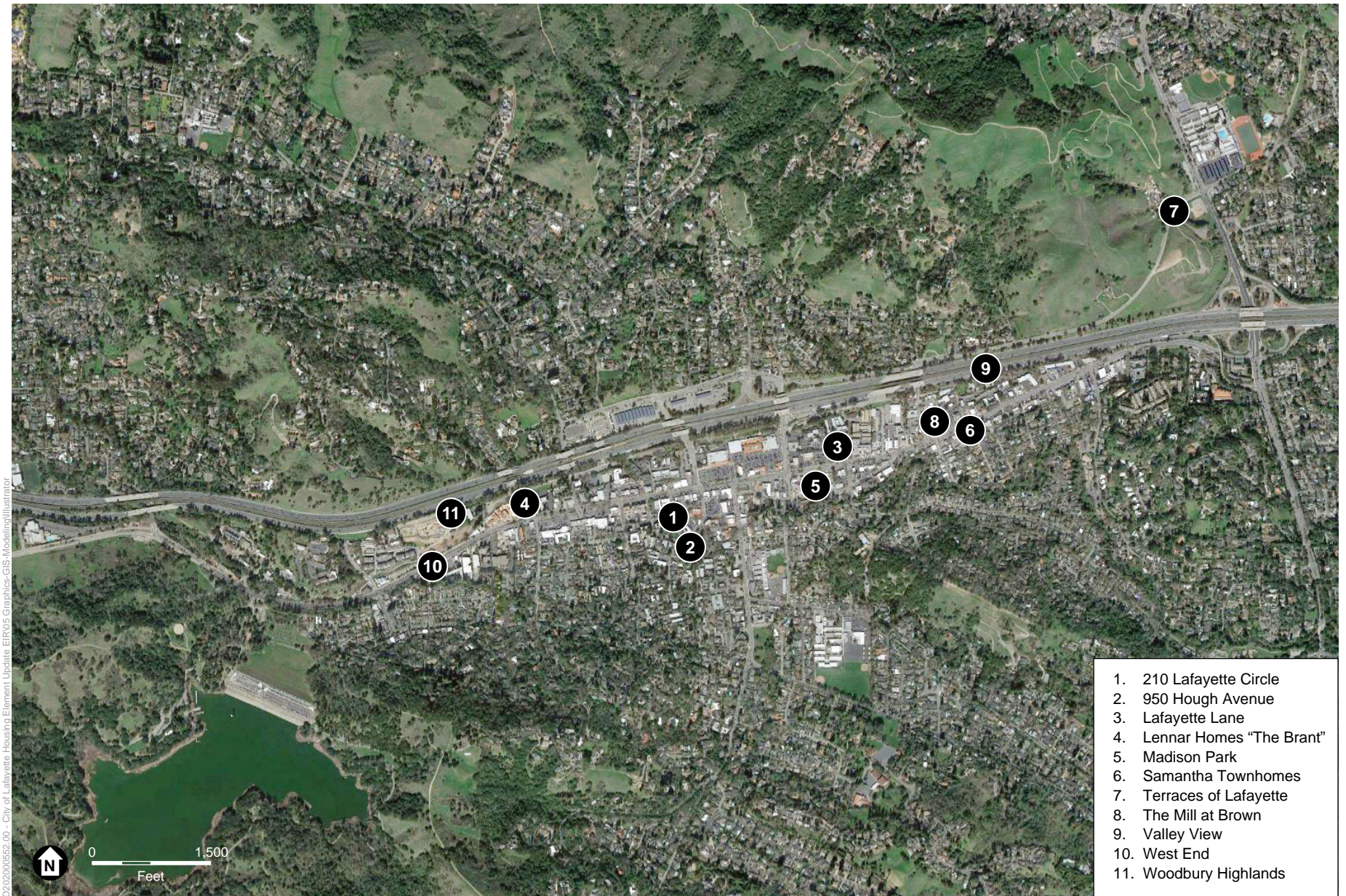
⁷ CEQA Guidelines Section 15130(a)(2).

during the HEUs planning period, for all jurisdictions other than Lafayette, this EIR will consider the regional household and population projections presented in Plan Bay Area 2040, which, among other things, provides estimates of likely new housing construction and population and employment growth through 2040.

**TABLE 4.0-1
 CUMULATIVE PAST, PRESENT, AND PROBABLE FUTURE RESIDENTIAL PROJECTS IN THE CITY**

Project Name	Location	Project Characteristics	Status	Total Residential Units
210 Lafayette Circle	210 Lafayette Circle	3-story mixed-use building with 12 residential units	Under construction	12
950 Hough Avenue	950 Hough Avenue	20-unit, 4-story condominium project	Approved, not yet under construction	20
Lafayette Lane	3462 Mount Diablo Boulevard	166 multiple-family residential units in five 4-story residential buildings and two detached community buildings with approximately 29,200 sf office building	Approved, not yet under construction	166
Lennar Homes "The Brant"	3666 Mount Diablo Boulevard	66 condominiums in a mixed-use project with 5,400 square feet of commercial uses including a full service restaurant	Under construction	66
Madison Park	3483 Golden Gate Way	Redevelopment of site with 4-story mixed-use building containing 71 residential units	In public hearings	71
Samantha Townhomes	Stuart Street	12 new townhomes on two vacant, unaddressed parcels on Stuart Street	Approved not yet under construction	12
Terraces of Lafayette	3233 Deer Hill Road	315 apartments in 14 buildings (seven 3-story and seven 2-story), with a clubhouse and leasing office	Approved not yet under construction	315
The Mill at Brown	3408 Mount Diablo Boulevard	13 condominium units in two 3-story buildings	Under Construction	13
Valley View	1059 Aileen Street	42-unit rental apartment project	Approved not yet under construction	4
West End	3721 Mount Diablo Boulevard	4-story multifamily development containing 13 units	Approved not yet under construction	13
Woodbury Highlands	3700 Mount Diablo Boulevard	99-units condominium project	Under construction	99
Total				791

SOURCES: City of Lafayette. 2021. Major Development Projects Map. Available: <https://lafayette.icitywork.com/>. Accessed September 14, 2021. Verified by City staff September, 2021.



SOURCE: ESA, 2021

Lafayette Housing Element Update EIR

Figure 4.0-1
 Cumulative Projects

This EIR will utilize the Plan Bay Area 2040 projections for 2040 as incorporated into the County transportation model for purposes of cumulative analysis. **Table 4.0-2** summarizes future 2040 projections for housing units and employment in the City, Contra Costa County, and the nine-county Bay Area and represents the levels of housing and employment that is projected without adoption of the City’s HEU.

**TABLE 4.0-2
 2040 HOUSING AND EMPLOYMENT PROJECTIONS¹**

	2040
Housing Units (Single-Family / Multi-Family)	
City of Lafayette ²	8,661/2,545
Contra Costa County	332,429/146,496
Bay Area	1,894,119/1,539,289
Employment	
City of Lafayette	11,773
Contra Costa County	497,470
Bay Area	4,692,852

NOTES:

¹ Data for the City, County, and the Region are based on Plan Bay Area 2040 as incorporated into the Contra Costa Transportation Authority Model.

² City of Lafayette Housing Units include units from approved and pending applications.

SOURCE: Fehr and Peers, January 2022.

4.1 Aesthetics

4.1.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects related to aesthetics. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to aesthetics. Further below, existing plans and policies relevant to aesthetics associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to aesthetics that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relating to aesthetics were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- City of Lafayette General Plan (2002).
- City of Lafayette Downtown Specific Plan EIR (2010).
- California Department of Transportation List of Scenic Highways (2021).

4.1.2 Environmental Setting

City of Lafayette

The City of Lafayette is part of the greater San Francisco Bay Area and is situated between Walnut Creek, Moraga, and Orinda, east of the Berkeley Hills. The City comprises a mix of developed and undeveloped lands. Most of the land area within the corporate boundaries of the City is developed with urban and suburban development of varying types, densities, and architectural styles. However, substantial areas of the City are either undeveloped or managed as some form of open space, including areas of open grassland and oak woodland. The City's downtown and principal commercial area lies south of State Route 24 (SR-24) and generally lies alongside Mount Diablo Boulevard, which is an east-west roadway that roughly parallels SR-24. Downtown Lafayette is generally flat, with the exception of the northern boundary which contains some hilly terrain, as it is located in the toe of the foothills of the surrounding hillsides and ridges. Development in the downtown core includes a diverse mix of building types, architectural styles, and building heights. Buildings in the downtown area range from one-story retail stores to three-story offices to three-story mixed-use structures. Areas lying north of SR-24 are predominately occupied by residential uses of varying types and designs. The extensive parking area for the Lafayette Bay Area Rapid Transit (BART) station also lies north of the freeway.

SR-24 is a major regional freeway that begins in Oakland and then passes through the Berkeley Hills via the Caldecott Tunnel before emerging near Orinda. The freeway then passes through Lafayette before merging with Interstate 680 (I-680) in Walnut Creek, east of Lafayette. SR-24 through Lafayette is generally configured as an eight-lane freeway, with four travel lanes in each direction and BART's Yellow Line (Antioch-SFO/Millbrae) occupying the freeway's median.

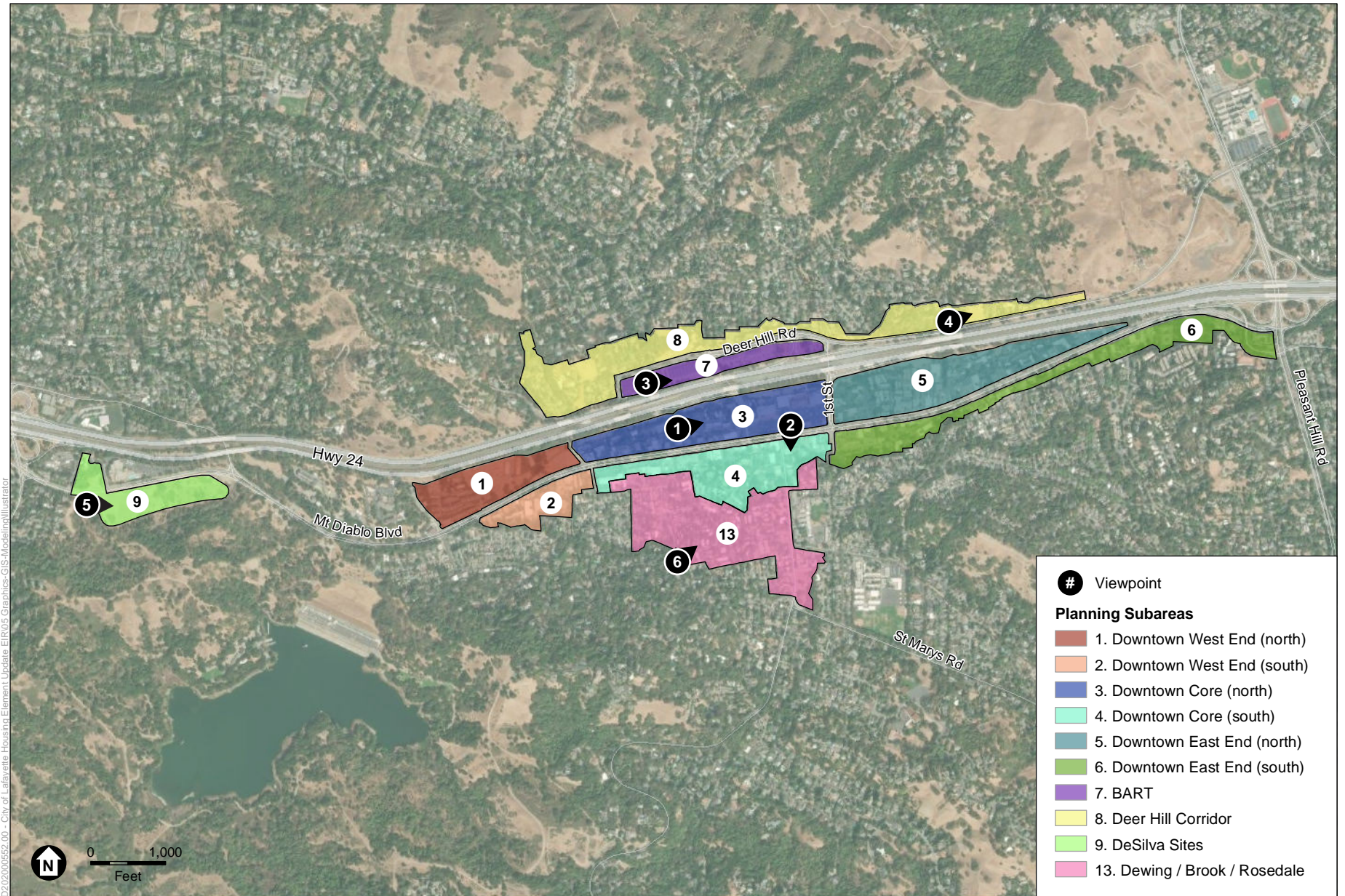
Views

Views of surrounding hillsides and ridges are available from numerous locations in the City. Lafayette Ridge can be seen from some points along the south side of Mount Diablo Boulevard and at intersections of side streets which cross Mount Diablo Boulevard. Sources of obstruction include tall trees that separate SR-24 from the downtown and some buildings that are three stories or taller. Intermittent views of Mount Diablo, which is located roughly 10 miles east of the City, can be seen as one drives along Mount Diablo Boulevard, or as one walks along the north side of the boulevard in the eastbound direction. The peak of the mountain can often be seen above rooftops and treetops. Mountain View Ridge and ridges in Moraga can be intermittently seen from the north side of Mount Diablo Boulevard at intersections of side streets which cross Mount Diablo Boulevard. Sources of view obstruction are buildings on the south side of Mount Diablo Boulevard that are three stories.

SR-24 passes through the middle of the City in an east-west direction and is a designated state scenic highway (Caltrans, 2021). The highway consists of four travel lanes in each direction bisected by the BART rail line, which is located in the highway median and accommodates two-way travel of BART trains, separating the eastbound and westbound portions of SR-24 by approximately 75 feet. The Lafayette BART station platform is situated approximately 100 feet east of Happy Valley Road within the BART right-of-way and extends 700 feet along SR-24. The westbound side of SR-24 is raised as much as 20 feet above the eastbound side SR-24 and the BART tracks for portions of the highway east of the BART platform to Pleasant Hill Road. As a result, the northern view for eastbound drivers is dominated by a retaining wall. SR-24 is lined with various species of trees, including eucalyptus, which form a physical and visual barrier between the highway and adjacent uses. Scenic resources visible from SR-24 include Lafayette Ridge to the north for eastbound travelers and Mountain View Ridge and ridges to the south for westbound travelers. Although the peak of Mount Diablo can be seen from a few locations along eastbound SR-24, these views are partially obstructed by vegetation or freeway overpasses.

Visual Characteristics of HEU Study Areas

As detailed in Chapter 3, *Project Description*, City planners have identified several subareas in the City where housing sites could potentially be located with implementation of the HEU. These subareas are numbered 1 through 9 and 13 in **Figure 4.1-1**. The existing visual characteristics of the HEU subareas are summarized below, with representative photographs of the subareas provided in figures. The locations of photographic views are shown on Figure 4.1-1.



SOURCE: City of Lafayette, 2021

Lafayette Housing Element Update EIR

Figure 4.1-1
Photo Location Map

Downtown (Areas 1 through 6)

The Downtown subareas generally lie astride Mount Diablo Boulevard and are comprised of that portion of the City that is a part of the City of Lafayette Downtown Specific Plan and several peripheral areas. The City's principal commercial uses are located in this area, with some residential uses scattered within. Generally, the portion of Mount Diablo Boulevard that runs through the Downtown Core subareas is characterized by a walkable, pedestrian-friendly streetscape, whereas the Downtown West End and Downtown East End subareas are characterized by a more auto-oriented streetscape. Buildings along Mount Diablo Boulevard range from single-story with commercial uses to four-story with residential uses. The wide range of uses, styles, and ages is dependent on the location of the building. The Downtown Core subareas contain newer, more intensively built buildings with a mix of uses, and the Downtown West End and Downtown East End subareas contain older office developments and low-lying one-story commercial buildings (**Figure 4.1-2**).

BART Properties and Adjoining Parcels (Area 7)

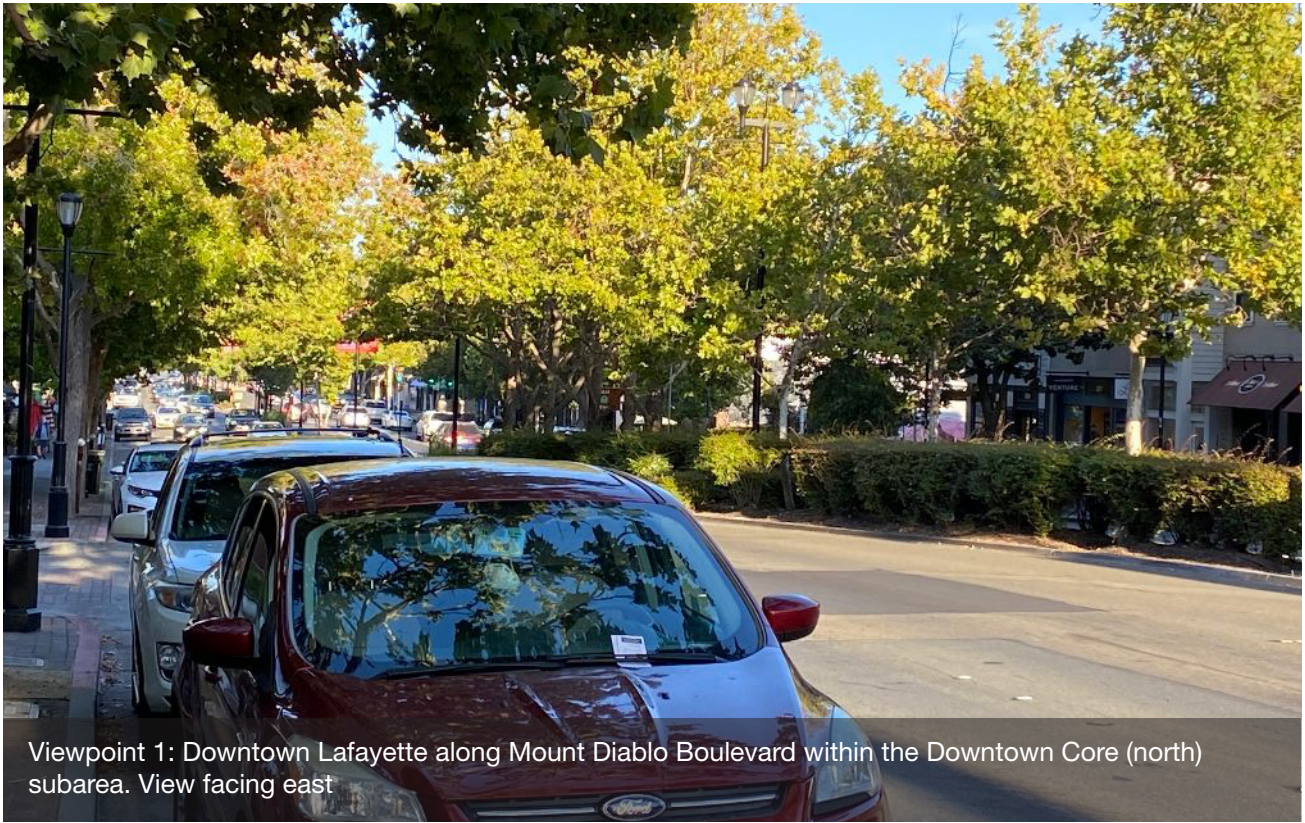
This subarea is located north of SR-24 and includes extensive parking areas for the Lafayette BART Station and several adjoining parcels lying east of the parking lots. The two BART-owned parking lots are bisected in a north-south direction by Oak Hill Road. The BART-owned parking lots include several overhead structures that house solar panels and provide shade for vehicles. Three additional parcels are located to the east of the BART parking lots and two are currently vacant. The easternmost parcel is currently occupied by parking for Whole Foods employees and is noncontiguous from the BART parking areas to the west. To varying extents, the parking lots are flanked and screened by mature trees (**Figure 4.1-3**).

Deer Hill Road Corridor (Area 8)

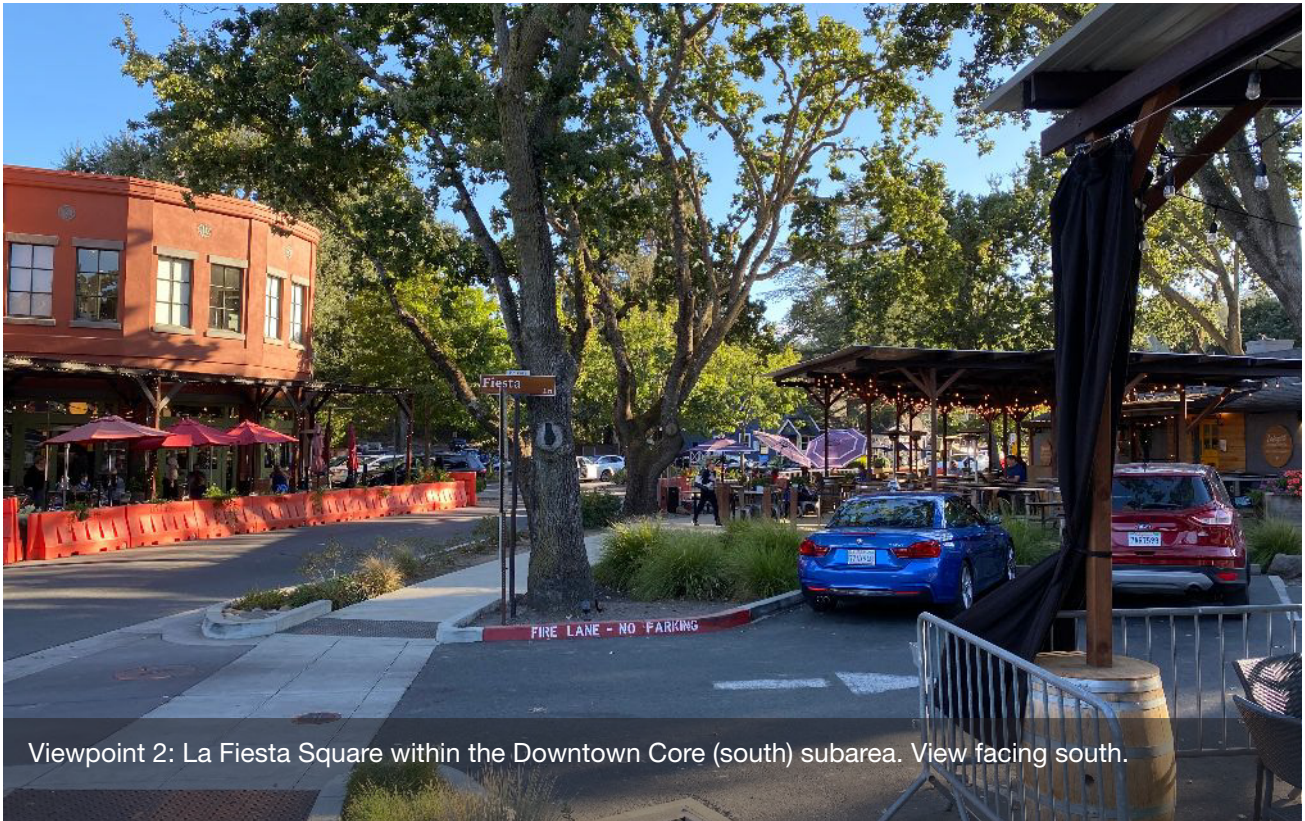
This subarea includes a series of parcels generally lying north of SR-24 and Deer Hill Road. This area is predominantly developed with residential uses. One- and two-story single-family homes of various architectural styles are interspersed among areas of open space, stands of mature trees, and hilly topography. The vineyards and associated buildings of the Deer Hill Vineyards winery are located in the westernmost portion of this subarea, west of Happy Valley Road, although the vineyard is not considered a housing opportunity site (**Figure 4.1-3**).

DeSilva Sites (Area 9)

This subarea is located near the western end of Mount Diablo Boulevard and comprises several parcels lying north and south of Mount Diablo Boulevard, adjacent to and across from the Oakwood Athletic Club, which comprises several connected gable-roofed buildings, an outdoor pool, paved parking lots, ornamental trees, and landscaping. This subarea consists primarily of open space with the exception of three two-story multi-family residential buildings clustered within the northwestern portion of the subarea, immediately south of SR-24. The buildings are primarily of modern construction, with stucco or wood exteriors, and are flanked to the north and south by stands of mature trees (**Figure 4.1-4**).



Viewpoint 1: Downtown Lafayette along Mount Diablo Boulevard within the Downtown Core (north) subarea. View facing east



Viewpoint 2: La Fiesta Square within the Downtown Core (south) subarea. View facing south.

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SOURCE: ESA, 2021

Lafayette Housing Element Update EIR

Figure 4.1-2
Viewpoints 1 and 2





Viewpoint 3: Lafayette BART Station parking lot west of Oak Hill Road. View facing east.



Viewpoint 4: Deer Hill Road within the Deer Hill Road Corridor subarea. View facing east.

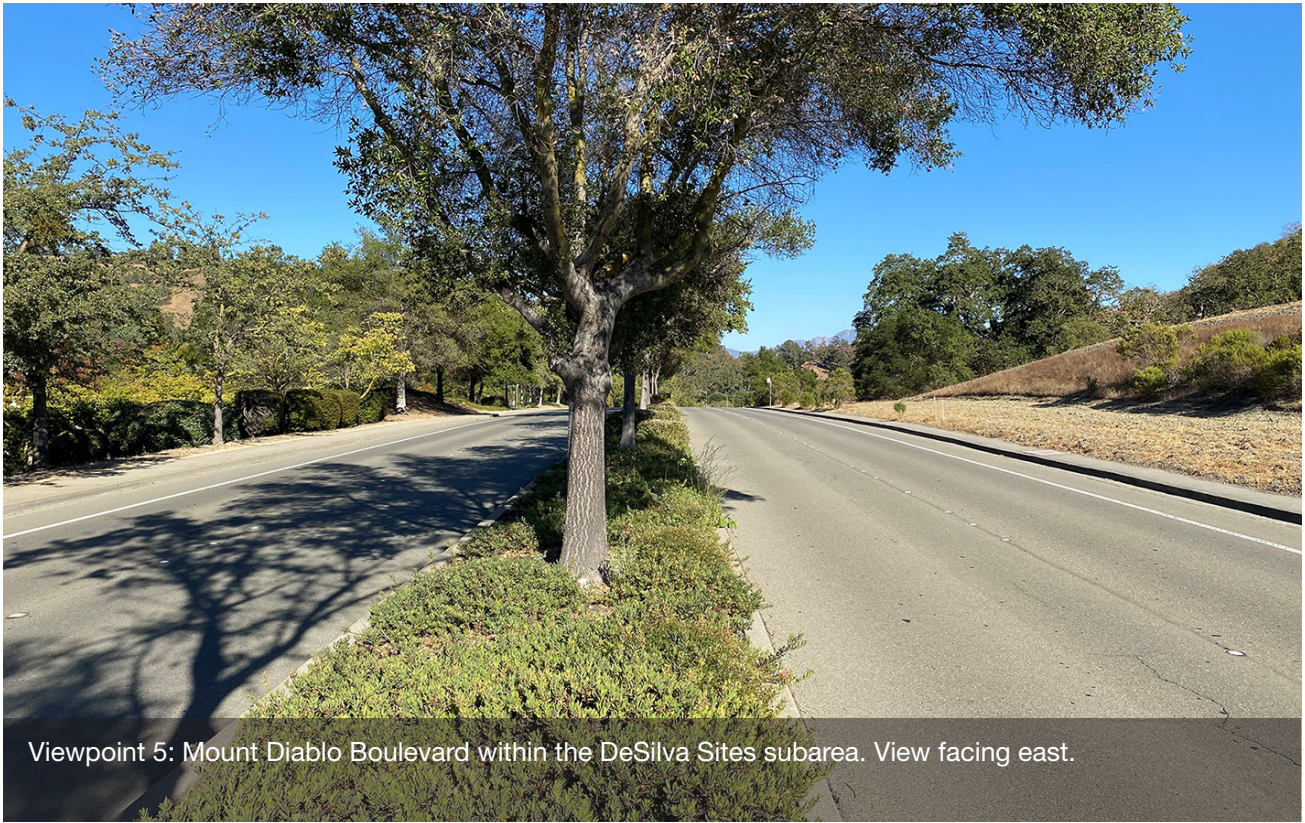
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SOURCE: ESA, 2021

Lafayette Housing Element Update EIR

Figure 4.1-3
Viewpoints 3 and 4





Viewpoint 5: Mount Diablo Boulevard within the DeSilva Sites subarea. View facing east.



Viewpoint 6: Dewing/Brook/Rosedale subarea at the intersection of Dewing Avenue and Brook Street. View facing east.

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SOURCE: ESA, 2021

Lafayette Housing Element Update EIR

Figure 4.1-4
Viewpoints 5 and 6



Dewing/Brook/Rosedale (Area 13)

This subarea is located south of Downtown and is almost entirely occupied by residential uses of varying densities. Building types in this area are diverse, ranging from single-family residential buildings to two-story apartment buildings. These structures also vary in architecture, layout, and site design (**Figure 4.1-4**).

Light and Glare

Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare, and if designed incorrectly, could be considered unattractive. Although nighttime light is a common feature of urban areas, spillover light can adversely affect light-sensitive uses, such as residential units at nighttime.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying (*discomfort glare*) or may diminish the ability to see other objects in the darkened environment (*disability glare*). Reflective glare, such as the reflected view of the sun from a window or mirrored surface, can be distracting during the day.

Existing Light and Glare Conditions

The City of Lafayette is an urbanized area that includes a variety of residential, commercial, and public uses. Existing sources of light and glare in the area are similar to those that would be found in any urbanized area and include streetlamps, parking-lot lighting, storefront and signage lighting, and car headlamps.

4.1.3 Regulatory Setting

Federal

There are no federal regulations pertaining to aesthetics that are applicable to the proposed HEU.

State

Modernization of Analysis for Transit-Oriented Infill Projects (Senate Bill 743)

Enacted in 2013, Senate Bill 743 implemented a number of changes to CEQA that are designed to streamline some of its procedures for certain projects, including infill residential, mixed-use residential, an employment center projects located near transit services. As specified in CEQA Section 21099(d)(1), aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment, provided the project meets all of the following three criteria:

- The project is in a transit priority area¹
- The project is on an infill site²
- The project is residential, mixed-use residential, or an employment center³

CEQA Section 21099(d)(2)(A) specifies that this subdivision does not affect, change, or modify the authority of a lead agency to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers provided by other laws or policies. CEQA Section 21099(e) further specifies that this section does not affect the authority of a public agency to establish or adopt thresholds of significance that are more protective of the environment.

Some new housing development that could result with implementation of the HEU, particularly development within one-half mile of the Lafayette BART station, which qualifies as a “major transit stop” as defined in CEQA Section 21064.3, would meet the criteria above under which aesthetic impacts are not required to be considered. However, as permitted under the aforementioned CEQA sections, this EIR considers and evaluates the potential aesthetic impacts of new housing development that could result with implementation of the HEU in all applicable areas of the City, including new infill housing development that could occur within a transit priority area.

California Scenic Highway Program

California’s Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 *et seq.* The State Scenic Highway System includes a list of highways that either are eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

A highway may be designated scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler’s enjoyment of the view. When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. A *scenic corridor* is the land generally adjacent to and visible from the highway. A scenic corridor is identified using a motorist’s line of vision. A reasonable boundary is selected when the view extends to the distant horizon. The corridor protection program does not preclude development, but seeks to encourage quality development that does not degrade the scenic value of the corridor. The jurisdictional boundaries of the nominating agency are also considered. The agency must also adopt ordinances to preserve the scenic quality of the corridor or document the

¹ CEQA Section 21099(a)(7) defines a “transit priority area” as an area within one-half mile of an existing or planned major transit stop. A “major transit stop” is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the a.m. and p.m. peak commute periods.

² CEQA Section 21099(a)(4) defines an “infill site” as either (1) a lot within an urban area that was previously developed; or (2) a vacant site where at least 75 percent of the site perimeter adjoins (or is separated by only an improved public right-of-way from) parcels that are developed with qualified urban uses.

³ CEQA Section 21099(a)(1) defines an “employment center” as a project situated on property zoned for commercial uses with a floor area ratio of no less than 0.75 and located within a transit priority area.

regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program. County roads can also become part of the Scenic Highway System. To receive official designation, the county must follow the same process required for official designation of state scenic highways.

SR-24 passes through the middle of the City in an east-west direction and is a designated state scenic highway (Caltrans, 2021). As presented above in the Environmental Setting, SR-24 is a major regional freeway that begins in Oakland and then passes through the Berkeley Hills via the Caldecott Tunnel before emerging near Orinda. The freeway then passes through Lafayette before merging with I-680 in Walnut Creek, east of Lafayette. SR-24 through Lafayette is generally configured as an eight-lane freeway, with four travel lanes in each direction and BART's Yellow Line (Antioch-SFO/Millbrae) occupying the freeway's median.

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. General Plan goals and policies related to aesthetics and relevant to implementation of the HEU are listed below.

Land Use Element

Goal LU-1: Protect the character and patterns of development of residential neighborhoods.

Policy LU-1.1: Scale. Development shall be compatible with the scale and pattern of existing neighborhoods.

Policy LU-1.2: Design. Development should respect the architectural character of the neighborhood.

Goal LU-2: Ensure that development respects the natural environment of Lafayette. Preserve the scenic quality of ridgelines, hills, creek areas, and trees.

Policy LU-2.1: Density of Hillside Development. Land use densities should not adversely affect the significant natural features of hill areas.

Policy LU-2.2: Cluster Development. Preserve important visual and functional open space by requiring development to be clustered on the most buildable portions of lots, minimizing grading for building sites and roads.

Goal LU-5: Preserve and enhance the open space, scenic viewsheds, and semi-rural qualities around the residential entryways to Lafayette.

Policy LU-5.1: Residential Entryways. Residential entryways to the City should be distinctive and attractive features of the City's landscape.

Goal LU-7: Encourage Downtown development which is attractive and enhances Lafayette’s community identity and small town character.

Policy LU-7.1: Design. Ensure that site planning, architecture, color, materials and landscaping contribute to the community identity and small town character.

Policy LU-7.2: Lighting. Use lighting to develop a sense of security and enhance architecture. Lighting should not overpower the surrounding environment.

Policy LU-7.7: Scenic Views. Preserve scenic views of Mount Diablo and hillsides from Downtown Lafayette. While it is not possible to entirely prevent some blockage of scenic views downtown, it is important to preserve intermittent views of the surrounding hillsides and ridges from Mount Diablo Boulevard. Scenic views can be preserved by maintaining a variety of building heights, providing open view corridors between buildings, and utilizing setbacks and building height limits.

Lafayette Municipal Code

Title 6, Planning and Land Use, of the Lafayette Municipal Code implements the General Plan through the adoption and administration of zoning laws, ordinances, rules, and regulations. Title 6 includes regulations for the use of land in the City; the location, height, and size of buildings or structures; the amount of building coverage and population density permitted in each zone; and the physical characteristics of buildings, structures, and site development, including architectural and site design.

Design Review

Article 5 of Chapter 6-2, *Applications and Permits*, in Title 6, *Planning and Land Use*, of the City’s Municipal Code, identifies the provisions of the City’s design review process. In general, design review is required for discretionary or applicable ministerial projects in multiple-family residential zoning districts, downtown commercial zoning districts, single-family residential zoning districts, projects for which design review is required as a condition of approval, and projects that seek a change to the approved building or site design pursuant to the design review permit.

However, with recent changes in State law, including the Housing Accountability Act codified in Government Code Section 65589.5, the City’s design review of proposed housing development projects (and mixed-use projects where at least two thirds of the square footage is designated for residential use) is limited to the application of “objective, quantifiable, written development standards, conditions, and policies appropriate to, and consistent with” meeting the City’s RHNA requirement. Objective standards and conditions and policies must be applied “to facilitate and accommodate development at the density permitted on the site and proposed by the development” (CGC 65589.5(f)). If proposed housing development projects comply with all objective general plan, zoning, and subdivision standards, the City can only deny the project or reduce its density if it finds that there would be a “specific adverse impact” upon public health or safety that can’t be mitigated in any other way. The finding of a specific adverse impacts must also be based on “objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete” (CGC 65589.5(j)).

These provisions suggest that design review provisions in City code, including those in Provision 6-274 will only apply to proposed housing developments to the extent they are objective and quantifiable. For example, “the height, mass, lot coverage, setback, and relationship of structures” referred to in Section 6-274(a) can be considered to the extent that other sections of the City’s municipal code provide quantitative standards for such things as height limits, minimum setbacks, and maximum lot coverage. Considerations and findings that are qualitative, requiring such things as “compatibility” or ensuring “an attractive environment” would not be applicable.

In response to the change in State law, and to clarify the standards that would apply, the City adopted objective design standards applicable to Downtown development in May 2019. Those standards address outdoor space, creeks and landscaping, parking and circulation, height and scale, and building design.⁴

Under SB 35, adopted in 2017, housing development projects may also qualify for ministerial (or “by right”) approval if they are located on infill sites and other specific conditions are met. Eligible projects are subject to objective zoning, general plan, subdivision, and design review standards, which are defined as “standards that involve no personal or subjective judgement by a public official and are uniformly verifiable by reference to an external and uniform benchmark or criterion available and knowable by both the development applicant or proponent and the public official before submittal” (CGC 65913.4(b)(5)).

Hillside Development

The Deer Hill Road Corridor (Area 8) and portions of the DeSilva Sites (Area 9) are within the Hillside Overlay District established in Municipal Code Chapter 6-20, *Hillside Development*. The Hillside Overlay District is intended to protect the health, safety, and welfare of the City by establishing regulations for the development of ridgeline, hillside, and other rural residential areas within the City. The district was created and established to implement the goals, policies, and programs of the General Plan that relate to hillside and ridgeline development, including goals, policies, and programs related to preservation of scenic views and scenic quality, and a Hillside Development Permit is required for development in the Hillside Overlay District. As noted above, State law allows the City to consider only “objective, quantifiable, written development standards, conditions, and policies” when reviewing housing development proposals. Thus quantitative standards such as those restricting development within a 15-degree declination of a ridgeline would apply, along with standards regarding maximum densities for average slopes. However qualitative standards would not.

⁴ The design standards can be viewed at: <https://www.lovelafayette.org/home/showpublisheddocument/6634/637660060226370000>

4.1.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to aesthetics are based on Appendix G of the *CEQA Guidelines*. Implementation of the HEU could have a significant impact on the environment if it would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point). In an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Methodology and Assumptions

The analysis of potential impacts related to aesthetics in this EIR relies on qualitatively comparing the existing built and natural environment to the future built and natural environment and evaluating the visual changes that would result from implementation of the HEU. Potential impacts are evaluated within the context of existing conditions based on analyses of photographs, site reconnaissance, and project data. Key view corridors are examined, and existing views are considered alongside those that would be expected to occur in the future with implementation of the HEU.

Anticipated visual changes are evaluated in the context of adopted City policies and regulations when considering the exclusion of subjective and non-quantitative standards included in State law. The evaluation also considers that, as detailed in Chapter 3, *Project Description*, the HEU would include adoption of General Plan amendments that would add or modify goals, objectives, policies, and implementation programs related to housing that would apply Citywide. Similarly, the evaluation also considers that the HEU identifies specific sites appropriate for the development of additional multifamily housing, and the City would rezone those areas if/as necessary to meet the requirements of State law.

As detailed in Chapter 3, *Project Description*, and in this section, City planners have identified several subareas in the City where housing sites could potentially be located with implementation of the HEU to meet the requirements of State law. Various possible distributions of housing sites and densities in the subareas have been and will be considered for inclusion in the HEU by the community, planning staff, the Planning Commission, and the City Council. The Distributed Sites approach represents the project analyzed in this Draft EIR, and the Downtown-Only approach is analyzed as an alternative at an equal level of detail in order to assess the impacts of the HEU if all of the housing sites were located in the Downtown area.

The Distributed Sites approach would include housing sites throughout the Downtown, BART station area parking lots, Deer Hill Road Corridor, DeSilva Sites, and Dewing/Brook/Rosedale subareas (collectively, subareas 1 through 9, and 13). The Downtown-Only Alternative would accommodate almost all of the HEU's growth within the existing limits of the Downtown (subareas 1 through 6). As shown in Table 3-5 in Chapter 3, *Project Description*, approximately half of the total of units would be accommodated on sites at the east end of Downtown (subareas 5 and 6), with the remainder spread throughout subareas 1 through 4. The analysis of potential impacts related to aesthetics evaluates the Distributed Sites approach and the Downtown-Only Alternative at an equal level of detail.

Under the HEU, development of individual Accessory Dwelling Units (ADUs) and single family residential projects will continue to be developed in residential neighborhoods throughout the City. The analysis of potential impacts related to aesthetics assumes that the scale and distribution of these types of developments would be such that they would not result in adverse visual changes.

Impacts and Mitigation Measures

Impacts

Impact 4.1-1: Implementation of the HEU could have a substantial adverse effect on a scenic vista. (*Significant and Unavoidable Impact*)

HEU with Distributed Sites

Visually sensitive public locations include viewpoints where a change to the visibility of an important scenic resource, or a visual change to the resource itself, would affect the general public. As described above in the Environmental Setting, views of surrounding hillsides and ridges, including Lafayette Ridge, are available from numerous locations in the City. Intermittent views of Mount Diablo, which is located roughly 10 miles east of the City, also can be seen from numerous locations in the City. The peak of the mountain can often be seen above rooftops and treetops. Mountain View Ridge and ridges in Moraga can be intermittently seen from the north side of Mount Diablo Boulevard at intersections of side streets which cross Mount Diablo Boulevard.

The HEU with Distributed Sites approach would accommodate growth by including sites for multifamily housing throughout the Downtown, on the BART sites, the Downtown Core, the Deer Hill Road corridor, the neighborhoods adjacent to and immediately south of the Downtown Core, the Downtown West End areas at the west end of Mount Diablo Boulevard, and the DeSilva sites (collectively, Areas 1 through 9, and 13 on Figure 4.1-1). Sites included in the City's existing Housing Element that have not been developed would be retained, and allowable densities on these sites would be increased from 35 to 50 dwelling units per acre. New multifamily housing sites would also be identified in Downtown and planned for similar densities. Aside from the BART site, which would allow 75 units per acre, no sites would allow densities higher than 50 units per acre. Sites in the Deer Hill Corridor (Area 8) and the DeSilva

Sites (Area 9) would be limited to 20 units per acre, and the Dewing/Brook/Rosedale area (Area 13) would remain at its existing density of 35 units per acre.

Planning areas included in the Distributed Sites Alternative are shown in Figure 3-4 and summarized in Table 3-4 in Chapter 3, *Project Description*. Implementation of the HEU under the Distributed Sites approach could result in the development of new housing of increased density, scale, and height than what currently exists in many areas. Development of this new housing could block or limit views of the natural environment of Lafayette, including ridgelines, hills, creek areas, and trees. This impact is considered potentially significant.

As explained in the Regulatory Setting section above, provisions of State law would apply to housing developments (and mixed use developments where at least two thirds of the square footage is residential) such that development of new housing under the Distributed Sites approach would be subject to compliance with City policies and standards only to the extent these policies and standards are objective and quantifiable. Thus, quantitative height limits, lot size, lot coverage, and set back requirements would apply, while policies requiring “compatibility” would not.

This would limit the scope of the City’s design review process, which is contained within Article 5 of Chapter 6-2, *Applications and Permits*, of the Lafayette Municipal Code, and focus the review on only the objective standards contained in the City’s regulations or policies. Similarly, implementation of Chapter 6-20, *Hillside Development*, would apply the quantitative standards applicable in the Hillside Overlay District, which includes the Deer Hill Road Corridor (Area 8) and portions of the DeSilva Sites (Area 9).

As detailed above and in Chapter 3, *Project Description*, the HEU would include adoption of General Plan amendments that would add or modify goals, objectives, policies, and implementation programs related to housing that would apply Citywide. Similarly, the HEU identifies specific sites appropriate for the development of additional multifamily housing, and the City would rezone those areas if/as necessary to meet the requirements of State law. General Plan and zoning amendments under the HEU would include or reference quantitative standards such as maximum densities and building heights, and could include additional objective standards to address preservation of scenic vistas to the extent feasible while ensuring the City can still meet its RHNA requirement (See CGC Section 65589.5(f)).

Notwithstanding the adoption of General Plan and zoning amendments as part of the HEU, the development of new housing of increased density, greater scale, and increased height than currently exists in many areas under the Distributed Sites approach could result in potentially adverse effects on scenic vistas and could limit views of the natural environment of Lafayette, including ridgelines, hills, creek areas, and trees. While abundant views of these scenic and visual resources would remain with new development, the extent of physical change that could occur and the associated alteration and potential blockage of views is considered substantial. Given that the HEU with Distributed Sites plans for higher density development than currently exists in the area, no feasible mitigation measures are available to reduce this impact. This impact is therefore considered **significant and unavoidable**.

Downtown-Only Alternative

The Downtown-Only Alternative would accommodate almost all of the HEU's growth within the existing limits of the Downtown commercial districts (Areas 1 through 6 in Figure 4.1-1). To do this, sites included in the City's existing Housing Element that have not been developed would be retained, additional sites would be added, and allowable densities would increase from 35 units per acre to approximately 115 units per acre. Although, if more sites in the Downtown are added to the inventory, the maximum density needed to accommodate the units could be reduced to somewhat less than 115 units per acre.

As discussed above, development of new housing under the Downtown-Only Alternative would be subject to compliance with City policies and standards established and enforced to ensure that adverse impacts to scenic views are minimized only to the extent that such policies and standards are quantitative and objective. Examples of quantitative and objective standards include height limits, setback requirements, maximum lot coverage, and similar standards. In addition, as described above, the City has adopted objective design standards applicable to Downtown development. Those standards address outdoor space, creeks and landscaping, parking and circulation, height and scale, and building design, and would provide a means of focusing design review for developments in the Downtown. For example, the standards require building setbacks by requiring the floor area of the second floor to be no more than 95 percent of the ground floor, and the third floor to be no more than 85 percent of the ground floor, with the floor area reduction applied to the street-facing façade.

As detailed above and in Chapter 3, Project Description, the HEU would include adoption of General Plan amendments that would add and/or modify goals, objectives, policies, and implementation programs related to housing that would apply Citywide. Similarly, the HEU identifies specific sites appropriate for the development of additional multifamily housing, and the City would rezone those areas if/as necessary to meet the requirements of State law. General Plan and zoning amendments under the HEU would include or reference quantitative standards such as maximum densities and building heights, and could include additional objective standards to address preservation of scenic vistas to the extent feasible while ensuring the City can still meet its RHNA requirement (See CGC Section 65589.5(f)).

Notwithstanding adoption of General Plan and zoning amendments as part of the HEU, the development of new housing of increased density, greater scale, and increased height than currently exists in many areas under the Downtown-Only Alternative could result in potentially adverse effects on scenic vistas and could limit views of the natural environment of Lafayette, including ridgelines, hills, creek areas, and trees. While abundant views of these scenic and visual resources would remain with new development, the extent of physical change that could occur and the associated alteration and potential blockage of views is considered to be substantial. Due to the greater density increases that could occur under the Downtown-Only Alternative, the degree of visual change could be more substantial than that which could occur under the Distributed Sites approach. However, the change would be limited to a smaller area. Given the Downtown-Only Alternative's plan for higher density development than currently exists in the area, no feasible mitigation measures are available to reduce the impact. This impact is therefore considered **significant and unavoidable**.

Mitigation Measure: None available.

Impact 4.1-2: Implementation of the HEU would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (*Less than Significant Impact*)

HEU with Distributed Sites

As described above in the Environmental Setting, SR-24 passes through the middle of the City in an east-west direction and is a designated state scenic highway. The highway consists of four travel lanes in each direction bisected by the BART rail line, which is located in the highway median and accommodates two-way travel of BART trains, separating the eastbound and westbound portions of SR-24 by approximately 75 feet. The westbound side of SR-24 is raised as much as 20 feet above the eastbound side SR-24 and the BART tracks for portions of the highway east of the BART platform to Pleasant Hill Road. As a result, the northern view for eastbound drivers is dominated by a retaining wall. SR-24 is lined with various species of trees, including eucalyptus, which form a physical and visual barrier between the highway and adjacent uses. Scenic resources visible from SR-24 include Lafayette Ridge to the north for eastbound travelers and Mountain View Ridge and ridges to the south for westbound travelers. Although the peak of Mount Diablo can be seen from a few locations along eastbound SR-24, these views are fleeting at freeway speeds and are partially obstructed by vegetation or freeway overpasses.

As described above, the Distributed Sites approach would include housing sites throughout the Downtown, BART, Deer Hill Road Corridor, DeSilva Sites, and Dewing/Brook/Rosedale subareas, each of which are visible to varying degrees from SR-24. Implementation of the HEU under the Distributed Sites approach would have a significant environmental impact if it would substantially degrade views of scenic resources from SR-24. The development of new housing of increased density, scale, and height than currently exists in the aforementioned areas under the Distributed Sites approach could limit views of Lafayette Ridge to the north for eastbound travelers and Mountain View Ridge and ridges to the south for westbound travelers from specific locations. The new development could intermittently obscure views of natural forms of hillsides, including prominent geological features, individual trees, woodland, riparian vegetation, rock outcroppings, and other natural features. The new development could also intermittently block views of historic buildings in Lafayette. However, due to the speed of travel, these changes would be experienced for relatively short durations, and abundant views of these scenic and visual resources would remain for travelers on SR-24 with new development of these sites. For this reason, the impact would be **less than significant**.

Downtown-Only Alternative

As described above, the Downtown-Only Alternative would accommodate almost all of the HEU's growth within the existing limits of the Downtown (subareas 1 through 6), which is visible to varying degrees from SR-24. Development that could occur with implementation of the Downtown-Only Alternative could limit views Mountain View Ridge and ridges to the south for westbound travelers from specific locations. The new development could intermittently obscure views of

natural forms of hillsides, including prominent geological features, individual trees, woodland, riparian vegetation, rock outcroppings, and other natural features. The new development could also block views of historic buildings located south of SR-24 in Lafayette. However, due to the speed of travel, these changes would be experienced for relatively short durations, and abundant views of these scenic and visual resources would remain for travelers on SR-24 with new development of these sites. For this reason, the impact would be **less than significant**.

Mitigation Measure: None required.

Impact 4.1-3: Implementation of the HEU could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. (Significant and Unavoidable Impact)

HEU with Distributed Sites

The City of Lafayette comprises a mix of developed and undeveloped lands. Most of the land area within the corporate boundaries of the City is developed with urban and suburban development of varying types, densities, and architectural styles. However, substantial areas of the City are either undeveloped or managed as some form of open space, including areas of open grassland and oak woodland. Downtown Lafayette is generally flat, with the exception of the northern boundary which contains some hilly terrain, as it is the toe of the foothills of surrounding hillsides and ridges. Development in the downtown core includes a diverse mix of building types, architectural styles, and building heights. Buildings range from one-story retail stores to three-story offices to three-story mixed-use structures. Areas lying north of SR-24 are predominately occupied by residential uses of varying types and designs. The extensive parking area for the Lafayette BART station also lies north of the freeway.

Changes to the visual character or quality of a site affect each individual differently, and thus to some extent are based on subjective and individual perspectives. As described above, the HEU with Distributed Sites approach would accommodate growth by including sites for multifamily housing throughout the Downtown, on the BART sites, the Downtown Core, the Deer Hill Road corridor, the neighborhoods adjacent to and immediately south of the Downtown Core, the Downtown West End areas at the west end of Mount Diablo Boulevard, and the DeSilva sites (collectively, Areas 1 through 9, and 13 on Figure 4.1-1). Sites included in the City's existing Housing Element that have not been developed would be retained, allowable densities on these sites would be increased from 35 to 50 dwelling units per acre. New multifamily housing sites would also be identified in Downtown and planned for similar densities. Aside from the BART site, which would allow 75 units per acre, no sites would allow densities higher than 50 units per acre. Sites in the Deer Hill Corridor (Area 8) and the DeSilva Sites (Area 9) would be limited to 20 units per acre, and the Dewing/Brook/Rosedale area (Area 13) would remain at its existing density of 35 units per acre. Sites included in the Distributed Sites Alternative are shown in Figure 3-4 and summarized in Table 3-4 in Chapter 3, Project Description. Implementation of the HEU under the Distributed Sites approach could result in the development of new housing of increased density, greater scale, and higher height than what currently exists in many areas. **Figure 4.1-5** and **Figure 4.1-6** present

depictions of housing developments of varying densities, heights, and scales. The images are provided to show in an illustrative manner the types of structures that could be developed with implementation of the HEU. Development of this new housing could result in substantial changes to the visual character of sites and surroundings. This impact is considered potentially significant.

As discussed in Impact 4.1-1, above, given recent changes in State law development of new housing under the Distributed Sites approach would be subject to compliance with City policies and standards only to the extent that the policies and standards are objective and quantitative. This would limit the scope of the City's design review process, which is contained within Article 5 of Chapter 6-2, *Applications and Permits*, of the Lafayette Municipal Code, and focus the review on the objective standards contained in the City's regulations or policies.

In addition, as detailed above and in Chapter 3, *Project Description*, the HEU would include adoption of General Plan amendments that would add and/or modify goals, objectives, policies, and implementation programs related to housing that would apply Citywide. Similarly, the HEU identifies specific sites appropriate for the development of additional multifamily housing, and the City would rezone those areas if/as necessary to meet the requirements of State law. General Plan and zoning amendments under the HEU would include or reference quantitative standards such as maximum densities and building heights, and could include additional objective standards to address visual character and the quality of public views to the extent feasible while ensuring the City can still meet its RHNA requirement (See CGC Section 65589.5(f)).

Notwithstanding the adoption of General Plan and zoning amendments, the development of new housing of increased density, greater scale, and higher height than currently exists in many areas under the Distributed Sites approach could result in potentially adverse effects to visual character and the quality of public views. Some of the housing could be denser and taller than most or all of the existing adjacent residential development. Some areas currently appreciated as open space could be developed with new housing. Given the HEU with Distributed Site's plan for higher density development than currently exists in the area, no feasible mitigation is available, and this impact is considered **significant and unavoidable**.

Downtown-Only Alternative

The Downtown-Only Alternative would accommodate almost all of the HEU's growth within the existing limits of the Downtown commercial districts (Areas 1 through 6 in Figure 4.1-1). To do this, sites included in the City's existing Housing Element that have not been developed would be retained, additional sites are added, and allowable densities would increase from 35 units per acre to approximately 115 units per acre. Although, if more sites in the Downtown are added to the inventory, the maximum density needed to accommodate the units could be somewhat reduced below 115 units per acre.



Image 1: Village Cluster or Urban-Suburban Homes (28–35 Units/Acre)



Image 2: Four Story with Central Garage Structure (45–70 Units/Acre)

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SOURCE: City of Lafayette Planning & Building Department, 2022

Lafayette Housing Element Update EIR

Figure 4.1-5
Illustrative Multifamily Housing Examples



Image 3: Five Story with Central Garage Structure (80--95 Units/Acre)



Image 4: Four or Five Story over Podium (90-110+ Units/Acre)

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SOURCE: City of Lafayette Planning & Building Department, 2022

Lafayette Housing Element Update EIR

Figure 4.1-6
Illustrative Multifamily Housing Examples

As discussed in Impact 4.1-1, above, given recent changes in State law development of new housing under the Distributed Sites approach would be subject to compliance with City policies and standards only to the extent that the policies and standards are objective and quantitative. This would limit the scope of the City's design review process, which is contained within Article 5 of Chapter 6-2, *Applications and Permits*, of the Lafayette Municipal Code, and focus the review on the objective standards contained in the City's regulations or policies. The City adopted objective design standards for Downtown development in May of 2019.

In addition, as detailed above and in Chapter 3, Project Description, the HEU would include adoption of General Plan amendments that would add and/or modify goals, objectives, policies, and implementation programs related to housing that would apply Citywide. Similarly, the HEU identifies specific sites appropriate for the development of additional multifamily housing, and the City would rezone those areas if/as necessary to meet the requirements of State law. General Plan and zoning amendments under the HEU would include or reference quantitative standards such as maximum densities and building heights, and could include additional objective standards to address visual character and the quality of public views to the extent feasible while ensuring the City can still meet its RHNA requirement (See CGC Section 65589.5(f)).

Notwithstanding the adoption of General Plan and zoning amendments, the development of new housing of increased density, greater scale, and higher height than currently exists in many areas under the Downtown-Only Alternative could result in potentially adverse effects to visual character and the quality of public views. Some of the housing could be denser and taller than most or all of the existing adjacent residential development. Some areas currently appreciated as open space could be developed with new housing. Due to the greater density increases that could occur under the Downtown-Only Alternative, the degree of visual change could be more substantial than that which could occur under the Distributed Sites approach. However, the change would be limited to a smaller area. Given the Downtown-Only Alternative's plan for higher density development than currently exists in the area, no additional feasible mitigation is available, and this impact is considered **significant and unavoidable**.

Mitigation Measure: None available.

Impact 4.1-4: Implementation of the HEU would not create a new source of substantial light or glare which would adversely affect day or nighttime views. (*Less than Significant Impact*)

HEU with Distributed Sites

The City of Lafayette is an urbanized area that includes a variety of residential, commercial, and public uses. Existing sources of light and glare in the area are similar to those that would be found in any urbanized area, and include streetlamps, parking-lot lighting, storefront and signage lighting, and car headlamps. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare. Although nighttime light is a common feature of urban areas, spillover light can adversely affect light-sensitive uses, such as residential units at nighttime. Glare results when a

light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying or may diminish the ability to see other objects in the darkened environment. Reflective glare, such as the reflected view of the sun from a window or mirrored surface, can be distracting during the day.

Development of housing that could occur under the Distributed Sites approach would be subject to compliance with objective City policies and standards, including provisions regarding signs and outdoor lighting. Also, residential construction contains abundant windows and outdoor open spaces, such that designers are sensitive to the need to reduce spill over light effects. Resulting developments would also be within an urban setting where street lighting, parking area lighting, and auto traffic are common. For these reasons, the development would not create a new source of substantial light or glare that would adversely affect day or nighttime views. The impact would be **less than significant**.

Downtown-Only Alternative

Development of housing that could occur under the Downtown-Only Alternative would be subject to compliance with objective City policies and standards, including provisions regarding signs and outdoor lighting. Also, residential construction contains abundant windows and outdoor open spaces, such that designers are sensitive to the need to reduce spill over light effects. Resulting developments would also be within an urban setting where street lighting, parking area lighting, and auto traffic are common. For these reasons, the development would not create a new source of substantial light or glare that would adversely affect day or nighttime views. The impact would be **less than significant**.

Mitigation Measure: None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to aesthetics could occur if the incremental impacts of the HEU combined with the incremental impacts of one or more cumulative projects.

For this topic, the geographic context for the cumulative analysis includes areas of the City visible to and from the HEU planning areas and vicinity. The analysis not only considers the cumulative projects listed in Table 4.0-1, which are assumed to occur with or without the HEU, but also considers the possibility of development consistent with growth projections discussed in Section 4.0, *Introduction to Environmental Analysis*, although the location and design of such development is currently unknown.

Impact 4.1-5: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could result in a substantial adverse effect on a scenic vista. (Significant and Unavoidable Impact)

Development that could occur with implementation of the HEU (under both the Distributed Sites approach and the Downtown-Only Alternative) and the cumulative development discussed in Section 4.0 of this EIR would introduce new housing and mixed-use development of increased density, scale, and height than currently exists in many areas. This new development could block or limit views of the natural environment, including ridgelines, hills, creek areas, and trees. While abundant views of these scenic and visual resources would remain with new development of these sites, the extent of physical change that could occur and the associated alteration and potential blockage of views is considered to be a substantial cumulative impact. Notwithstanding compliance with objective and quantitative City policies and standards and the adoption of General Plan and zoning amendments as part of the HEU, the extent of physical change that could occur in many areas under the HEU would result in a considerable contribution to the significant cumulative impact on scenic vistas. Given the HEU's plan for higher density development than currently exists in the area, no feasible mitigation measures are available to reduce this impact. This cumulative impact is therefore considered **significant and unavoidable**.

Mitigation Measure: None available.

Impact 4.1-6: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (Less than Significant Impact)

Development that could occur with implementation of the HEU (under both the Distributed Sites approach and the Downtown-Only Alternative) and the cumulative development discussed in Section 4.0 could intermittently obscure views of natural forms of hillsides, including prominent geological features, individual trees, woodland, riparian vegetation, rock outcroppings, and other natural features. The new development could also block views of historic buildings in Lafayette. However, due to the speed of travel, these changes would be experienced for relatively short durations, and abundant views of these scenic and visual resources would remain for travelers on SR-24 with new development of these sites. For this reason, the cumulative impact would be **less than significant**.

Mitigation Measure: None required.

Impact 4.1-7: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. (*Significant and Unavoidable Impact*)

Development that could occur with implementation of the HEU (under both the Distributed Sites approach and the Downtown-Only Alternative) and the cumulative development described in Section 4.0 would be subject to compliance with objective and quantitative City policies and standards established and enforced to ensure that adverse impacts to scenic resources and visual character are minimized. Notwithstanding compliance with objective policies and standards designed to avoid or minimize adverse effects to visual character, the development that could occur with implementation of the HEU (under both the Distributed Sites approach and the Downtown-Only Alternative) would be of a density, scale, and height that could result in substantial changes to the visual character of sites and surroundings. This is considered to be a substantial cumulative impact. The extent of physical change that could occur in many areas under the HEU could result in a considerable contribution to the significant cumulative impact related to visual character. Given the HEU's plan for higher density development than currently exists in the area, no feasible mitigation measures are available to reduce this impact. This cumulative impact is therefore considered **significant and unavoidable**.

Mitigation Measure: None available.

Impact 4.1-8: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not create a new source of substantial light or glare which would adversely affect day or nighttime views. (*Less than Significant Impact*)

Development that could occur with implementation of the HEU (under both the Distributed Sites approach and the Downtown-Only Alternative) and the cumulative development described in Section 4.0 would be required to comply with applicable plans, policies, and guidelines designed to ensure that new development would not create a new source of substantial light or glare which would adversely affect day or nighttime views. Consequently, the cumulative impact would be **less than significant**.

Mitigation Measure: None required.

4.1.5 References

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4.2 Air Quality

4.2.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects on air quality. Below, the section describes the existing air quality conditions, as well as the regulatory framework. Finally, the impact discussion evaluates potential impacts to air quality due to activities that emit criteria and non-criteria air pollutants that could result from implementation of the HEU in the context of existing conditions. The analysis determines whether those emissions are significant relative to applicable air quality standards and identifies feasible mitigation measures for significant adverse impacts.

The Notice of Preparation (NOP) for the EIR was distributed on August 2, 2021, and a scoping meeting was held on August 16th, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relating to air quality were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- The Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Air Quality Guidelines (2017a);
- The BAAQMD Final 2017 Clean Air Plan (2017b);
- The Office of Environmental Health Hazard Assessment (OEHHA) health risk assessment methodology (2015); and
- The City of Lafayette General Plan (2002).

4.2.2 Environmental Setting

Climate and Meteorology

Air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The City of Lafayette lies within the San Francisco Bay Area Air Basin (SFBAAB), which includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties, as well as the southwest portion of Solano County and the southeast portion of Sonoma County. The City of Lafayette is located within the Diablo Valley which is generally characterized by warm, dry summers and cool, damp winters. The average temperature in Lafayette is between 39 to 55 degrees Fahrenheit in the winter, and between 70 to 85 degrees Fahrenheit in the summer.

Air Pollutants of Concern

Air pollutants of concern within the SFBAAB include certain criteria air pollutants and toxic air contaminants (TACs). These are described below.

Criteria Air Pollutants

As required by the federal Clean Air Act (CAA) passed in 1970, the U.S. Environmental Protection Agency (U.S. EPA) has identified six criteria air pollutants that are pervasive in urban environments, and for which state and national health-based ambient air quality standards have been established. The U.S. EPA calls these pollutants “criteria air pollutants” because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM), and lead are the six criteria air pollutants originally identified by the U.S. EPA. Since that time, subsets of particulate matter have also been identified for which permissible levels have been established. These include particle matter less than 10 microns in diameter (PM₁₀), and particle matter less than 2.5 microns in diameter (PM_{2.5}). See Section 4.2.3, Regulatory Framework, for further discussion of specific pollutants and their attainment status within the air basin with respect to state and federal air quality standards.

Ozone

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG, also sometimes referred to as volatile organic compounds [VOC] by some regulating agencies) and nitrogen oxides (NO_x). The main sources of ROG and NO_x, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the SFBAAB, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema.

Carbon Monoxide (CO)

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles with the highest emissions occurring during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal; however, ambient levels of CO have decreased substantially due to improved vehicle fuel efficiency.

Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from man-made and natural sources. Particulate matter regulated by the state and federal Clean Air Acts is measured in two size ranges: PM₁₀ for particles less than 10 microns

in diameter, and PM_{2.5} for particles less than 2.5 microns in diameter. In the SFBAAB, motor vehicles generate about one-half of the air basin's particulates through tailpipe emissions as well as brake pads and tire wear. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of fine particulates.

Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than as a health hazard. However, PM₁₀ and PM_{2.5} represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. According to CARB, studies in the United States and elsewhere “have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks,” and studies of children's health in California have demonstrated that particle pollution “may significantly reduce lung function growth in children (CARB 2022).”

PM_{2.5} is of particular concern because epidemiological studies have demonstrated that people who live near freeways and high-traffic roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections, and decreased pulmonary function and lung development in children (San Francisco Department of Public Health, 2008). New studies are also showing that long-term average exposure to PM_{2.5} is associated with an increased risk of death from the novel coronavirus 2019 disease (COVID-19) in the United States. One study found that an increase of one microgram per cubic meter (µg/m³) in PM_{2.5} is associated with an 8 percent increase in the COVID-19 death rate (Wu et al., 2020). The increase in wildfire smoke also could have contributed to increased cases of COVID-19 (Zhou, et al., 2021).

Nitrogen Dioxide (NO₂)

NO₂ is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are its main sources. Aside from its contribution to ozone formation, NO₂ can increase the risk of acute and chronic respiratory disease and reduce visibility. NO₂ may be visible as a coloring component of the air on high pollution days, especially in conjunction with high ozone levels. In 2010, the U.S. EPA implemented the current one-hour NO₂ standard (0.10 ppm) (see *Regulatory Framework* below). On November 15, 2012, CARB approved a revision to the State Implementation Plan (SIP) for implementing the 2010 federal NO₂ standards. All areas in California are designated as attainment/unclassified for the federal NO₂ standards (CARB, 2012).

Air Quality Index

The U.S. EPA developed the Air Quality Index (AQI) scale to make the public health impacts of air pollution concentrations easily understandable. The AQI, much like an air quality “thermometer,” translates daily air pollution concentrations into a number on a scale between 0 and 500. The numbers in the scale are divided into six color-coded ranges, with numbers 0–300 as outlined below:

- **Green (0-50)** indicates “good” air quality. No health impacts are expected when air quality is in the green range.

- **Yellow (51-100)** indicates air quality is “moderate.” Unusually sensitive people should consider limited prolonged outdoor exertion.
- **Orange (101–150)** indicates air quality is “unhealthy for sensitive groups.” Active children and adults, and people with respiratory disease, such as asthma, should limit outdoor exertion.
- **Red (151–200)** indicates air quality is “unhealthy.” Active children and adults, and people with respiratory disease, such as asthma should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
- **Purple (201–300)** indicates air quality is “very unhealthy.” Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit outdoor exertion.

The AQI numbers refer to specific amounts of pollution in the air and are based on the federal air quality standards for ozone, CO, NO₂, SO₂, PM₁₀, and PM_{2.5}. In most cases, the federal standard for these air pollutants corresponds to the number 100 on the AQI chart. If the concentration of any of these pollutants rises above its respective standard, it can be unhealthy for the public. In determining the air quality forecast, local air districts use the anticipated concentration measurements for each of the major pollutants, converts them into AQI numbers, and determines the highest AQI for each zone in a district. Readings below 100 on the AQI scale would not typically affect the health of the general public (although readings in the moderate range of 50 to 100 may affect unusually sensitive people). Levels above 300 rarely occur in the United States, and readings above 200 have not occurred in the SFBAAB in decades, with the exception of the October 2017 and November 2018 wildfires north of San Francisco and the August/September 2020 complex wildfires that occurred throughout the SFBFAAB (BAAQMD, 2017c).

Wildfires appear to be occurring with increasing frequency in California and the bay area as climate changes (since 2000, 18 of the state’s 20 largest wildfires and 18 of the state’s 20 most destructive fires on record have occurred (Cal Fire, 2022a; Cal Fire, 2022b). As a result of these fires in bay area counties (Napa and Sonoma) and counties north and east of the bay area (e.g. Butte, Lassen, Plumas, and Shasta), the AQI in the bay area reached the “very unhealthy” and “hazardous” designations, ranging from values of 201 to above 350. During those periods, the air district issued “Spare the Air” alerts and recommended that individuals stay inside with windows closed and refrain from significant outdoor activity.

AQI statistics over recent years indicate that air quality in the SFBAAB is predominantly in the “Good” or “Moderate” categories and healthy on most days for most people. Historical air district data indicate that the air basin experienced air quality in the red level (unhealthy) on 25 days between 2018 and 2020. As shown in **Table 4.2-1**, the air basin had a total of 77 red-level or orange-level (unhealthy or unhealthy for sensitive groups) days between 2018 and 2020. A number of these days are attributable to the increasing frequency of wildfires. This table also shows that the air basin experienced a total of 6 purple level (very unhealthy) days in between 2018 and 2020.

**TABLE 4.2-1
AIR QUALITY INDEX STATISTICS FOR THE SAN FRANCISCO BAY AREA AIR BASIN**

AQI Statistics for Air Basin	Number of Days by Year		
	2018	2019	2020
Unhealthy for Sensitive Groups (Orange)	8	10	34
Unhealthy (Red)	8	0	17
Very Unhealthy (Purple)	5	0	1

SOURCE: BAAQMD, 2021.

Toxic Air Contaminants

In addition to criteria air pollutants, plans and individual projects may directly or indirectly emit toxic air contaminants (TACs). TACs are airborne substances that can cause short-term (acute) and/or long-term (chronic and/or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). Human health effects of TACs can include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity that may be emitted from a variety of common sources including gasoline stations, automobiles, diesel engines, dry cleaners, industrial operations, and painting operations. Thus, individual TACs vary greatly in the health risk they present; and at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Unlike criteria air pollutants, TACs do not have ambient air quality standards but instead are regulated by the air district using a risk-based approach to determine which sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances to provide quantitative estimates of the risks.¹ Exposure assessment guidance published by the air district in January 2016 adopts the assumption that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 years (BAAQMD, 2016). Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Although not a TAC, exposures to PM_{2.5} are strongly associated with mortality, respiratory diseases, and reductions in lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease (San Francisco Department of Public Works, 2008). In addition to PM_{2.5}, diesel particulate matter (DPM) is also of concern. CARB identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans (CARB, 1998). The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region.

¹ In general, a health risk assessment is required if the air district concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. The applicant of the project that would emit TACs is required to conduct a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TACs.

Despite notable emission reductions since CARB's 2000 Diesel Risk Reduction Plan (CARB 2000), CARB recommends that proximity to sources of DPM emissions (e.g. a freeway) be considered in the siting of new sensitive land uses. CARB notes that these recommendations are advisory and should not be interpreted as defined "buffer zones," and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, CARB's position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level (CARB, 2005).

Air Pollution Sources

Air pollution sources contributing to emissions within the City and near the HEU planning areas include sources described below.

Stationary Sources

The air districts inventory of permitted stationary sources of emissions indicates that there are dozens of permitted stationary emission sources present within or near the HEU area. These permitted stationary sources are primarily standby generators, gasoline stations, and other facilities such as auto body shops.

Roadway Traffic Emissions

Motor vehicles are responsible for a large share of pollution, especially in California. Vehicle tailpipe emissions contain diverse forms of particles and gases and also contribute to particles by generating road dust and through tire wear.

The air district guidance indicates that roadways with volumes exceeding 10,000 average annual daily traffic may impact sensitive receptors if they are located within 1,000 feet of any sensitive receptor. This traffic contributes to elevated concentrations near the roadway of PM_{2.5}, DPM if heavy trucks are present, and other contaminants emitted from motor vehicles. Average daily traffic counts were taken by Fehr & Peers. This data indicates that roadways with more than 10,000 average annual daily traffic in the HEU area include northbound First Street (north of Mount Diablo Boulevard), northbound and southbound Moraga Road (north of Brook Street), northbound and southbound Pleasant Hill Road (north of State Route [SR] 24), northbound Pleasant Hill Road (south of SR-24), and SR-24 near the HEU plan areas.

Existing Ambient Air Quality

Criteria Air Pollutants

The region's air quality monitoring network measures the ambient concentrations of criteria air pollutants at various locations in the SFBAAB. There is one active air quality monitoring station near Lafayette, located approximately 8 miles northeast from the City of Lafayette at 2956-A Treat Boulevard in Concord, California. **Table 4.2-2** shows the most recent monitoring data for

five criteria air pollutants including ozone, PM₁₀, PM_{2.5}, and NO₂, for the years 2018 through 2020. Table 4.2-2 does not include CO or SO₂ as these are not pollutants of concern for the region. The SFBAAB attains the CO standard due to decreasing emissions over the last several years from improved vehicle fuel efficiency. Monitors are not required for SO₂ in the SFBAAB, as it has never been designated as non-attainment for SO₂. The table also compares the measured pollutant concentrations to the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for each of the criteria air pollutants of concern. Concentrations shown in bold indicate an exceedance of the standard for the air basin.

**TABLE 4.2-2
SUMMARY OF AIR QUALITY MONITORING DATA (2018-2020) – CONCORD STATION^a**

Pollutant	Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured		
		2018	2019	2020
Ozone				
Days 1-Hour State Standard Exceeded		0	0	2
Maximum 1-Hour Concentration (ppm)	>0.09 ppm ^b	0.077	0.092	0.108
Days 8-hour State/National Standard Exceeded		0	2	3
Maximum 8-hour Concentration (ppm)	>0.07 ppm ^{b,c}	0.061	0.074	0.083
Respirable Particulate Matter (PM₁₀)				
Days 24-hour National Standard Exceeded	>150 µg/m ^{3c}	0	0	11.5
Days 24-hour State Standard Exceeded	>50 µg/m ^{3b}	11.5	-	-
Maximum 24-hour Concentration (µg/m ³)		105	36	167
State Annual Average (µg/m ³)	>20 µg/m ^{3b}	16.2	-	-
Fine Particulate Matter (PM_{2.5})				
Days 24-hour National Standard Exceeded	>35 µg/m ^{3c}	14.2	0	16.2
Maximum 24-hour Concentration (µg/m ³)		180	28.2	119.8
Annual Average (µg/m ³)	>12 µg/m ^{3b,c}	13.4	6.8	11.0
Nitrogen Dioxide (NO₂)				
Days 1-hour National Standard Exceeded		0	0	0
Maximum 1-hour Concentration (ppm)	>0.1 ppm ^c	0.038	0.041	0.034

NOTES:

Bold values are in excess of applicable standard.
ppm = parts per million.
µg/m³ = micrograms per cubic meter.

^a The Concord, CA station is the closest monitoring station to the HEU planning areas.

^b State standard, not to be exceeded.

^c National standard, not to be exceeded.

SOURCE: CARB, 2022; U.S. EPA, 2022.

Compliance with the standards is on a regional basis, as opposed to the city level. In the SFBAAB, compliance is demonstrated by ongoing measurements of pollutant concentrations at more than 30 air quality monitoring stations operated by the air district in all nine bay area counties. An exceedance of an ambient air quality standard at any one of the stations counts as a regional exceedance.

Toxic Air Contaminants

In addition to monitoring criteria air pollutants, both the BAAQMD and CARB operate TAC monitoring networks in the SFBAAB. These stations measure 10 to 15 TACs depending on the specific station. The monitoring stations are located in areas where there are expected to be the highest concentrations of TACs, and the TACs selected for monitoring at these stations are those that have traditionally been found in the highest concentrations in ambient air and therefore tend to produce the most substantial risk. There are no TAC monitoring stations within 20 miles of the City or its HEU planning areas.

Odorous Emissions

Odors are generally regarded as an annoyance rather than a health hazard. The ability to detect odors varies considerably among the population and is subjective. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Odor impacts should be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Odor sources typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants (BAAQMD, 2017ba)

Sensitive Receptors

Air quality does not affect every individual in the population in the same way, and some groups are more sensitive than others to air pollution. Reasons for greater sensitivity can include existing health problems, duration of exposure to air pollutants, or certain peoples' increased susceptibility to pollution-related health problems due to factors such as age. Population subgroups sensitive to the health effects of air pollutants include: the elderly and the young; population subgroups with higher rates of respiratory disease, such as asthma and chronic obstructive pulmonary disease; and populations with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases. The factors responsible for variations in exposure are also often similar to factors associated with greater susceptibility to air quality health effects. For example, lower income residents may be more likely to live in substandard housing and be more likely to live near industrial or roadway sources of pollution.

The BAAQMD defines sensitive receptors as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include land uses such as schools, hospitals, and residential areas. Land uses such as schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Residential uses are considered sensitive because these individuals could be present, and people in residential areas are often at home for extended periods of time, so they can be exposed to pollutants for extended periods.

In April 2005, CARB released the Air Quality and Land Use Handbook, which encourages local land use agencies to consider the risks from air pollution prior to making decisions that approve the siting of new sensitive receptors (e.g., schools, homes, and daycare centers) near sources of pollution, such as major roadways and freeways. There are a variety of sensitive receptors that are located in the City and the HEU planning areas including residential uses, schools, daycares, hospitals, and convalescent homes. Many sensitive receptors, including the Bentley Upper School, Contra Costa Day School, Diablo Valley Montessori School, The Child Day Schools, Nanny’s House Child Care & Preschool, the Lafayette Care Center, Deer Hill Care Home, and Merrill Gardens at Lafayette, are also located in close proximity to the City of Lafayette’s major highway, SR-24, which generates high pollutant levels from automobile traffic.

4.2.3 Regulatory Setting

Regulation of air pollution is achieved through both national and state ambient air quality standards and through emissions limits on individual sources of air pollutants. Local Air Quality Management Districts and Air Pollution Control Districts are responsible for demonstrating attainment with state air quality standards through the adoption and enforcement of Attainment Plans.

Federal

Criteria Air Pollutants

The 1970 Clean Air Act (most recently amended in 1990) requires that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled in order to achieve all ambient air quality standards by the deadlines specified in the act. These ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weakened from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed. **Table 4.2-3** presents current state (California Ambient Air Quality Standards, or CAAQS) and national (National Ambient Air Quality Standards, or NAAQS) ambient air quality standards.

NAAQS and CAAQS have been set at levels considered safe to protect public, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. As explained by CARB, “An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment” (CARB, 2017). That is, if a region is in compliance with the ambient air quality standards, its regional air quality can be considered protective of public health. The NAAQS are statutorily required to be set by

the U.S. EPA at levels that are “requisite to protect the public health.”² Therefore, the closer a region is to attaining a particular ambient air quality standard, the lower the human health impact is from that pollutant. See Section 4.2.2, above, for a brief description of the health effects of exposure to criteria air pollutants.

**TABLE 4.2-3
 STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS AND MAJOR SOURCES**

Pollutant	Averaging Time	CAAQS	NAAQS	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	Formed when reactive organic gases (ROG) and nitrogen oxides (NO _x) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hour	0.070 ppm	0.070 ppm	
Carbon Monoxide	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hour	9.0 ppm	9 ppm	
Nitrogen Dioxide	1 hour	0.18 ppm	100 ppb	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030 ppm	0.053 ppm	
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hour	---	0.5 ppm ¹	
	24 hour	0.04 ppm	0.14 ppm	
	Annual Avg.	---	0.030 ppm	
Respirable Particulate Matter (PM ₁₀)	24 hour	50 ug/m ³	150 ug/m ³	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 ug/m ³	---	
Fine Particulate Matter (PM _{2.5})	24 hour	---	35 ug/m ³	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
	Annual Avg.	12 ug/m ³	12.0 ug/m ³	
Lead	Monthly Ave.	1.5 ug/m ³	---	Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 ug/m ³	
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Geothermal power plants, petroleum production and refining
Sulfates	24 hour	25 ug/m ³	No National Standard	Produced by the reaction in the air of SO ₂ .
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	See PM _{2.5} .
Vinyl chloride	24 hour	0.01 ppm	No National Standard	Polyvinyl chloride and vinyl manufacturing.

NOTE:

ppb = parts per billion; ppm = parts per million; ug/m³ = micrograms per cubic meter.

¹ Secondary national standard.

SOURCES: CARB, 2016.

² See <https://www.law.cornell.edu/uscode/text/42/7409>.

Pursuant to the 1990 Federal Clean Air Act Amendments (FCAAA), the US EPA classifies air basins (or portions thereof) as “attainment”, “nonattainment”, or “unclassified” for each criteria air pollutant, based on whether or not the national standards had been achieved. As shown in **Table 4.2-4**, at the federal level, the SFBAAB is designated as a nonattainment area for the 8-hour ozone standard and the federal 24-hour PM_{2.5} standard. The SFBAAB is in attainment for all other federal ambient air quality standards. State-level attainment status of the SFBAAB is discussed further below.

**TABLE 4.2-4
SAN FRANCISCO BAY AREA AIR BASIN ATTAINMENT STATUS**

Pollutant	Averaging Time	Designation/Classification	
		State Standards	Federal Standards
Ozone	8 Hour	Nonattainment	Nonattainment
	1 Hour	Nonattainment	--
Carbon Monoxide	8 Hour	Attainment	Attainment
	1 Hour	Attainment	Attainment
Nitrogen Dioxide	1 Hour	Attainment	--
	Annual Arithmetic Mean	--	Attainment
Sulfur Dioxide	24 Hour	Attainment	--
	1 Hour	Attainment	--
	Annual Arithmetic Mean	--	--
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	Nonattainment	--
	24 Hour	Nonattainment	Unclassified
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	Nonattainment	Unclassified/Attainment
	24 Hour	--	Nonattainment
Sulfates	24 Hour	Attainment	--
Lead	30 Day Average	--	Attainment
	Calendar Quarter	--	Attainment
	Rolling Month Average	--	--
Hydrogen Sulfide	1 Hour	Unclassified	--
Vinyl Chloride	24 Hour	No information available	--
Visibility Reducing Particles	8 Hour	Unclassified	--

SOURCE: BAAQMD, 2017a.

The FCAA requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The FCAA added requirements for states containing areas that violate the national standards to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The U.S. EPA has the responsibility to review all SIPs to determine if they conform to the mandates of the FCAA and will achieve air quality goals when implemented.

State

Criteria Air Pollutants

Although the federal Clean Air Act established the NAAQS, individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological challenges in California, there are differences between the state and national ambient air quality standards, as shown in **Table 4.2-4**. California ambient standards tend to be at least as protective as national ambient standards or are often more stringent.

In 1988, California passed the California Clean Air Act (California Health and Safety Code section 39600 et seq.), which, like its federal counterpart, called for designation of areas as “attainment”, “nonattainment”, or “unclassified” with respect to the state standards. The SFBAAB is currently designated as nonattainment for the state 8-hour and 1-hour ozone standards, the state average and 24-hour PM₁₀ standards, and the state average PM_{2.5} standards. The SFBAAB is designated as attainment or unclassified with respect to the other state standards.

Toxic Air Contaminants

The Health and Safety Code defines TACs as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. The State Air Toxics Program was established in 1983 under AB 1807 (Tanner). A total of 243 substances have been designated TACs under California law, including the 189 (federal) Hazardous Air Pollutants.

Off-road Diesel Emissions

The CARB In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation) applies to all self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles (except on-road two-engine sweepers). This includes vehicles that are rented or leased (rental or leased fleets). CARB’s goal is to gradually reduce the state-wide construction vehicle fleet’s emissions through turnover, repower, or retrofits. New engine emissions requirements were grouped into tiers based on the year in which the engine was built (CARB 2022a). In 2014, new engines were required to meet Tier 4 Final standards, which to date are the most stringent emissions standards for off-road vehicle engines. The goal of the In-Use Off-Road Diesel-Fueled Fleets Regulation is to reduce particulate matter (PM₁₀ and PM_{2.5}) and NO_x emissions from off-road heavy-duty diesel vehicles in California (CARB 2022b). This regulation also limits idling to 5 minutes, requires a written idling policy for larger vehicle fleets, and requires that fleet operators provide information on their engines to CARB and label vehicles with a CARB-issued vehicle identification number.

CARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses. As discussed above, CARB published Air Quality and Land Use Handbook: A Community Health Perspective in April 2005. This handbook is intended to give guidance to local governments in the siting of sensitive land uses near sources of air pollution. Recent studies have shown that public exposure to air pollution can be substantially elevated near

freeways and certain other facilities such as ports, rail yards, and distribution centers. Sensitive receptor siting recommendations for applicable uses in the City of Lafayette are listed in **Table 4.2-5** below. CARB notes that these recommendations are advisory and should not be interpreted as defined “buffer zones,” and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary CARB’s position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level (CARB, 2005).

**TABLE 4.2-5
 RECOMMENDATIONS FOR SITING NEW SENSITIVE LAND USES**

Source Category	Advisory Recommendations of Locations to Avoid
Freeways and High-Traffic Roads	500’ of a freeway or urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
Dry Cleaners Using Perchloroethylene	300’ of any dry cleaning operation. For operations with two or more machines, provide 500’. For operations with three or more machines, consult the local air district. Also, do not site new sensitive receptors in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	300’ of a large gas station, defined as a facility with a throughput of 3.6 million gallons per year or greater. A 50’ separation is recommended for typical gas dispensing facilities.

SOURCE: CARB, 2005.

California Building and Energy Efficiency Standards (Title 24)

The California Energy Commission first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce emissions of criteria pollutants or TACs, increased energy efficiency and reduced consumption of natural gas and other fuels would result in fewer criteria pollutant and TAC emissions from residential and non-residential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods (California Energy Commission, 2018).

The Title 24, Part 6, standards became effective on January 1, 2017. The most recent update to the Title 24 energy efficiency standards (2019 standards) went into effect on January 1, 2020. The proposed project would adhere to the applicable version of Title 24 as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits.

California Green Standards Building Code

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The CALGreen Code is intended to encourage more sustainable and environmentally friendly building practices, require low-pollution emitting

substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment.

Since 2011, the CALGreen Code has been mandatory for all new residential and non-residential buildings constructed in the state. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and non-residential uses; the new measures took effect on January 1, 2020.

Regional

Bay Area Air Quality Management District Clean Air Plan

The BAAQMD 2017 *Clean Air Plan: Spare the Air, Cool the Climate* was adopted on April 19, 2017 by the air district in cooperation with the Metropolitan Transportation Commission, the San Francisco Bay Conservation and Development Commission, and the Association of Bay Area Governments to provide a regional strategy to improve air quality within the SFBAAB and meet public health goals (BAAQMD, 2017d). The control strategy described in the 2017 Clean Air Plan includes a wide range of control measures designed to reduce emissions and lower ambient concentrations of harmful pollutants, safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and reduce greenhouse gas emissions (GHGs) to protect the climate.

The 2017 Clean Air Plan addresses four categories of pollutants: ground-level ozone and its key precursors, ROG and NO_x; PM, primarily PM_{2.5}, and precursors to secondary PM_{2.5}; air toxics; and GHG emissions. The control measures are categorized based on the economic sector framework including stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water measures.

The air district is the regional agency with jurisdiction over the nine-county region located in the air basin. The Association of Bay Area Governments, the Metropolitan Transportation Commission, county transportation agencies, cities and counties, and various non-governmental organizations also participate in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs. The air district is responsible for attaining and/or maintaining air quality in the region within federal and state air quality standards. Specifically, the air district has the responsibility to monitor ambient air pollutant levels throughout the region and to develop and implement strategies to attain the applicable federal and state standards. The air district has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, and can impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The air district also regulates new or expanding stationary sources of TACs and requires air toxic control measures for many sources emitting TACs.

Bay Area Air Quality Management District Rules

The air district rules that would be most applicable to the subsequent projects pertain mostly to permits for emergency generators and include Rules 2-1, 2-2, and 2-5. The air district regulates stationary-source emissions of TACs through Rule 2-1 (General Permit Requirements), Rule 2-2 (New Source Review), and Rule 2-5 (New Source Review of Toxic Air Contaminants). Under these rules, all stationary sources that have the potential to emit TACs above a certain level are required to obtain permits from the air district. These rules provide guidance for the review of new and modified stationary sources of TAC emissions, including evaluation of health risks and potential mitigation measures.

Sources must apply Best Available Control Technology (BACT) to reduce emissions, and the air district recently updated its BACT requirement for emergency generators greater than 1,000 horsepower (hp) to achieve EPA Tier 4 standards (BAAQMD, 2021).

Local

City of Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of Lafayette. Goals and policies related to air quality are listed below.

Goal C-2: Regulate traffic so as to preserve the peace and quiet of residential areas.

Policy C-2.1: Manage Traffic Flow. Discourage diversion of through-traffic onto local streets.

Goal C-4: Coordinate land use and circulation planning.

Policy C-4.1: Balance Circulation and Land Use Patterns. Limit development to that which can be adequately served by Lafayette's circulation system.

Policy C-4.2: Traffic Mitigation. Require new developments to pay their fair share of circulation improvements.

Goal C-6: Provide an attractive, well-designed system of walkways for safe and efficient pedestrian movement in the Lafayette. The walkway system should connect residential areas with the local and regional trails system, public transportation, schools, parks, and other community amenities, and the Downtown Core area.

Policy C-6.1: Master Walkways Plan. Continue to update and implement the Master Walkways Plan.

Policy C-6.2: Walkway Safety. Seek to maintain the City's walkways to avoid hazards.

Goal C-7: Reduce automobile travel demand.

Policy C-7.1: Automobile Travel Demand. Seek to reduce vehicle trips by promoting alternatives to the single-occupant automobile.

Goal C-8: Promote alternatives to the single-occupant automobile.

Policy C-8.1: Increase Use and Availability of Public Transit. Take measures to increase use of public transit. Work with public transit providers to improve equipment, schedules, and better serve the community. Encourage providers to promote their services.

Policy C-8.2: Bicycles. Encourage bicycling by making it easier and safer for people to travel by bicycle.

Goal C-11: Provide a balanced, multimodal transportation network that meets the needs of all users and provides safe and convenient travel that is consistent with local conditions and needs of the community.

Policy C-11.1: All Users. Design and operate city streets based on a “Complete Streets” concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, movers of commercial goods and transit users of all ages and abilities.

Policy C-11.3. Connectivity. Provide a connected network of facilities accommodating all modes of travel in the transportation system. This includes looking for opportunities for repurposing existing publicly-owned rights-of-way to enhance connectivity for cyclists, pedestrians, and transit users to schools, parks, commercial areas, civic destinations and regional non-motorized networks.

Policy C-11.5. All Projects and Phases. Apply Complete Street concept to the planning, funding, design, approval and implementation phases of roadway projects, including those involving new construction, reconstruction, retrofits, major rehabilitation, or changes in the allocation of pavement space on an existing roadway, as well as those that involve new privately built roads and easements intended for public use. Specific infrastructure for a given category of users may be excluded if an exemption is approved via the process set forth in Policy C11.6, “Exemptions.”

Goal OS-10: Improve air quality.

Policy OS-10.1. Regional Planning. Work with the Bay Area Air Quality Management District (BAAQMD) to implement the Regional Clean Air Plan.

Policy OS-10.2. Air Quality Standards. Seek to comply with State and Federal standards for air quality.

Program OS-10.2.1. Incorporate the provisions of the BAAQMD's Air Quality and Urban Development: Guidelines for Assessing Impacts of Projects and Plans into CEQA project review procedures.

Program OS-10.2.2. Revise the Zoning Ordinance to minimize the installation of wood burning fireplaces and stoves.

Program OS-10.2.5. Amend the grading ordinance to include thorough dust control provisions.

Program OS-10.2.6. The City will establish buffers around sites where businesses emit toxic air contaminants and odors. The buffers will be established consistent with the BAAQMD's Air Quality and Urban Development: Guidelines for Assessing Impacts of Project and Plans and the Regional Clean Air Plan.

Policy OS-10. Vehicle Emissions. Improve air quality by reducing the use of single-occupant automobiles

City of Lafayette Standard Specifications

The City's Standard Specifications provide requirements for all City projects, and these specifications include dust control and watering practices (Section 4). Many of these are consistent with the best management practices recommended by the BAAQMD (discussed under Impact 4.2-3, below).

4.2.4 Environmental Impacts and Mitigation Measures

This section analyzes impacts related to air quality that could occur from implementation of the HEU. It describes the methods used to determine impacts and lists the thresholds that were used to conclude whether an impact would be significant. Mitigation measures are identified as necessary to reduce or avoid significant impacts.

Significance Thresholds

The thresholds used to determine the significance of impacts related to air quality are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project could have a significant impact on the environment if it would:

- Conflict with or obstruct implementation of the actual air quality plan;
- Result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors); or
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Methodology and Assumptions

The following analysis is based on guidance from the BAAQMD provided in the 2017 BAAQMD CEQA Air Quality Guidelines (BAAQMD, 2017a). The air district's guidelines identify different approaches to analyzing plans versus projects. The discussion below presents a plan-level analysis to address implementation of either the HEU with Distributed Sites or the Downtown-Only Alternative. Specifically, this section starts with an assessment of consistency with the Clean Air Plan by comparing the HEU's consistency with the strategy of reducing pollutant emissions from vehicle-miles traveled (VMT) by channeling future growth into urban communities where goods and services are close at hand and people have a range of viable transportation options. This section then evaluates criteria pollutants by comparing VMT increase to population increase. For health risk, the plan level analysis describes the BAAQMD's guidance, which calls for examining the impact of the environment on the project (i.e. how would

existing sources of TAC and PM_{2.5} affect new residents), and provide this information to inform the HEU, recognizing that the focus of CEQA is impacts of the project on the environment.³ The analysis also assesses the addition of any odor sources anticipated as part of the plan.

In addition to assessing potential air quality impacts resulting from the HEU at a plan level as required by the BAAQMD guidance, the analysis considers the potential for significant impacts as a result of subsequent projects that may be constructed under either of the HEU scenarios. The analysis includes a qualitative discussion of criteria pollutants that may result from construction and operation of specific projects. A qualitative discussion of health risks that may result from construction and operation of specific projects is also provided, and is informed by quantitative analysis of risks associated with traffic increases (i.e. project operations) projected due to the HEU.

While the exact timing of development under the HEU is unknown and will ultimately be market driven, this analysis is based on the assumption that the projected development will occur by the year 2040 for modeling purposes, and emissions were estimated for this planning horizon. This analysis is based on projected land uses, traffic trips, and associated VMT information provided in the transportation analysis prepared by Fehr & Peers (see also Section 4.14 of this EIR, *Transportation*).

Impacts and Mitigation Measures

Impacts

Impact 4.2-1: The HEU would not conflict with or obstruct implementation of the 2017 Clean Air Plan. (*Less than Significant Impact*)

The most recently adopted air quality plan for the SFBAAB is the 2017 Clean Air Plan (BAAQMD, 2017d) (Clean Air Plan). The Clean Air Plan is a road map that demonstrates how the SFBAAB will implement all feasible measures to reduce ozone precursors (ROG and NO_x) and reduce transport of ozone and its precursors to neighboring air basins, in accordance with the requirements of the California Clean Air Act. It also provides a control strategy to reduce PM, air toxics, and GHGs. In determining consistency with the Clean Air Plan, this analysis considers whether the project would:

- Support the primary goals of the Clean Air Plan;
- Include applicable control measures of the Clean Air Plan; and
- Avoid disrupting or hindering implementation of control measures identified in the Clean Air Plan.

The primary goals of the Clean Air Plan are to protect air quality and public health at the regional and local scale and protect the climate by reducing regional criteria air pollutant emissions and reducing local air quality-related health risks (by meeting state and national ambient air quality

³ This is pursuant to the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015.

standards). To meet these goals, the Clean Air Plan includes 85 control measures aimed at reducing air pollutants in the SFBAAB (BAAQMD, 2017d). These control measures are grouped into the following sectors: stationary (industrial) sources, transportation, energy, buildings, agriculture, natural and working lands, and waste management. The vast majority of the control measures included in the Clean Air Plan do not apply directly to the HEU and its related subsequent projects because they target facilities or land uses that do not currently exist and would not be permitted in the Plan area (e.g., energy generation, waste management, agricultural, forest or pasture lands); vehicles or equipment that would not be employed in the Plan area (e.g., airplanes, farming equipment); and/or involve rulemaking or other actions under the jurisdiction of agencies not directly involved with design and approval of the Plan and its related actions. For example, the Agriculture, Natural and Working Lands, and Water measures address emissions sources not applicable to the HEU, but rather the air district's own programs and regional air quality planning, and are less applicable to local agencies' decisions and projects. In addition, 40 of these measures address stationary sources (such as oil refineries and cement kilns, and large boilers used in commercial and industrial facilities) and will be implemented by the air district using its permit authority and are therefore not suited to implementation through local planning efforts.

Both the HEU with Distributed Sites and the Downtown-Only Alternative would promote high-density land use patterns, allow or require reduction of off-street parking facilities, encourage tree plantings and water and energy conservation, divert waste, and promote transit and bicycling as modes of transport. While subsequent projects that may occur under the HEU are expected to increase demand for travel within the vicinity, safe and convenient pedestrian, transit, and bicycle access to and within the vicinity is necessary for the success of subsequent projects. The HEU with Distributed Sites would include up-zoning of BART-owned properties and the Downtown-Only Alternative would include an equivalent up-zoning of alternate properties Downtown. In both cases, the new multifamily housing would have access to public transit options.

The majority of the control measures identified in the Clean Air Plan fall under the implementation responsibility of the BAAQMD and would not be directly applicable to the development of the HEU. However, under both the HEU with Distributed Sites and the Downtown-Only Alternative, construction of dense multifamily housing would support the implementation of transportation-, energy-, building-, waste-, and water conservation-related measures discussed in the Clean Air Plan and would not hinder its implementation. The relevant sectors are discussed further below.

Transportation Control Measures

The Transportation Control Measures concern improving transit systems, improving efficiency of the region's transportation system, encouraging residents and employees to exhibit "sustainable transportation behavior," improving bicycle and pedestrian facilities, and supporting high-density growth. By providing for multifamily housing near BART and near Downtown, the HEU with Distributed Sites and the Downtown-Only Alternative would support the implementation of the following Transportation Control Measures included in the Clean Air Plan:

- TR 3: Local and Regional Bus Service;

- TR 4: Local and Regional Rail Service;
- TR 5: Transit Efficiency and Use;
- TR 9: Bicycle and Pedestrian Access and Facilities; and
- TR 10: Land Use Strategies.

Housing developed under the HEU would be concentrated in areas that are serviced by local and regional bus service, as well as regional rail services, which would contribute to increased transit use and efficiency within the region. Furthermore, the areas that would be developed under either of the HEU scenarios would place residents near existing and proposed future bikeways and pedestrian pathways that have been identified by the City's Bikeways Plan and the City's Walkways Plan. Both scenarios would also support TR 10: Land Use Strategies, as development under the HEU scenarios would have a higher density near transit facilities than what is currently planned for those areas. This up-zoning would increase resident access to public services and transit, which would reduce VMT per capita, thereby reducing air quality emissions.

Energy Control Measures

The HEU would also, through implementation of existing local, regional, and state policies, further the Clean Air Plan's Energy Control Measures. The focus of the Energy Control Measures included in the Clean Air Plan is decreasing the amount of electricity consumed in the SFBAAB, as well as decreasing the carbon intensity of the electricity used. More specifically, the Energy Control Measures included in the Clean Air Plan include:

- EN 1: Decarbonize Electricity Production; and
- EN 2: Decrease Electricity Demand.

Development under either scenario would be required to comply with the most recent applicable standards included in Title 24, Part 6 (Building Energy Efficiency Standards for Residential and Nonresidential Buildings) and Title 24, Part 11 (CALGreen Code) of the California Code of Regulations. These standards are meant to reduce energy use and improve energy efficiency of development. In addition, MCE, a community choice aggregation, offers clean energy to City residents, and will be available to future residents of the development that would occur under the implementation of both the HEU with Distributed Sites as well as the Downtown-Only Alternative.

Buildings Control Measures

The Clean Air Plan includes four Buildings Control Measures to improve the energy efficiency of existing buildings, promote the use of electricity and on-site renewable energy in existing and new buildings, and to ensure that new construction is designed to achieve zero net GHG emissions. The Buildings Control Measures that would be applicable to the HEU scenarios include:

- BL 1: Green Buildings;
- BL 2: Decarbonize Buildings; and

- BL 4: Urban Heat Island Mitigation.

As discussed above, development under the either of the HEU scenarios would be required to comply with the requirements included in the Title 24 Building Energy Efficiency Standards and the CALGreen Code. Implementation of Title 24, Part 6 and Title 24, Part 11 of the California Code of Regulations would lead to energy-related improvements that would reduce emissions. Furthermore, as discussed under Impact 4.2-4, subsequent projects that do not fall below the screening levels identified in the BAAQMD CEQA Guidelines, and that would generate operational emissions that would exceed the BAAQMD thresholds of significance, would be required to implement the tree planting requirements included in Mitigation Measure 4.2-4b, identified below.

Waste Management Control Measures

The waste management sector generates GHG emissions from landfills and composting facilities, as well as a variety of air pollutants from waste decomposition in landfills and composting operations. The Waste Management Control Measures are meant to reduce or capture methane emissions from landfills and composting facilities, divert organic materials from landfills, and increase waste diversion rates through efforts to reduce, reuse, and recycle. The Waste Management Control Measures that would be supported by the HEU scenarios include the following:

- WA 3: Green Waste Diversion; and
- WA 4: Recycling and Waste Reduction.

Development resulting from the HEU would be serviced by a waste hauler that offers residential and commercial composting services and that would be required to comply with the requirements of the California Integrated Waste Management Act and AB 341. Therefore, both the HEU scenarios would support the applicable Waste Management Control Measures of the Clean Air Plan.

Water Conservation Control Measures

Water use generates criteria air pollutant and toxic air contaminant emissions; therefore, the 2017 Clean Air Plan includes measures to reduce emissions from the water sector by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. The only Water Conservation Control Measure that would be applicable to development under the HEU is:

- WR 2: Support Water Conservation.

As discussed under the Building Control Measures, both of the HEU scenarios would be required to implement the requirements of the CALGreen Code which includes residential mandatory measures to improve water efficiency and conservation.

Conclusion

Overall, both the HEU with Distributed Sites and the Downtown Only Alternative would result in dense multifamily housing close to transit and bicycle/pedestrian facilities, and would support the primary goals of the Clean Air Plan through continued implementation of numerous existing regulations that have been established for new developments throughout the City of Lafayette. Thus, both scenarios would support the goal of the Clean Air Plan to protect public health. The impact would be **less than significant**.

Mitigation Measures: None required.

Impact 4.2-2: The HEU would not result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard. (Less than Significant Impact)

The significance of a plan’s emissions of criteria air pollutants is based on consistency with regional air quality planning, including an evaluation of population growth and growth in VMT. For a proposed plan to result in less-than-significant criteria air pollutants impact, an analysis must demonstrate that the plan’s growth in VMT would not exceed the plan’s population growth.

HEU with Distributed Sites

Growth in Vehicle Miles Traveled Compared to Growth in Population

As discussed in Section 4.12, *Population and Housing*, population growth projected for the HEU with Distributed Sites is 8,390 residents. This assumption is based on the Contra Costa Transportation Authority’s (CCTAs) model, which uses a factor of 2.5 persons per household. The population of Lafayette would increase approximately 31 percent, from the 2040 No Project scenario to 2040 HEU with Distributed Sites at full buildout, as shown in **Table 4.2-6**.

**TABLE 4.2-6
 HEU WITH DISTRIBUTED SITES VMT VERSUS POPULATION GROWTH**

	2040 No Project	2040 HEU with Distributed Sites	Difference between No Project and HEU with Distributed Sites	% Increase
Population	28,015 ^c	36405	8,390 ^b	29.9%
VMT^a	1,386,800	1,450,300	63,500	4.6%

NOTES:

- ^a VMT data provided by Fehr & Peers, and represents VMT on all City roads.
- ^b Population increase based on the CCTA model which uses a 'persons-per-household' factor of 2.5.
- ^c Data for the City, County, and the Region are based on Plan Bay Area 2040 as incorporated into the Contra Costa Transportation Authority Model.

Based on the output from the travel demand model, daily VMT associated with the HEU would increase by approximately 63,500 VMT from the 2040 No Project scenario of approximately 1,386,800, as shown in Table 4.2-6. This represents a growth of approximately 5 percent attributable to the HEU with Distributed Sites. Because the growth in VMT would be less than

the growth in population, the HEU with Distributed Sites would result in a *less-than-significant* impact with respect to regional criteria air pollutants.

Downtown-Only Alternative

Growth in Vehicle Miles Traveled Compared to Growth in Population

Population growth projected for the Downtown-Only Alternative is 8,483 residents, based on the same approach used for the HEU with Distributed Sites. The population of Lafayette would increase approximately 32 percent, from the 2040 No Project scenario to 2040 Downtown-Only Alternative at full buildout, as shown in **Table 4.2-7**.

**TABLE 4.2-7
DOWNTOWN-ONLY ALTERNATIVE VMT VERSUS SERVICE POPULATION GROWTH**

	2040 No Project	2040 Downtown-Only Alternative	Difference between No Project and Downtown-Only Alternative	% Increase
Population	28,015 ^c	36,498	8,483	30.3%
VMT^a	1,386,800	1,447,300	60,500	4.4%

NOTES:

- ^a VMT data provided by Fehr & Peers, and represents VMT on all City roads.
- ^b Population increase based on the CCTA model which uses a persons per household factor of 2.5.
- ^c No Project population growth projections obtained from Plan Bay Area 2040, Projections 2040. (ABAG, 2017).

Based on the output from the travel demand model, daily VMT associated with the HEU would increase by approximately 60,500 from the 2040 No Project baseline of approximately 1,386,000 VMT, as shown in Table 4.2-7. This represents a growth of 4 percent attributable to the Downtown-Only Alternative. Because the growth in VMT would be less than the growth in population that could be generated by the Downtown-Only Alternative, the Downtown-Only Alternative would result in a *less-than-significant* impact with respect to regional criteria air pollutants.

Conclusion

As discussed above, implementation of either of the HEU scenarios would result in growth in VMT that would be less than the growth in service population and would result in a *less-than-significant* impact with respect to regional criteria air pollutants. For this reason, implementation of the HEU would result in a *less-than-significant* impact with respect to regional emissions of criteria air pollutants and no mitigation measures are required.

Mitigation Measures: None required.

Impact 4.2-3: Construction and operation of individual development projects following adoption of the HEU could result in a cumulatively considerable net increase in criteria pollutants for which the region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard. (*Significant and Unavoidable Impact, with Mitigation*)

While a plan-level analysis is not required to assess project-related emissions, construction and operation of subsequent projects would result in criteria air pollutant emissions, the effects of which are analyzed here in an effort to anticipate potential impacts that may be identified in subsequent project-specific environmental reviews and apply mitigation measures where necessary. This analysis first discusses potential emissions from project construction, and then potential emissions from project operation.

Implementation of the HEU would allow for development of new residential uses, and some of the subsequent projects under the HEU would entail demolition and removal of existing structures, excavation, site preparation, and construction of new buildings. Emissions generated during construction activities would include exhaust emissions from the use of heavy-duty off-road diesel equipment, on-road diesel trucks, and employee vehicles, as well as fugitive emissions associated with earth-disturbing activities and other demolition and construction work.

Construction Dust

Activities that generate dust include building and parking lot demolition, excavation, and equipment movement across unpaved construction sites. Dust can be an irritant causing watering eyes or irritation to the lungs, nose, and throat. Demolition, excavation, grading, and other construction activities can cause wind-blown dust that adds PM₁₀ and PM_{2.5} to the local atmosphere. The BAAQMD has taken a qualitative approach to addressing fugitive dust emissions during construction, such that any project that implements the BAAQMD Basic Construction Mitigation Measures Recommended for All Projects (Best Management Practices) would not result in a significant impact with respect to fugitive dust. **Mitigation Measure 4.2-3a: Best Management Practices**, provided below, specifies BAAQMD recommended measures and would apply to all individual projects to address construction dust.

Construction Equipment Exhaust

The BAAQMD CEQA Air Quality Guidelines include screening criteria based on development type and size (Table 3-1) to determine if construction or operational emissions from individual projects would likely result in a cumulatively considerable net increase in non-attainment criteria air pollutants.⁴ A project that exceeds the screening criteria may require a detailed air quality assessment to determine whether criteria air pollutant emissions would exceed significance thresholds (BAAQMD, 2017b). Projects below the screening criteria would not require future analysis and the criteria pollutant impact from those projects are presumed to be less than significant.

⁴ For example, the construction-related screening size for mid-rise apartments is 240 dwelling units, per Table 3-1 in the BAAQMD CEQA Guidelines.

Subsequent projects that would exceed the screening sizes have the potential to generate emissions of criteria air pollutants that could contribute a cumulatively considerable amount of non-attainment pollutants. These projects may require substantial ground disturbance, require extremely compressed construction schedules, and require specialty equipment, all of which could lead to exceedance of the significance thresholds. Thus subsequent projects that exceed the BAAQMD screening criteria would require a detailed air quality assessment to determine whether criteria air pollutant emissions would exceed significance thresholds.

Because the specific characteristics of each subsequent project and the required construction equipment information (year and duration of construction, equipment type, operating hours, horsepower, etc.) are not known, **Mitigation Measure 4.2-3b: Emission Reduction Measures for Subsequent Projects Exceeding the Significance Thresholds for Criteria Pollutants**, provided below, requires a quantitative analysis of projects exceeding the BAAQMD's screening criteria, and implementation of emission reduction measures if significance thresholds for criteria pollutants are exceeded.

Operational Emissions

Subsequent projects that could occur under either of the HEU scenarios would generate vehicle trips and other operational emissions, such as emissions from landscape maintenance activities, painting, and the use of consumer products. Sufficient detail about subsequent projects is not currently known. However as discussed above, the air district established screening criteria to determine if operational emissions from projects would result in a cumulatively considerable net increase in criteria air pollutants (BAAQMD, 2017b). A project that exceeds the operational screening criteria would require a detailed air quality assessment to determine whether criteria air pollutant emissions would exceed significance thresholds.

Most subsequent projects' operational emissions are not anticipated to exceed the thresholds of significance. This is because the majority of operational emissions from residential development are from gasoline-powered passenger vehicles, which do not emit a substantial amount of NO_x. Some VOCs would be emitted from personal product and solvent use (i.e., consumer products), but these emissions typically do not exceed thresholds for small and mid-size projects. Vehicles also emit fugitive PM_{2.5} in the form of road dust, brake wear, and tire wear.

Impact 4.2-2 demonstrated that VMT growth would be less than population growth, based on the type of proposed development that involves dense multifamily housing close to transit and bicycle/pedestrian facilities, and concluded that the operational criteria pollutant emissions from the HEU would be less than significant as a result. It is expected that the operational emissions from each subsequent project would also be less than significant.

Only the largest projects would potentially exceed the thresholds. Nonetheless, because subsequent projects under the HEU could exceed the air district's screening criteria, each subsequent project that exceeds the screening levels included in the CEQA Air Quality Guidelines would require a quantitative analysis to determine if criteria air pollutant emissions are below significance thresholds (BAAQMD, 2017b). **Mitigation Measure 4.2-3b: Emission Reduction Measures for Subsequent Projects Exceeding the Significance Thresholds for**

Criteria Pollutants, provided below, requires a quantitative analysis of projects exceeding the BAAQMD's screening criteria, and implementation of emission reduction measures if significance thresholds for criteria pollutants are exceeded.

Mitigation Measures

Mitigation Measure 4.2-3a: Best Management Practices.

All subsequent projects, regardless of size, shall implement best management practices to reduce construction impacts, particularly fugitive dust, to a less-than-significant level. Specifically, in addition to the City's Dust Control and Watering technical provisions in its Standard Specifications (City of Lafayette 2013), the project sponsor shall require all construction plans to specify implementation of the following best management practices:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- 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.

Mitigation Measure 4.2-3b: Emission Reduction Measures for Subsequent Projects Exceeding the Significance Thresholds for Criteria Pollutants.

Project sponsors proposing projects that exceed BAAQMD screening levels shall prepare a project-level criteria air pollutant assessment of construction and operational emissions at the time the project is proposed. The project-level assessment could include a comparison of the project with other similar projects where a quantitative analysis has been conducted, or a project-specific criteria air pollutant analysis to determine whether the project exceeds the air district's criteria air pollutant thresholds.

In the event that a project-specific analysis finds that the project could result in significant construction and/or operational criteria air pollutant emissions that exceed significance thresholds, the project sponsor shall implement the following emission reduction measures to the degree necessary to reduce the impact to less than significance thresholds, and shall implement other feasible measures as needed to reduce the impact to less than the significance thresholds.

Clean Construction Equipment.

- 1) Diesel off-road equipment shall have engines that meet the Tier 4 Final off-road emission standards, as certified by CARB, as required to reduce the emissions to less than the thresholds of significance shown in Table 2-1 of the BAAQMD CEQA Guidelines (BAAQMD 2017b). This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Verified Diesel Emission Control Strategy (VDECS) information if applicable and other related equipment data. A Certification Statement is also required to be made by the Contractor for documentation of compliance and for future review by the air district as necessary. The Certification Statement must state that the Contractor agrees to compliance and acknowledges that a violation of this requirement shall constitute a material breach of contract.
- 2) The City may waive the equipment requirement above only under the following unusual circumstances: if a particular piece of off-road equipment with Tier 4 Final standards is technically not feasible or not commercially available; the equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or there is a compelling emergency need to use other alternate off-road equipment. If the City grants the waiver, the contractor shall use the next cleanest piece of off-road equipment available, as detailed in **Table 4.2-8**, below.

**TABLE 4.2-8
 OFF ROAD EQUIPMENT COMPLIANCE STEP DOWN APPROACH**

Compliance Alternative	Engine Emissions Standard	Emissions Control
1	Tier 4 Interim	N/A
2	Tier 3	ARB Level 3 VDECS
3	Tier	ARB Level 3 VDCES

- 3) For purposes of this mitigation measure, “commercially available” shall mean the availability of Tier 4 Final engines similar to the availability for other large-scale construction projects in the region occurring at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction for the project and (ii) geographic proximity to the project site of Tier 4 Final equipment.
- 4) Table 4.2-8 describes the Off Road Compliance Step Down approach. If engines that comply with Tier 4 Final off-road emission standards are not commercially available, then the Contractor shall meet Compliance Alternative 1. If off-road equipment meeting Compliance Alternative 1 are not commercially available, then the Project

sponsor shall meet Compliance Alternative 2. If off-road equipment meeting Compliance Alternative 2 are not commercially available, then the Project sponsor shall meet Compliance Alternative 3 as demonstrated below.

- 5) The project sponsor shall require the idling time for off-road and on-road equipment be limited to no more than 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the 2-minute idling limit.

Electric Vehicle Charging – Operational Emissions. The project sponsor shall demonstrate compliance with EV charging requirements in Tier 2 CalGreen standards in effect at the time of project review (consistent with GHG mitigation measure 4.71b). The installation of all EV charging equipment shall be included on the project drawings submitted for the construction-related permits or on other documentation submitted to the City of Lafayette.

Significance After Mitigation: With implementation of Mitigation Measure 4.2-3a, construction dust impacts of subsequent projects would be reduced to less than significant with mitigation by incorporating best management practices promulgated by the BAAQMD.

With implementation of Mitigation Measure 4.2-3b, it cannot be stated with certainty that construction and operational criteria air pollutant impacts associated with all subsequent projects would be reduced to less-than-significant levels. However, as discussed above, only large construction projects that exceed the screening sizes in Table 3-1 of the Air Quality CEQA Guidelines, projects with substantial ground disturbance, specialty construction equipment, or compressed and highly intensive construction schedules would be expected to exceed emissions significance thresholds. Nevertheless, due to this uncertainty, criteria pollutant emissions from construction and operation of subsequent projects that could be developed under the HEU would be significant and unavoidable with mitigation. The identification of this significant and unavoidable impact does not preclude the finding of a less-than-significant or less-than-significant-with-mitigation impact for subsequent projects that are below the applicable screening criteria or that meet the criteria air pollutant thresholds of significance with implementation of Mitigation Measure 4.2-3b.

Impact 4.2-4: The HEU would not result in exposure of new sensitive receptors to substantial pollutant concentrations. (*Non-CEQA Impact*)

The BAAQMD significance criteria for exposure to sensitive receptors from health risks due to emissions of TAC and PM_{2.5} resulting from adoption of a plan considers the following:

- Presence of sensitive receptors around existing and planned sources of TACs (including adopted Risk Reduction Plan areas) and;
- Presence of sensitive receptors within 500 feet from all freeways and high volume roadways

The greatest source of TACs near the HEU planning areas is SR-24; there are no other major sources of TACs or Risk Reduction Plan areas near either the Distributed Sites or the Downtown Only Alternative. Also, no new TAC sources are planned as part of the HEU. According to these criteria, impacts would be significant if the plan would introduce sensitive receptors in the vicinity of existing and planned sources of TACs, such as freeways and high volume roadways. However, in the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015, the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing environmental conditions might impact a project's users or residents. Nonetheless, this analysis considers the potential for new receptors to be exposed to TAC emissions from SR-24 for informational purposes. Some of the Planning Areas in the HEU area are within the 500 feet of SR-24, and new HEU residential sensitive receptors could be developed, occupied and subsequently exposed to TAC emissions from SR-24. The Title 24 Building Code requires low-rise residential buildings and larger to install Minimum Efficiency Reporting Value (MERV) 13 enhanced filtration. MERV 13 air filtration is capable of removing 80 percent of particulate matter, thereby reducing an individual's exposure to air pollution (ASHRAE Standard 52.2; AHRI Standard 680). Nevertheless, the condition of approval below is recommended to further reduce the impact of TAC emissions on the HEU's new sensitive receptors that would be within 500 feet of SR-24.

Condition of Approval to Reduce Exposure to Air Pollution – Toxic Air Contaminants:

The HEU shall require all new sensitive receptors constructed within 500 feet of SR-24 to install mechanical ventilation systems capable of achieving the protection from particulate matter (PM_{2.5}) equivalent to that associated with a MERV 16 filtration (as defined by American Society of Heating, Refrigerating and Air-Conditioning Engineers [ASHRAE] standard 52.2). As part of implementing this condition, an ongoing maintenance plan for the building's HVAC filtration system is required.

Impact 4.2-5: Construction and operation of individual development projects following adoption of the HEU would result in emissions of fine particulate matter (PM_{2.5}) and TACs that could result in exposure of sensitive receptors to substantial pollutant concentrations. (*Less than Significant, with Mitigation*)

Construction and operation of individual projects that are constructed following adoption of the HEU could expose sensitive receptors to levels of TACs and PM_{2.5} that could lead to potentially significant health risk impacts. To provide some understanding of the potential risks from project operations, health risk assessment (HRA) modeling was conducted to quantify potential risk levels at sensitive receptors due to traffic increases anticipated as a result of development in the HEU planning areas. The results of the HRA were evaluated against BAAQMD's project level thresholds (BAAQMD 2017b), which are:

- Cancer risk probability > 10 in one million;
- Chronic, non-cancer hazard index > 1;
- Acute, non-cancer hazard index > 1; and

- Annual average PM_{2.5} concentration > 0.3 µg/m³.

The HRA estimated the incremental change in cancer risks, chronic non-cancer risk, acute risk, and localized PM_{2.5} concentrations that would result from traffic associated with each scenario of the HEU.

For construction of subsequent development projects, sufficient detail about their type and location is not currently known to allow a quantitative analysis of health risks at sensitive receptors resulting from construction activities. For example, construction TAC emissions from subsequent projects is based on project-specific construction equipment use and schedule information that is unavailable at this time. Therefore, because the HRA cannot reasonably account for construction emissions from subsequent projects, the HRA quantitatively addresses only impacts from operational emissions. See Appendix B for detailed calculations for the HRA.

Mobile Source Emissions

Total on-road mobile source TAC emissions associated with HEU traffic were calculated using the incremental increase in traffic from the HEU (difference between the 2040 No Project Forecast and the 2040 HEU Forecasts from the travel demand memorandum [TDM]). However, the HEU is effective starting in 2023 and therefore development that could occur pursuant to the HEU could begin as early as 2023. To provide for a conservative analysis full buildout by 2023 was assumed for the operational traffic-generated TAC emissions analysis.

Traffic that could occur under the HEU was evaluated using the CARB 2021 Emission Factor (EMFAC2021) model, using the vehicle fleet mix in Contra Costa County, and calendar year 2023 emissions factors. The default vehicle fleet mix for Contra Costa County was adjusted to represent vehicle classes associated with residential growth of the HEU and the Plan-generated traffic, based on the TDM. Diesel particulate matter (DPM) was conservatively modeled with the PM₁₀ exhaust emission factor for diesel vehicles, which comprise less than 0.5 percent of the total vehicle mix. Health risk from gasoline vehicles' total organic gas (TOG) exhaust and evaporative emissions was modeled with the TOG emission factors, which were speciated into individual TAC compounds, using BAAQMD's Recommended Methods for Screening and Modeling Local Risks and Hazards (BAAQMD, 2012). Health risk from PM_{2.5} included exhaust, brake-wear, tire-wear, and entrained road dust (CARB, 2018).

Mobile source emission estimates along roadway segments within the HEU area were input into the AERMOD (version 21112) air quality dispersion model to determine concentrations of DPM, TOG, and PM_{2.5} at all sensitive receptor locations included in the modeling domain. Receptors were modeled on a 20-by-20-meter receptor grid, consistent with BAAQMD Health Risk Assessment Modeling Protocol, and include all sensitive receptors within 1,000 feet of each Planning Area boundary (BAAQMD, 2020a). Health risks from Plan-generated traffic were then estimated for the roadway segments in the HEU areas and at surrounding existing sensitive land uses. Other modeling parameters included air district meteorological data from the air district's Concord-Buchanan station, United States Geological Survey elevation data, and a breathing level receptor height (1.5 meters).

These parameters, and all other analysis methods, are consistent with the BAAQMD Health Risk Assessment Modeling Protocol. The roadway sources were modeled as area sources with a release height of 1.7 meters and a source initial vertical dimension of 1.58 meters, consistent with U.S. EPA Haul Road Workgroup Final Report (U.S. EPA, 2012). The health risk calculations follow the 2015 OEHHA risk assessment guidelines (OEHHA, 2015). The cancer risk, chronic non-cancer risk, acute risk, and PM_{2.5} concentrations for the overall maximally exposed individual sensitive receptor (MEISR) in each Planning Area were estimated.

Health Risk Model Results

Results of the modeling were used to determine whether traffic associated with subsequent development projects as part of the HEU Distributed Sites and Downtown-Only Alternative would exceed thresholds for health risks. As shown in **Table 4.2-9**, the maximum modeled impacts from the HEU with Distributed Sites-generated traffic sources are all below significance thresholds, as follows:

- Cancer risk = 1.10 in 1 million;
- Chronic hazard index = 0.004;
- Acute hazard index =0.019; and
- Annual average PM_{2.5} concentration = 0.14 µg/m³.

**TABLE 4.2-9
HEU WITH DISTRIBUTED SITES PROJECT HEALTH RISK IMPACTS
ON EXISTING RESIDENTIAL AND PLANNING AREA RECEPTORS**

Receptor / Planning Area	Incremental Increase in Lifetime Cancer Risk (in 1 million)	Chronic Non-Cancer Risk	Acute Risk	Annual Average PM _{2.5} Concentration (µg/m ³)
Overall (Existing and Planning Area) ^a	1.10	0.004	0.019	0.137
Downtown West End (North)	0.37	0.001	0.008	0.047
Downtown West End (South)	0.26	0.001	0.007	0.032
Downtown Core (North)	0.58	0.002	0.013	0.072
Downtown Core (South)	0.26	0.001	0.011	0.033
Downtown East End (North)	0.26	0.001	0.006	0.033
Downtown East End (South)	0.18	0.001	0.005	0.022
BART	0.60	0.002	0.013	0.075
Deer Hill Corridor	1.10	0.004	0.019	0.137
DeSilva Sites	0.37	0.001	0.006	0.047
Dewing/Brook/Rosedale	0.12	<0.001	0.006	0.015
Significance Threshold	10	1.0	1.0	0.3
Exceeds Threshold (Yes or No)?	No	No	No	No

NOTES:

µg/m³ = micrograms per cubic meter; PM_{2.5} = particulate matter 2.5 microns or less in diameter

^a The Overall receptor represents the highest impact modeled at all sensitive receptors either within a Planning Area or that is existing outside the Planning Area within the modeling domain.

As shown in **Table 4.2-10**, the maximum modeled impacts from the Downtown-Only Alternative-generated traffic sources are all below significance thresholds, as follows:

- Cancer risk = 0.55 in 1 million;
- Chronic hazard index = 0.002;
- Acute hazard index = 0.012; and
- Annual average PM_{2.5} concentration = 0.07 µg/m³.

Based on these results, it is reasonable to assume that traffic associated with subsequent projects (i.e. operational TAC emissions) under both of the HEU scenarios would result in less than significant impacts related to exposure of sensitive receptors to substantial levels of TACs. Note that the modeling does not account for emissions from construction of subsequent projects. This is discussed qualitatively, below.

**TABLE 4.2-10
 HEU WITH DOWNTOWN-ONLY ALTERNATIVE PROJECT HEALTH RISK IMPACTS
 ON EXISTING RESIDENTIAL AND PLANNING AREA RECEPTORS**

Receptor / Planning Area	Incremental Increase in Lifetime Cancer Risk (in 1 million)	Chronic Non-Cancer Risk	Acute Risk	Annual Average PM _{2.5} Concentration (µg/m ³)
Overall (Existing and Planning Area) ^a	0.55	0.002	0.012	0.069
Downtown West End (North)	0.20	0.001	0.006	0.026
Downtown West End (South)	0.11	<0.001	0.006	0.014
Downtown Core (North)	0.36	0.001	0.007	0.045
Downtown Core (South)	0.24	0.001	0.007	0.030
Downtown East End (North)	0.41	0.001	0.007	0.052
Downtown East End (South)	0.27	0.001	0.007	0.034
BART	0.45	0.002	0.007	0.057
Deer Hill Corridor	0.55	0.002	0.012	0.069
DeSilva Sites	0.11	<0.001	0.002	0.014
Dewing/Brook/Rosedale	0.14	<0.001	0.004	0.018
Significance Threshold	10	1.0	1.0	0.3
Exceeds Threshold (Yes or No)?	No	No	No	No

NOTES:

µg/m³ = micrograms per cubic meter; PM_{2.5} = particulate matter 2.5 microns or less in diameter

^a The Overall receptor represents the highest impact modeled at all sensitive receptors either within a Planning Area or that is existing outside the Planning Area within the modeling domain.

Health Risks from Construction of Subsequent Projects

The specific characteristics of each subsequent project and the required construction equipment information (year and duration of construction, equipment type, operating hours, horsepower, etc.) are not known, and therefore it is not possible to assess whether construction-related TAC emissions would result in health risks in excess of the significance thresholds described above. As a result, Mitigation Measure 4.2-5a, presented below would require subsequent projects within

1,000 feet of sensitive receptors to undergo a project-level assessment at the time the project is proposed.

Mitigation Measures

Mitigation Measure 4.2-5a Emission Reduction Measures for Subsequent Projects Exceeding the Significance Thresholds for Health Risks associated with TAC Emissions.

Project sponsors proposing projects within 1,000 feet of sensitive receptors, including residences, schools, day care centers, and hospitals, shall prepare a project-level health risk assessment at the time the project is proposed. The project-level assessment could include a comparison of the project with other similar sized projects located a similar distance from receptors where a quantitative analysis has been conducted, or a project-specific analysis to determine whether the project exceeds the air district's health risk thresholds.

In the event that a project-specific analysis finds that the project could result in health risks that exceed significance thresholds, the project sponsor shall implement the clean construction equipment requirement of Mitigation Measure 4.2-3b to the degree necessary to reduce the impact to less than significance thresholds, and shall implement other feasible measures as needed to reduce the impact to less than the significant thresholds.

Significance After Mitigation: Mitigation measure 4.2-5a would reduce TAC emissions from off-road, diesel construction equipment. Tier 4 Final off-road engines emit 80 to 90 percent less DPM than Tier 2 engines. This mitigation measure would be implemented to the extent necessary (e.g. all Tier 4 final construction equipment) to reduce construction health risk impacts associated with all subsequent projects to less-than-significant levels and would require additional emission reduction measures if necessary.

Impact 4.2-6: The HEU would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (*Less than Significant Impact*)

*During construction of the developments that may occur under either of the HEU scenarios, the use of diesel-powered vehicles and equipment that could temporarily generate localized odors, which would cease upon completion of potential individual projects developed under the HEU scenarios and would not result in a significant odor impact. The BAAQMD CEQA Guidelines identifies land uses that have potential to generate continuous odorous impacts and odor complaints during operation. These land uses include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants (BAAQMD, 2017b). Development under either of the HEU scenarios would be residential and would not include land uses that are identified by the BAAQMD as common odor sources. Therefore, operation of either of the HEU scenarios would have a **less-than-significant** impact with respect to odor sources.*

Mitigation Measure: None required.

Cumulative Impacts

The SFBAAB is a nonattainment area for both the federal and state ozone standards; therefore, a cumulative air quality impact already exists. Additional emissions of ozone precursors NO_x or ROG over threshold amounts would further degrade air quality related to ozone. Impact 4.2-2 evaluates whether the HEU's contribution to this significant impact would be considerable and concludes that the impact would be significant and unavoidable after mitigation. For this reason, no further analysis of cumulative criteria pollutants is necessary.

Impact 4.2-7: The HEU, in conjunction with cumulative sources, would not result in exposure of sensitive receptors to substantial levels of fine particulate matter (PM_{2.5}) and TACs under cumulative conditions. (*Less than Significant Impact*)

The largest, existing source of TACs and PM_{2.5} in the vicinity of the plan area is SR-24. Those existing emissions result in cancer risks and annual average PM_{2.5} concentrations that exceed the BAAQMD's cumulative thresholds at locations within 500 feet of SR-24. These cumulative thresholds are:

- Cancer risk probability > 100 in one million;
- Chronic, non-cancer hazard index > 10;
- Acute, non-cancer hazard index > 10; and
- Annual average PM_{2.5} concentration > 0.8 µg/m³.

Both cumulative traffic volumes in the 2040 No Project condition and HEU-related traffic will incrementally increase the existing emissions and health risks resulting from SR-24 that are above the thresholds of significance, resulting in a cumulatively significant impact.

However, given that the vast majority of the cumulative impact is from existing sources, that an extremely small percentage of the total risk would be attributed to the plan, and that the plan's risks would be below project-level significance thresholds with mitigation (as shown in Impact 4.2-4), the project's contribution to the cumulative impact would not be considerable, and this impact from the plan is considered **less than significant**.

Impact 4.2-8: The HEU, in combination with cumulative projects, would not combine with other sources of odors that would adversely affect a substantial number of people. (*Less than Significant Impact*)

Impact 4.2-6 describes the potential of odorous emissions from the HEU. Development under either of the HEU scenarios would be residential and would not include land uses that are identified by the BAAQMD as common odor sources. Therefore, operation of either of the HEU

scenarios would not generate odors and there is no potential for the HEU to combine with cumulative projects to result in a significant cumulative odor impact, as there are no major sources of odors in the vicinity. Therefore, this impact would be **less than significant**.

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4.3 Biological Resources

4.3.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects on Biological Resources. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to Biological Resources. Further below, existing plans and policies relevant to Biological Resources associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to Biological Resources that could result from implementation of the HEU in the context of existing conditions. The evaluation of biological resources includes a “study area” that encompasses the various HEU planning areas (see Figure 3-3 in Chapter 3 of this EIR for an overview map of the planning areas), plus a 150-foot buffer to account for potential project-related indirect impacts.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021, and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relevant to Biological Resources were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- Site visit by ESA Wildlife Biologist Erika Walther on September 27, 2021
- Historic and current aerial imagery available on Google Earth (2021).
- Subscription-based biological resource databases including the CDFW California Natural Diversity Database (CNDDDB), CNPS Rare Plant Inventory, and a USFWS Information for Planning and Consultation Official Species List (2021).
- City of Lafayette General Plan (2002).
- City of Lafayette Downtown Specific Plan (2012).
- City of Lafayette Downtown Specific Plan EIR (2010).
- 3933 Quail Ridge Road Residential Project Focused Initial Study (IS) (2019)
- City of Lafayette HDP05-19 David Frazee for Vaughn Land LLC Initial Study Checklist Form (2020).

4.3.2 Environmental Setting

Regional Setting

The project is in the San Francisco Bay Bioregion, which has a mild Mediterranean climate with generally warm, dry summers and cool, wet winters. This region includes marine, freshwater, and terrestrial resources from Point Arena to the Santa Cruz Mountains and extends from the continental shelf to the delta of the Sacramento and San Joaquin Rivers (USGS, 2017). The region includes

redwood forests, Douglas fir mixed evergreen forests, bishop pine forests, oak woodlands, and coastal prairie-scrub.

Local Setting

The City of Lafayette is in the San Pablo Ridge Range, one of the Southern Coast Ranges running from the East San Francisco Bay Area south to Santa Barbara County. Lafayette is approximately 11 miles west of Mount Diablo at the north end of the Diablo Range. Lafayette is within the Walnut Creek Watershed, and more specifically, within the 17,238-acre Las Trampas Creek Sub-Watershed, which includes 64 miles of channels (Contra Costa County Community Development Department, 2004). This watershed includes the 126-acre Lafayette Reservoir, which is surrounded by public watershed lands southwest of downtown Lafayette. In addition, numerous recreational parks are scattered throughout the existing residential and commercial development in Lafayette.

The primary waterway flowing through downtown Lafayette is Lafayette Creek. Lafayette Creek drains north from Lafayette Reservoir via an underground channel and continues east as a natural surface creek south of Mount Diablo Boulevard for approximately 1.3 miles before crossing Moraga Road and continuing east as a concrete and earthen constructed waterway for approximately 0.4 miles before merging with Las Trampas Creek between 3rd Street and 4th Street. In addition, Happy Valley Creek drains multiple tributaries that originate north of Highway 24, merging with Lafayette Creek south of Mount Diablo Boulevard and west of Moraga Road. Both creeks generally have water flow all year, and conditions provide enough soil moisture to support riparian habitat (City of Lafayette, 2012). Additional details about the project setting are included in Chapter 3 of this EIR, *Project Description*.

Vegetation Communities and Associated Wildlife Species

A *vegetation community* is a recognizable collection of plant species that interact with each other and the elements of their environment and are distinct from adjacent vegetation communities (Holland, 1986). The terrestrial plant community classification presented in this assessment is based on a review of aerial imagery on Google Earth and the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland, 1986). Plant communities generally correlate with wildlife habitat types. Wildlife habitats are typically classified and evaluated using *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988). Vegetation communities in the study area include:

- Developed/landscaped
- California annual grassland
- Riverine
- Riparian woodland
- Oak woodland

The following subsections describe these communities and their locations in the study area.

Developed/Landscaped

Developed/landscaped areas are present throughout the study areas established for HEU with Distributed Sites and the Downtown-Only Alternative and are the primary vegetation community within the study areas.

Developed/landscaped habitats are not natural vegetation communities per se, as they lack natural vegetation, and the terms are used in this analysis to describe areas that cannot be classified as vegetation communities. The study area is largely composed of developed urban land that includes existing buildings, paved streets, sidewalks, and parking lots interspersed with landscape plantings, including street and parking lot trees, residential landscaping, and public parks, such as Brook Street Park, Lafayette Plaza Park, and Gazebo Park.

Developed/landscaped areas provide minimal habitat opportunities for most sensitive plants and wildlife; however, common wildlife such as striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), and Virginia opossum (*Didelphis virginiana*) could use these areas to forage for human food waste, shelter from predators and weather, or move to and from patches of higher quality habitat, such as Lafayette Creek and open space surrounding downtown. Landscaped areas in an otherwise urban environment can provide cover, foraging, and nesting habitat for a variety of bird species, as well as reptiles and small mammals, especially those that are tolerant of disturbance and human presence. Birds commonly found in such areas include non-native species, such as house sparrow (*Passer domesticus*) and rock pigeon (*Columba livia*), and birds native to the area, including American robin (*Turdus migratorius*), house finch (*Haemorhous mexicanus*), dark-eyed junco (*Junco hyemalis*), California scrub jay (*Aphelocoma californica*), mourning dove (*Zenaida macroura*), and Anna's hummingbird (*Calypte anna*). Merlins (*Falco columbarius*) can be observed perching in tall urban or neighborhood trees or flying through urban areas in the San Francisco Bay Area in winter. When present, reptiles and small mammals using this type of habitat often include western fence lizard (*Sceloporus occidentalis*) and northern alligator lizard (*Elgaria multicarinata*), and house mouse (*Mus musculus*).

California Annual Grassland

Within the study area, California annual grassland is present at the eastern portion of the Deer Hill Corridor Planning Area north of Deer Creek Road.

The California annual grassland community, also known as non-native grassland, is typically composed of a dense cover of introduced annual grasses and ruderal (weedy) forbs (broad-leaved plants) adapted to colonizing and persisting in disturbed upland habitats. Non-native grasses typical of this vegetative community include barley (*Hordeum vulgare*), soft chess (*Bromus hordeaceus*), foxtail barley (*Hordeum murinum* ssp. *leporinum*), red brome (*Bromus madritensis* ssp. *rubens*), medusahead (*Elymus caput-medusae*), and slender wild oat (*Avena barbata*) and an array of associated annual and perennial forbs.

This grassland community can provide cover, foraging, and nesting habitat for a variety of bird species, as well as reptiles and small mammals. Reptiles inhabiting this community may include western fence lizard, California alligator lizard, and Pacific gopher snake (*Pituophis catenifer catenifer*). Birds that may use California annual grassland include red-tailed hawk (*Buteo*

jamaicensis), American kestrel (*Falco sparverius*), barn swallow (*Hirundo rustica*), western meadowlark (*Sturnella neglecta*), and western bluebird (*Sialia mexicana*). Mammals common to annual grasslands include California ground squirrel (*Spermophilus beecheyi*), black-tailed jack rabbit (*Lepus californicus*), and Botta's pocket gopher (*Thomomys bottae*). Despite the association of non-native grasslands with fossorial mammals, no mammal burrows were observed at the site.

Riverine

Within the study areas, riverine habitat is present in the daylighted portions of two perennial streams¹, Lafayette Creek and Happy Valley Creek. Daylighted portions of Lafayette Creek occur within the Downtown Core, Downtown East End, and Dewing/Brook/Rosedale Planning Areas, and daylighted portions of Happy Valley Creek occur within the Deer Hill Corridor and Downtown Core Planning Areas.

Riverine communities are defined as intermittent or continually running waters, often referred to as rivers, streams or creeks. These streams originate at some elevated source, such as a lake or spring, and flow down slope. Streams are smaller and faster at their origin; velocity progressively decreases and water volume increases (due to contributions from tributaries) as the water moves to lower elevations. During this transition, water temperature and turbidity tend to increase, dissolved oxygen decreases, and the streambed gradually changes from rock and cobble to silt and mud.

Riverine communities provide habitat for benthic macro-invertebrates such as mayflies, caddisflies, alderflies and stoneflies, and the larva of true flies, where the stream is fast and well-oxygenated. These invertebrates in turn support native fish species. Pools support dragonflies, damselflies and water striders. In slower, warmer reaches of the stream, crustaceans, water boatmen, backswimmers and diving beetles thrive. Emergent vegetation grows along stream banks, and duckweed floats on the surface. Decaying matter on the muddy river bottom promotes the growth of plankton in sluggish waters.

Riparian Woodland

Within the study areas, mixed riparian woodland is present along daylighted portions of Lafayette Creek and Happy Valley Creek (see Riverine discussion for Planning Area locations).

Mixed riparian woodland consists of dense to sparse cover of primarily arroyo willow (*Salix lasiolepis*), valley oak (*Quercus lobata*), coast live oak (*Quercus agrifolia*), and California bay laurel (*Umbellularia californica*). Associated overstory species in this community include Oregon ash (*Fraxinus latifolia*), California buckeye (*Aesculus californica*), and California sycamore (*Platanus racemosa*). The understory in this riparian community is primarily composed of poison-oak (*Toxicodendron diversilobum*), mugwort (*Artemisia douglasiana*), Himalayan blackberry (*Rubus armeniacus*), and stinging nettle (*Urtica* sp.). This community type is also known as central coast riparian woodland or forest.

¹ A perennial stream or creek is defined as having flowing water year-round during a typical year with groundwater providing the primary source of water for stream flow and runoff from rainfall serving as a supplemental source of water. "Daylighted" refers to streams that have not been routed through underground culverts and channels and are open to the sky.

Riparian woodlands provide habitat for a variety of wildlife species that utilize the extensive vegetative cover and fresh water. Common mammals found in riparian corridors include raccoon, grey fox (*Urocyon cinereoargenteus*), and western harvest mouse (*Reithrodontomys megalotis*). Birds that use riparian habitats for nesting and foraging include northern flicker (*Colaptes auratus*), red-shouldered hawk (*Buteo lineatus*), song sparrow (*Melospiza melodia*), yellow warbler (*Setophaga petechia*), a California species of special concern, and Cooper's hawk (*Accipiter cooperii*).

Oak Woodland

Within the study areas, oak woodland is present south of Mount Diablo Boulevard in the DeSilva Sites Planning Area.

Oak woodland typically consists of one or more oak species (*Quercus* spp.) reaching 30 to 50 feet in height. Where these woodland canopies form a dense canopy, the understory is often restricted to a few poison oak or fern plants; the total understory cover in such circumstances may drop to less than one percent.

Oak woodland provides wildlife habitat to a number of species. Bird species common to oak woodland include oak titmouse (*Baeolophus inornatus*), acorn woodpecker (*Melanerpes formicivorus*), chestnut-backed chickadee (*Poecile rufescens*), western screech owl (*Otus kennicottii*) and California quail (*Callipepla californica*). Amphibians such as California slender salamander (*Batrachoseps attenuatus*) and arboreal salamander (*Aneides lugubris*) are known to use coastal oak woodlands. Reptiles that use this habitat include Pacific gopher snake, common kingsnake (*Lampropeltis getulus*) and northern alligator lizard. Mammalian species typical of oak woodlands include pallid bat (*Antrozous pallidus*), California ground squirrel, brush rabbit (*Sylvilagus bachmani*), Columbian black-tailed deer (*Odocoileus hemionus* ssp. *columbianus*), and mountain lion (*Felis concolor*).

Special-Status and Protected Species

The term *special-status species* refers to plant and wildlife species that are considered sufficiently rare that they require special consideration and/or protection and should be, or currently are, listed as rare, threatened, or endangered by the federal and/or state governments. Such species are legally protected under the federal and/or state Endangered Species Acts or other regulations or are species that are considered sufficiently rare by the regulatory and scientific community to qualify for protection. The term *special-status species* includes the following:

- Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA) (Code of Federal Regulations Title 50, Section 17.12 [listed plants] and Section 17.11 [listed animals] and various notices in the *Federal Register* [FR] [proposed species]);
- Species that are candidates for possible future listing as threatened or endangered under the FESA (61 FR 40, February 28, 1996);

- Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (California Code of Regulations Title 14, Section 670.5);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code [CFGF] Section 1900 et seq.);
- Species formerly designated by CDFW as California Species of Special Concern (SSC);²
- Animals fully protected under the CFGF (Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);³
- Species that meet the definitions of rare and endangered under CEQA. CEQA Section 15380 provides that a plant or animal species may be treated as “rare or endangered” even if not on one of the official lists (CEQA Guidelines Section 15380); and
- Plants considered by CDFW and the California Native Plant Society (CNPS) to be “rare, threatened or endangered in California” (California Rare Plant Rank 1A, 1B, and 2).

A list of special-status plant and wildlife species that may occur in the HEU study area was created by reviewing the resources cited in Section 4.3.1. The CNDDDB (CDFW, 2021) and CNPS (2021) Rare Plant Inventory were queried based on a search of the Benicia, Walnut Creek, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, and Diablo 7.5-minute U.S. Geological Survey quadrangles. The USFWS *Official List of Federal Endangered and Threatened Species that Occur in or May Be Affected by the Projects* (USFWS 2021a) was queried based on the project area (refer to **Appendix C** of this EIR, *Plant and Wildlife Species Lists for the Project Area*, for database reports). No critical habitat occurs within the study areas, although critical habitat for the Alameda whipsnake (*Masticophis lateralis euryxanthus*) is present north of Lafayette (USFWS, 2021b). The results of these queries formed the basis for analysis of special-status species with the potential to occur in the local vicinity, their general habitat requirements, and their potential to occur in the study areas. Based on this analysis and available habitat in the HEU study area, special-status plant species that have at least a moderate potential to occur in the HEU study area include bent-flowered fiddleneck (*Amsinckia lunaris*), Mount Diablo fairy lantern (*Calochortus pulchellus*), and Diablo Helianthella (*Helianthella castanea*). Special-status wildlife species that have a moderate to high potential to occur in the study area include Cooper’s hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), and hoary bat (*Lasiurus cinereus*) (**Table 4.3-1**).

² A California SSC is one that: has been extirpated from the state; meets the state definition of threatened or endangered but has not been formally listed; is undergoing or has experienced serious population declines or range restrictions that put it at risk of becoming threatened or endangered; and/or has naturally small populations susceptible to high risk from any factor that could lead to declines that would qualify it for threatened or endangered status.

³ The *fully protected* classification was California’s initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. The designation can be found in the CFGF.

**TABLE 4.3-1
SPECIAL-STATUS SPECIES WITH A MODERATE OR HIGH POTENTIAL TO OCCUR IN THE PROJECT STUDY AREAS**

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	Habitat Description	Potential to Occur in the Study Area for the HEU with Distributed Sites	Potential to Occur in the Study Area for the Downtown-Only Alternative
Plants				
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--/--/1B.2	Gravelly slopes, grassland, openings in woodland, often serpentine. (5)50 – 800 meters Blooms Mar-Jun	Moderate. Suitable habitat present within two grassland habitat areas – one east and south of Brown Avenue and the other east of Elizabeth Street – within the Deer Hill Corridor, and in the oak woodland habitat within DeSilva Sites Planning Area.	Not expected. No suitable habitat.
Mount Diablo fairy lantern <i>Calochortus pulchellus</i>	--/--/1B.2	Wooded slopes, rarely chaparral, generally northern aspect. 200 – 800 meters Blooms Apr-Jun	Moderate. Suitable habitat present within two grassland habitat areas – one east and south of Brown Avenue and the other east of Elizabeth Street – within the Deer Hill Corridor, and in the oak woodland habitat within DeSilva Sites Planning Area.	Not expected. No suitable habitat.
Diablo helianthella <i>Helianthella castanea</i>	--/--/1B.2	Open, grassy sites. 200 - 1300 meters Blooms Apr-Jun	Moderate. Suitable habitat present within two grassland habitat areas – one east and south of Brown Avenue and the other east of Elizabeth Street – within the Deer Hill Corridor, and in the oak woodland habitat within DeSilva Sites Planning Area.	Not expected. No suitable habitat.
Birds				
Cooper's hawk <i>Accipiter cooperii</i>	--/WL, §3503.5 /--	Nests in riparian areas and oak woodlands, and hunts songbirds at woodland edges. Increasingly common in neighborhood trees; tolerates human disturbance.	High. Suitable nesting habitat is present in riparian woodland, oak woodland, and neighborhood trees. No CNDDDB occurrences within 3 miles of the study area.	High. Suitable nesting habitat is present in riparian woodland and neighborhood trees. No CNDDDB occurrences within 3 miles of the study area.
Sharp-shinned hawk <i>Accipiter striatus</i>	--/WL, §3503.5 /--	Nests in dense groves of usually midsized conifers, in the tops of live oaks, and sometimes deciduous trees. Usually on hilltops or hillsides, near grasslands or chaparral, but typically not water. Hunts songbirds along edge habitat.	High. Suitable nesting habitat is present in oak woodland in the project study area. No CNDDDB occurrences within 3 miles of the study area.	Low. Marginally suitable habitat present in riparian woodland. No CNDDDB occurrences within 3 miles of the study area.
Mammals				
Pallid bat <i>Antrozous pallidus</i>	--/CSC/ WBWG: High	A wide variety of habitats is occupied, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. Roosts in buildings, caves, tree hollows, crevices, mines, and bridges.	Moderate. Suitable roosting habitat present in tree crevices and bridge joints in riparian corridor and tree crevices in oak woodland. CNDDDB occurrences from 50+ years ago approximately 2 miles west of the DeSilva Sites Planning Area and in the hills south of Sites 2 and 13.	Moderate. Suitable roosting habitat present in tree crevices and bridge joints in riparian corridor. CNDDDB occurrences from 1931 in the hills south of Sites 2 and 13.

TABLE 4.3-1 (CONTINUED)
SPECIAL-STATUS SPECIES WITH A MODERATE OR HIGH POTENTIAL TO OCCUR IN THE PROJECT STUDY AREAS

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	Habitat Description	Potential to Occur in the Study Area for the HEU with Distributed Sites	Potential to Occur in the Study Area for the Downtown-Only Alternative
Mammals (cont.)				
Western red bat <i>Lasiurus blossevillii</i>	--/CSC/ WBWG: High	Habitats include forests and woodlands from sea level up through mixed conifer forests. Feeds over a wide variety of habitats including grasslands, shrublands, open water, open woodlands and forests, and croplands. Solitary rooster in tree foliage. May hibernate in leaf litter.	Moderate. Suitable roosting habitat present in oak woodland in the DeSilva Sites Planning Area. No CNDDDB occurrences within 3 miles of the study area.	Low. Marginally suitable habitat present in woodland within the project study area. No CNDDDB occurrences within 3 miles of the study area.
Hoary bat <i>Lasiurus cinereus</i>	--/--/ WBWG: Medium	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for foraging. Roosts in dense foliage of medium to large trees. Feeds primarily on moths; requires water.	Moderate. Suitable roosting habitat present in the project study area. No CNDDDB occurrences within 3 miles of the study area.	Low. Marginally suitable habitat present in the project study area. No CNDDDB occurrences within 3 miles of the study area.
Yuma myotis <i>Myotis yumanensis</i>	--/--/ WBWG: Low- Medium	Wide variety of habitats below 8,000-foot elevation. Optimal habitats are open forests and woodland with sources of water over which to feed. Adult males typically solitary roosters. roost in buildings, under bridges, and in tree crevices, caves and mines.	Moderate. Suitable roosting habitat present in tree crevices bridge joints in riparian woodland and oak woodland. No CNDDDB occurrences within 3 miles of the study area.	Moderate. Suitable roosting habitat present in tree crevices bridge joints in riparian woodland. No CNDDDB occurrences within 3 miles of the study area.

NOTES:

^a Species that are not expected to occur because of the absence of suitable habitat, or because the study area is outside of the species' known range, were excluded from the table.

^b *Potential to Occur Categories:*

- No potential = The study area is outside of the species' known range or does not support suitable habitat for the species. Species identified as unlikely to occur are not addressed further in the habitat assessment.
- Low = The study area is within the known range of the species; however, the species is presumed to be extirpated from the study area or region or only marginally suitable habitat is present within the study area.
- Moderate = The study area is within the known range of the species and suitable habitat is present within the study area; but there are few or no recent documented occurrences of the species within an appropriate distance of the study area (this will depend on the species' mobility).
- High = The study area is within the known range of the species and suitable habitat is present within the study area, and there are recent documented occurrences of the species within an appropriate distance of the study area (this will depend on the species' mobility).

STATUS CODES:

State:

CSC = California Species of Special Concern

WL = Watch list

§3503.5 = Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls)

Other:

California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR):

1A = Presumed extirpated in California; Rare or extinct in other parts of its range.

1B = Rare, threatened, or endangered throughout range; Most species in this rank are endemic to California.

2A = Extirpated in California, but common in other parts of its range.

2B = Rare, threatened, or endangered in California but common in other parts of its range.

.1 = Seriously endangered in California

.2 = Fairly endangered in California

LS= Locally Significant Species

WBWG = Western Bat Working Group:

Low = Stable population

Medium = Need more information about the species, possible threats, and protective actions to implement.

High= Imperiled or at high risk of imperilment.

SOURCE: ESA

Sensitive Natural Communities

Sensitive natural communities are designated by various resource agencies such as CDFW, or in local policies and regulations; are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent or distribution; and are considered threatened enough to warrant some level of protection. CDFW tracks communities of conservation concern through its *California Sensitive Natural Community List* (CDFW, 2019). Natural communities with ranks of S1 to S3 are considered sensitive natural communities, to be addressed in the environmental review processes of CEQA and its equivalents.

There are several sensitive natural communities that include oak tree alliances with certain other oak species and, therefore, a Sensitive Natural Community could be present in the DeSilva Sites Planning Area. This is discussed further under Impact 4.3-2.

Critical Habitat

USFWS can designate critical habitat for species that have been listed as threatened or endangered. Critical habitat is defined in FESA Section 3(5)(A) as those lands (or waters) within a listed species' current range that contain the physical or biological features that are considered essential to its conservation. There is no critical habitat in the study areas (USFWS, 2021b).

4.3.3 Regulatory Setting

Federal

The FESA, MBTA, and Magnuson-Stevens Fishery Conservation and Management Act are the primary federal planning, treatment, and review mechanisms for biological resources in the study areas. Each is summarized below.

Endangered Species Act

USFWS and the National Marine Fisheries Service (NMFS) are the designated federal agencies responsible for administering the FESA. The FESA defines species as "endangered" and "threatened" and provides regulatory protection for any species thus designated. FESA Section 9 prohibits the "take" of species listed by USFWS as threatened or endangered. As defined in the FESA, *taking* means "... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." Recognizing that take cannot always be avoided, FESA Section 10(a) includes provisions for takings that are incidental to, but not the purpose of, otherwise lawful activities.

FESA Section 7(a)(2) requires all federal agencies, including USFWS, to evaluate projects authorized, funded, or carried out by federal agencies with respect to any species proposed for listing or already listed as endangered or threatened and the species' critical habitat, if any is proposed or designated. Federal agencies must undertake programs for the conservation of endangered and threatened species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."

As defined in the FESA, “individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding.” No federally listed species are expected in the study areas.

Migratory Bird Treaty Act

The MBTA is the domestic law that affirms and implements a commitment by the United States to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. Unless and except as permitted by regulations, the MBTA makes it unlawful at any time, by any means, or in any manner to intentionally pursue, hunt, take, capture, or kill migratory birds anywhere in the United States. The law also applies to the intentional disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Act of 1976 (U.S. Code Title 16, Sections 1801–1884 [16 USC 1804–1884]), as amended in 1996 and reauthorized in 2007, is intended to protect fisheries resources and fishing activities within 200 miles of shore. Conservation and management of U.S. fisheries, development of domestic fisheries, and phasing out of foreign fishing activities are the main objectives of the Magnuson-Stevens Act. The Magnuson-Stevens Act provided NMFS with legislative authority to regulate U.S. fisheries in the area between 3 and 200 miles offshore and established eight regional fishery management councils that manage the harvest of the fish and shellfish resources in these waters.

The Magnuson-Stevens Act defines essential fish habitat (EFH) as those waters and substrate that support fish spawning, breeding, feeding, or maturation. The Magnuson-Stevens Act requires that NMFS, the regional fishery management councils, and federal agencies taking an action that may affect managed fish species covered under the Magnuson-Stevens Act identify EFH and protect important marine and anadromous fish habitat.

The regional fishery management councils, with assistance from NMFS, are required to develop and implement Fishery Management Plans. These plans delineate EFH and management goals for all managed fish species, including some fish species that are not protected under the Magnuson-Stevens Act. Federal agency actions that fund, permit, or carry out activities that may adversely affect EFH are required under Magnuson-Stevens Act Section 305(b), in conjunction with required Section 7 consultation under FESA, to consult with NMFS regarding potential adverse effects of their actions on EFH and to respond in writing to NMFS’s recommendations.

The portions of the study areas in Lafayette Creek are designated as EFH for Chinook salmon (*Oncorhynchus tshawytscha*) as covered under the Pacific Coast Salmon Fishery Management Plan, which is designed to protect habitat for commercially important salmonid species (NOAA, 2021; PFMC, 2016). Chinook salmon may be seasonally present in the lower watershed, but no fish passage is available to allow this species to enter Lafayette Creek or Happy Valley Creek.

State

In addition to CEQA, the primary state planning, treatment, and review mechanisms for biological resources in the study areas are the CESA, CFGC Sections 1600–1603 and 3503, 3503.5, and 3511, and the National Pollutant Discharge Elimination System (NPDES) General Permit. Each is summarized below.

California Endangered Species Act

The CESA closely parallels the conditions of the FESA; however, it is administered by CDFW. CESA prohibits the take of plant and animal species that the California Fish and Game Commission has designated as either threatened or endangered in California. “Take” in the context of this regulation means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill a listed species (CFGC section 86). The take prohibitions also apply to candidates for listing under CESA. However, section 2081 of the act allows the department to issue permits for the minor and incidental take of species by an individual or permitted activity listed under the act. Unlike FESA, species that are candidates for state listing are granted the same protections as listed species under CESA.

In accordance with the requirements of CESA, an agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present in the study areas. The agency also must determine whether the project could have a potentially significant impact on such species. In addition, the department encourages informal consultation on any project that could affect a candidate species.

No state listed species are expected in the study areas.

California Fish and Game Code Sections 1600–1603

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife resources are subject to the regulatory authority of CDFW under CFGC Sections 1600–1603. Under the CFGC, a *stream* is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. Specifically, CFGC Section 1603 governs private-party individuals, and CFGC Section 1601 governs public projects.

CDFW jurisdiction in altered or artificial waterways is based on the value of those waterways to fish and wildlife. CDFW must be contacted by the public or private party for a streambed alteration agreement for any project that might substantially affect a streambed or wetland. CDFW has maintained a “no net loss” policy regarding potential impacts and has required replacement of lost habitats.

California Fish and Game Code Sections 3503, 3503.5, and 3513

The MBTA is the domestic law that affirms and implements a commitment by the United States to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a

shared migratory bird resource. Unless and except as permitted by regulations, the MBTA encompasses whole birds, parts of birds, and bird nests and eggs. The FESA defines take as "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered species." Harm may include significant habitat modification where it actually kills or injures a listed species through impairment of essential behavior (e.g., nesting or reproduction). This would include the protection of nests for all species that are on the List of Migratory Birds, most recently updated in the Federal Register (50 CFR section 10.13) in 2013.

National Pollutant Discharge Elimination System General Construction Permit for Stormwater Runoff

Depending on the specific development project, construction of the residences that could be constructed if the HEU is implemented could disturb more than 1 acre of land surface affecting the quality of stormwater discharges into waters of the United States, and would thus be subject to the NPDES *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002, as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The permit, commonly referred to as the Construction General Permit, regulates stormwater discharges from construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit regulates pollutants in stormwater (generated by construction activity) to waters of the United States from construction sites that disturb 1 acre or more of land surface, or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface. The permit requires that stormwater discharges and authorized non-stormwater discharges not contain pollutants that cause or contribute to an exceedance of any applicable water quality objective or water quality standards (identified in the water quality control plan, or basin plan).

The Construction General Permit requires that projects develop and implement a storm water pollution prevention plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater and non-stormwater and from moving off-site into receiving waters. The BMPs fall into several categories: erosion control, sediment control, waste management, and good housekeeping.

Routine inspection of all BMPs is required by the Construction General Permit. In addition, the SWPPP must contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the

current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to Biological Resources are listed below.

Open Space and Conservation Element

Goal OS-1: Preserve areas of visual prominence and special ecological significance as Open Space.

Policy OS-1.3: Conserve a Variety of Open Space Features. Protect areas of special ecological significance, including ridges, hillsides, woodlands, wildlife corridors, riparian areas, steep slopes, prominent knolls, swales, and rock outcroppings.

Policy OS-1.7: Open Space for Wildlife Corridors. Assure that adequate open space is provided to permit effective wildlife corridors for animal movement between open space areas, along watercourses, and on ridges.

Goal OS-3: Maintain the semi-rural character and beauty of the city by preserving its open and uncluttered natural topographic features.

Policy OS-3.1: Protect natural features of the lands. The character and natural features of hills, steep slopes, riparian areas, woodlands, and open areas will be preserved in as natural a condition as feasible.

Goal OS-4: Preserve areas with important biotic resources.

Policy OS-4.1: Riparian Vegetation. Preserve, protect, and restore riparian habitat, particularly the native, riparian woodland species and associated understory plants.

Policy OS-4.3: Woodlands. Preserve existing woodlands and their associated vegetation.

Policy OS-4.5: Biotic Resource Analysis. Require a biotic resource analysis prior to development of properties located within, or adjacent to, identified environmentally sensitive areas.⁴

Goal OS-5 Preserve and protect creeks, streams, and other watercourses in their natural state.

Policy OS-5.1: Stream bank stability. Protect stream bank stability.

Goal OS-6: Improve water quality in watercourses.

Policy OS-6.1: Reduce Watercourse Pollution. Minimize pollutants in storm water runoff.

Goal OS-7: Protect and preserve soil as a natural resource.

Policy OS 7.1: Control Soil Erosion. Control soil erosion to prevent flooding and landslides, maintain water quality, and reduce public costs of flood control and watercourse maintenance.

⁴ The general location of environmentally sensitive land, which includes riparian areas, wildlife corridors, steep hillsides, and major ridgelines, is indicated on Map III-1: Hillside Overlay Map of the Lafayette General Plan.

Policy OS-7.2: Reduce Soil Contamination. Reduce soil contamination from chemicals through careful regulation of the storage, transportation and use of chemicals.

Lafayette Downtown Specific Plan

The Lafayette Downtown Specific Plan aims to maintain and improve the character of downtown by promoting land uses and applying design principles that retain the downtown character; improving downtown traffic circulation; preserving downtown’s natural features, such as creeks and trees; planning for a series of interconnected downtown districts whose different physical characteristics and land uses complement each other; and establishing priorities and identifying funding sources for public improvements.

Trees

Goal 14: Preserve downtown trees.

Policy 14.1: Preserve significant and existing trees and require additional trees and landscaping materials which are water-conserving and suited to Lafayette’s climates.

Creeks

Goal 15: Protect and enhance downtown creeks.

Policy 15.1: Preserve the natural resource value of the creeks.

Policy 15.2: Preserve creeks as significant contributor to the downtown character.

City of Lafayette Tree Protection Ordinance

Municipal Code 6-17, Tree Protection, aims to protect existing woodland and their associated vegetation, protect native trees, preserve riparian habitat, encourage the planting of native species, and avoid cutting mature trees by protecting existing trees and requiring the replacement of trees that have been removed. Municipal Code 6-17 defines “protected trees” as meeting any of the following criteria:

1. The tree is located on a developed property and has a trunk diameter of 12 inches or more and is one of the following species: coast live oak (*Quercus agrifolia*), canyon oak (*Quercus chrysolepis*), blue oak (*Quercus douglasii*), white oak (*Quercus garryana*), black oak (*Quercus kelloggii*), valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*), California bay (*Umbellularia californica*), California buckeye (*Aesculus californica*), and madrone (*Arbutus menziesii*).
2. The tree is of any size or species and designated to be protected and preserved on an approved development application.
3. A native riparian tree with a trunk diameter of 6 inches or more or one component trunk of a multi-stemmed tree with a diameter of 4 inches or more that is one of the following species: bigleaf maple (*Acer macrophyllum*); boxelder (*Acer negundo*); white alder (*Alnus rhombifolia*); black walnut (*Juglans hindsii*); cottonwood (*Populus fremontii*); red willow (*Salix laevigata*); arroyo willow (*Salix lasiolepis*); coast live oak (*Quercus agrifolia*); valley oak (*Quercus lobata*); California bay (*Umbellularia californica*); California buckeye (*Aesculus californica*); blue elderberry (*Sambucus mexicana, aerulea, or glauca*).

4. Any species with a diameter of 6 inches or more located on undeveloped property.
5. A replacement tree planted as restitution for a violation of this chapter.
6. A native tree of any size or species within a restricted ridgeline area.
7. A tree of any size or species located within a public right-of-way or a private easement.
8. A tree of any size or species within a commercial zoning district.

Per the City's Tree Ordinance Section 1704 and 1707, Category II Tree Protection Permit from the City is required for removal of a protected tree on developed or undeveloped property associated with a development application. When removal or destruction of a protected tree is permitted, Ordinance Section 1707 requires tree replacement at a ratio of 2 replacement trees to 1 removed or destroyed tree for each 6 inches or its fraction of the diameter of the tree to be removed. The replacement tree must be the same genus and species as the removed or destroyed tree or can be an alternative species if approved by the Planning and Building Department's Director or the Director's designee.

Lafayette Municipal Code Ordinance No. 512, Article 5. Creek Setback Requirements

Article 5 of the Lafayette Municipal Code Ordinance No. 512 prohibits construction of buildings and structures within the creek setback area. No permanent structure other than fences and drainage and erosion protection improvements may be built within the setback area. Exceptions to the setback requirements may be approved if the property owner holds the City and other public agencies harmless. If a parcel is subject to subdivision easements or setback requirements under Contra Costa County Ordinance Code Sections 914-14.002 through 14.014, those subdivision requirements control. Development and other activities may also be subject to requirements from the Contra Costa County Flood Control District, California Department of Fish and Wildlife, Federal Emergency Management Administration, and/or US Army, Corps of Engineers.

4.3.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to Biological Resources are based on Appendix G of the *CEQA Guidelines*. Implementation of the HEU could have a significant impact on the environment if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;

- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Issues Not Discussed in Impacts

There are no adopted or approved local, regional, or state habitat conservation plans applicable to the HEU planning area; therefore, the following significance threshold does not apply to the HEU and is not discussed further:

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Methodology and Assumptions

The impact analysis is based on the resources, references, and data collection methods identified in Section 4.3.1, *Introduction*. The analysis addresses potential direct and indirect impacts from construction or operation of the residential projects that could be constructed if the HEU is implemented, defined as follows:

- *Direct impacts* are those that could occur at the same time and place as project implementation, such as the removal of habitat as a result of ground disturbance.
- *Indirect impacts* are those that could occur either at a later time or at a distance from the project areas, but that are reasonably foreseeable, such as the loss of an aquatic species as a result of upstream effects on water quality or quantity.

Direct and indirect impacts on biological resources may vary in duration; they may be temporary, short term, or long term.

The analysis considers the potential impacts of the HEU's implementation and the development of multi-family housing on suitable habitat, special-status species, sensitive natural communities, wetlands, and wildlife corridors, using the significance criteria listed above. Mitigation measures are identified, as necessary, to reduce impacts to less-than-significant levels.

Impacts and Mitigation Measures

Impacts

Impact 4.3-1: Implementation of the HEU would not have a substantial adverse effect, either directly, indirectly, or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS (nesting birds, special-status bats). (*Less than Significant Impact, with Mitigation*)

HEU with Distributed Sites

Portions of the study area include suitable habitat for the following species and are within the species' known range: bent-flowered fiddleneck, Mount Diablo fairy lantern, and Diablo helianthella, each of which has a CNPS California Rare Plant Rank of 1B.2 (rare, threatened, or endangered throughout the species' range); Cooper's hawk and sharp-shinned hawk, which are protected by CFGC 3503 and the MBTA; pallid bat and western red bat, both California Species of Special Concern; and hoary bat and Yuma myotis, which, as Western Bat Working Group "medium" species, meet the definition for rare and endangered species under CEQA (CDFW, 2021).

Rare Plant Species

Construction

Potential habitat for bent-flowered fiddleneck, Mount Diablo fairy lantern, and Diablo helianthella is present in two grassland habitat areas – one east and south of Brown Avenue and the other east of Elizabeth Street – within the Deer Hill Corridor Planning Area, and in the oak woodland habitat within DeSilva Sites Planning Area (Figure 3-5, Distributed Sites Alternative). Construction within these could result in direct temporary or permanent impacts to rare plant species, if present. If clearing and grubbing, ground disturbance, site access, or construction staging were to remove or otherwise damage individuals of these species, this would be a **potentially significant impact**.

Mitigation Measure 4.3-1a, Avoid and Minimize Impacts on Special-Status Plant Species would reduce construction-related impacts to less than significant.

Mitigation Measure 4.3-1a, Avoid and Minimize Impacts on Special-Status Plant Species.

To ensure protection of special-status plants, the following measures will be implemented.

- Prior to the start of construction in the DeSilva Sites Planning Area and two grassland habitat areas – one east and south of Brown Avenue and the other east of Elizabeth Street – within the Deer Hill Corridor Planning Area, including clearing and grubbing, and grading, a qualified biologist shall conduct a properly timed special-status plant survey for bent-flowered fiddleneck, Mount Diablo fairy lantern, and Diablo helianthella within the species' suitable habitat within the project work limits. The survey will follow the CDFW *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural*

Communities (CDFW, 2018). If special-status plant species occur within the project work limits, then the biologist will establish an adequate buffer area for each plant population to exclude activities that directly remove or alter the habitat of, or result in indirect adverse impacts on, the special-status plant species. A qualified biologist will oversee installation of a temporary, plastic mesh-type construction fence (Tensor Polygrid or equivalent) at least 4 feet (1.2 meters) tall around any established buffer areas to prevent encroachment by construction vehicles and personnel. The qualified biologist will determine the exact location of the fencing. The fencing will be strung tightly on posts set at maximum intervals of 10 feet (3 meters) and will be checked and maintained weekly until all construction is complete. The buffer zone established by the fencing will be marked by a sign stating:

- “This is habitat of [list rare plant(s)] and must not be disturbed. This species is protected by [the Endangered Species Act of 1973, as amended/CESA/California Native Plant Protection Act].”
- As required by the CDFW *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*, the qualified botanist shall determine the potential presence and distribution of sensitive natural communities.
- If direct impacts cannot be avoided, the City shall prepare a plan for minimizing the impacts by one or more of the following methods: 1) salvage and replant plants at the same location following construction; 2) salvage and relocate the plants to a suitable off-site location with long-term assurance of site protection; 3) collect seeds or other propagules for reintroduction at the site or elsewhere; or 4) payment of compensatory mitigation, e.g., to a mitigation bank.
- The success criterion for any seeded, planted, and/or relocated plants shall be full replacement at a 1:1 ratio after five years. Monitoring surveys of the seeded, planted, or transplanted individuals shall be conducted for a minimum of five years, to ensure that the success criterion can be achieved at year 5. If it appears the success criterion would not be met after five years, contingency measures may be applied. Such measures shall include, but not be limited to: additional seeding and planting; altering or implementing weed management activities; or, introducing or altering other management activities.
- Any special-status plant species observed during surveys will be reported to the USFWS and CDFW and submitted to the CNDDDB.

Significance After Mitigation: Implementation of **Mitigation Measure 4.3-1a** would reduce construction-related impacts to special-status plants by conducting surveys to determine if special-status plants are present in the project area and, if so, demarcating their location so that they can be avoided; establishing a plan for minimizing direct impacts cannot be avoided, including replanting at the project area to compensate for temporary impacts, or requiring off-site relocation or compensatory mitigation for permanent impacts; establishing success criteria; and, monitoring replanting or relocation sites to assure success criteria are met. Therefore, implementation of this mitigation measure would reduce potential impacts on special-status plants to **less than significant with mitigation**.

Operations

No operational activities associated with the HEU with Distributed Sites are expected to impact special-status plants since plant species are not directly impacted by development once construction has concluded; therefore, operational impacts would be **less than significant**.

Mitigation Measure: None required.

Nesting Birds

Construction

Construction within the HEU with Distributed Sites could result in direct or indirect impacts to nesting birds protected by the MBTA, including but not limited to Cooper's hawk and sharp-shinned hawk. Direct impacts to nesting birds could result from the removal of trees and vegetation and/or demolition of buildings while an active bird nest is present. In addition, earth moving, operation of heavy equipment, and increased human presence could result in noise, vibration, and visual disturbance. These conditions could indirectly result in nest failure (disturbance, avoidance, or abandonment that leads to unsuccessful reproduction), or could cause flight behavior that would expose an adult or its young to predators. These activities could cause birds that have established a nest before the start of construction to change their behavior or even abandon an active nest, putting their eggs and nestlings at risk for mortality.

Generally, nest failure would be a violation of CFGC sections 3503–3513. Impacts during the non-breeding season generally are not considered significant, primarily because of the birds' mobility and ability to access other comparable foraging habitat in the region. However, impacts during the breeding season would be a **potentially significant impact**.

Mitigation Measure Mitigation Measure 4.3-1b, Avoid and Minimize Impacts on Nesting Birds would reduce construction-related impacts to less than significant.

Mitigation Measure 4.3-1b: Avoid and Minimize Impacts on Nesting Birds.

Adequate measures shall be taken to avoid inadvertent take of raptor nests and other nesting birds protected under the Migratory Bird Treaty Act when in active use. This shall be accomplished by taking the following steps.

- a) If construction is proposed within 500 feet of areas of well-developed riparian or oak woodlands during the nesting season (February 15 to August 31), a pre-construction survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 7 days prior to the onset of vegetation removal or construction, to identify any active nests on the project site and in the vicinity of proposed construction. Surveys shall be performed for the project area, vehicle and equipment staging areas, and suitable habitat within 250 feet to locate any active passerine (e.g., songbird) nests and within 500 feet to locate any active raptor (bird of prey) nests.
- b) If no active nests are identified during the survey period, or if development is initiated during the non-breeding season (September 1 to February 14), construction may proceed with no restrictions.
- c) If bird nests are found, an adequate no-disturbance buffer shall be established around the nest location and construction activities restricted within the buffer until the

qualified biologist has confirmed that any young birds have fledged and are able to leave the construction area. Required setback distances for the no-disturbance zone shall be established by the qualified biologist and may vary depending on species, line-of-sight between the nest and the construction activity, and the birds' sensitivity to disturbance. As necessary, the no-disturbance zone shall be fenced with temporary orange construction fencing if construction is to be initiated on the remainder of the development site.

- d) Any birds that begin nesting within the project area and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and no work exclusion zones shall be established around active nests in these cases; however, should birds nesting nearby being to show disturbance associated with construction activities, no-disturbance buffers shall be established as determined by the qualified wildlife biologist.
- e) Any work that must occur within established no-disturbance buffers around active nests shall be monitored by a qualified biologist. If adverse effects in response to project work within the buffer are observed and could compromise the nest's success, work within the no-disturbance buffer shall halt until the nest occupants have fledged.
- f) A report of findings shall be prepared by the qualified biologist and submitted to the City for review and approval prior to initiation of construction within the no-disturbance zone during the nesting season. The report shall either confirm absence of any active nests or shall confirm that any young within a designated no-disturbance zone and construction can proceed.

Significance After Mitigation: Implementation of **Mitigation Measure 4.3-1b** would reduce construction-related impacts by limiting construction to the non-nesting season when feasible or, if avoiding the nesting season is not feasible, conducting pre-construction surveys for nesting birds and establishing no-disturbance buffers around any active nests until birds have fledged and are able to leave the construction area; and reporting findings to the City prior to initiation of construction. Therefore, implementation of this mitigation measure would reduce potential impacts on nesting birds to **less than significant with mitigation**.

Operations

Operational activities associated with the HEU with Distributed Sites are unlikely to indirectly impact nesting birds due to the baseline level of human disturbance already occurring in and adjacent to the study area. Birds nesting in these areas are assumed to be habituated to such disturbance, and therefore, the impacts of human disturbance would be **less than significant**.

Mitigation Measure: None required.

Special-Status Roosting Bats

Construction

Project construction could result in impacts to roosting western red bat, pallid bat, Yuma myotis, and hoary bat, if present. Western red bat and pallid bat are CDFW species of special concern. All four species have the potential to roost in tree foliage or bark in riparian woodland and trees in parks within the HEU with Distributed Sites study area, which could result in impacts to bats

during daytime construction hours. Construction activities could result in direct impacts to roosting bats if they were disturbed, killed, or injured by removal or trimming of a tree in which they were roosting. If roosting bats are present, construction noise could result in indirect impacts due to disturbance, avoidance, or abandonment of roosts. If tree removal were to occur during periods of winter torpor or maternity roosting, any bats present would likely not survive the disturbance (Tuttle, 1991). This would be a potentially significant impact, but implementation of **Mitigation Measure Mitigation Measure 4.3-1c** would reduce construction-related impacts to less than significant.

Mitigation Measure 4.3-1c: Avoid and Minimize Impact on Roosting Bats.

A qualified biologist (as defined by CDFW⁵) who is experienced with bat surveying techniques (including auditory sampling methods), behavior, roosting habitat, and identification of local bat species shall be consulted prior to demolition or building relocation activities or tree work to conduct a pre-construction habitat assessment of the project area (focusing on buildings to be demolished or relocated) to characterize potential bat habitat and identify potentially active roost sites. No further action is required should the pre-construction habitat assessment not identify bat habitat or signs of potentially active bat roosts within the project area (e.g., guano, urine staining, dead bats, etc.).

The following measures shall be implemented should potential roosting habitat or potentially active bat roosts be identified during the habitat assessment in buildings to be demolished or relocated, or in trees adjacent to construction activities that could be trimmed or removed within the study area for the HEU with Distributed Sites:

- a) In areas identified as potential roosting habitat during the habitat assessment, initial building demolition, relocation, and any tree work (trimming or removal) shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15, to the extent feasible. These dates avoid the bat maternity roosting season and period of winter torpor.⁶
- b) Depending on temporal guidance as defined below, the qualified biologist shall conduct pre-construction surveys of potential bat roost sites identified during the initial habitat assessment no more than 14 days prior to building demolition or relocation, or any tree trimming or removal.
- c) If active bat roosts or evidence of roosting is identified during pre-construction surveys for building demolition and relocation or tree work, the qualified biologist shall determine, if possible, the type of roost and species. A no-disturbance buffer shall be established around roost sites until the qualified biologist determines they are no longer active. The size of the no-disturbance buffer would be determined by the qualified biologist and would depend on the species present, roost type, existing screening around the roost site (such as dense vegetation or a building), as well as the type of construction activity that would occur around the roost site.

⁵ CDFW defines credentials of a qualified biologist within permits or authorizations issued for a project. Typical qualifications include a minimum of four years of academic training leading to a degree and a minimum of 2 years of experience conducting surveys for each species that may be present within the project area.

⁶ Torpor refers to a state of decreased physiological activity with reduced body temperature and metabolic rate.

- d) If special-status bat species or maternity or hibernation roosts are detected during these surveys, appropriate species- and roost-specific avoidance and protection measures shall be developed by the qualified biologist in coordination with CDFW. Such measures may include postponing the removal of buildings or structures, establishing exclusionary work buffers while the roost is active (e.g., 100-foot no-disturbance buffer), or other compensatory mitigation.
- e) The qualified biologist shall be present during building demolition, relocation, or tree work if potential bat roosting habitat or active bat roosts are present. Buildings and trees with active roosts shall be disturbed only under clear weather conditions when precipitation is not forecast for three days and when daytime temperatures are at least 50 degrees Fahrenheit.
- f) The demolition or relocation of buildings containing or suspected to contain bat roosting habitat or active bat roosts shall be done under the supervision of the qualified biologist. When appropriate, buildings shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost, likely in the evening and after bats have emerged from the roost to forage. Under no circumstances shall active maternity roosts be disturbed until the roost disbands at the completion of the maternity roosting season or otherwise becomes inactive, as determined by the qualified biologist.
- g) Trimming or removal of existing trees with potential bat roosting habitat or active (non-maternity or hibernation) bat roost sites shall follow a two-step removal process (which shall occur during the time of year when bats are active, according to a) above and, depending on the type of roost and species present, according to c) above).
 - 1) On the first day and under supervision of the qualified biologist, tree branches and limbs not containing cavities or fissures in which bats could roost shall be cut using chainsaws.
 - 2) On the following day and under the supervision of the qualified biologist, the remainder of the tree may be trimmed or removed, either using chainsaws or other equipment (e.g., excavator or backhoe).
 - 3) All felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape, or be inspected once felled by the qualified biologist to ensure no bats remain within the tree and/or branches.

Significance After Mitigation: Implementation of **Mitigation Measure 4.3-1c** would reduce construction-related impacts by requiring pre-construction surveys to identify active bat roosts; establishment of protective buffers until roosts are no longer in use; and, limiting the removal of trees or structures with potential bat roosting habitat to the time of year when bats are active to avoid disturbing bats during the maternity roosting season or months of winter torpor. Therefore, implementation of this mitigation measure would reduce potential impacts on roosting bats to **less than significant with mitigation**.

Operations

Operational activities associated with the HEU with Distributed Sites are unlikely to indirectly impact roosting bats due to the baseline level of human disturbance already occurring in or adjacent to roadways, riparian corridors, and public parks. Bats roosting in these areas are

assumed to be habituated to such disturbance, and therefore, operational impacts would be **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

The study area within the Downtown-Only Alternative includes suitable habitat for the following species and is within the species' known range: Cooper's hawk, pallid bat, western red bat, hoary bat, and Yuma myotis.

Construction

To ensure that impacts are avoided and minimized to the maximum extent practical, the project applicant would be required to implement **Mitigation Measures 4.3-1b** and **4.3-1c**, described above under the HEU with Distributed Sites.

Mitigation Measures 4.3-1b and 4.3-1c: see above.

Significance After Mitigation: Implementation of **Mitigation Measure 4.3-1b** would reduce construction-related impacts to nesting birds by limiting construction to the non-nesting season when feasible or, if avoiding the nesting season is not feasible, conducting pre-construction surveys for nesting birds and establishing no-disturbance buffers around any active nests until birds have fledged and are able to leave the construction area; and reporting findings to the City prior to initiation of construction. Implementation of **Mitigation Measure 4.3-1c** would reduce construction-related impacts to special-status roosting bats requiring pre-construction surveys to identify active bat roosts; establishment of protective buffers until roosts are no longer in use; and, limiting the removal of trees or structures with potential bat roosting habitat to the time of year when bats are active to avoid disturbing bats during the maternity roosting season or months of winter torpor. Therefore, implementation of this mitigation measure would reduce potential impacts on roosting bats to **less than significant with mitigation**.

Operations

Similar to the HEU with Distributed Sites, operational activities associated with the Downtown-Only Alternative are unlikely to indirectly impact nesting birds or roosting bats due to the baseline level of human disturbance already occurring in and adjacent to the study area. Nesting birds and roosting in these areas are assumed to be habituated to such disturbance, and therefore, the operational impact would be **less than significant**.

Mitigation Measure: None required.

Impact 4.3-2: Implementation of the HEU would not have a substantial adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS. (*Less than Significant Impact, with Mitigation*)

HEU with Distributed Sites

The study area for the HEU with Distributed Sites is not within critical habitat for any federally threatened or endangered species (USFWS, 2021b). However, riparian habitat is present, and the oak woodland habitat within the DeSilva Sites Planning Area (also known as Planning Area 9) is conservatively considered a CDFW sensitive natural community.

Riparian Habitat

Approximately 0.85 mile of Lafayette Creek and 300 feet Happy Valley Creek are daylighted and support riparian habitat within the HEU with Distributed Sites study area. This section of Happy Valley Creek is already flanked by recently built multi-family housing developments and is not expected to be the site of a future housing project. The eastern 0.4 miles of Lafayette Creek in the study area is on the southern edge of Downtown East End (south; Planning Area 6) so no construction would occur on the south side of the creek. The western 0.45 miles of Lafayette Creek cuts through the Dewing/Brooks/Rosedale Planning Area (Planning Area 13) and construction could potentially occur on either side of the creek.

Construction

Riparian Vegetation and Creeks. Riparian habitat occurs in the study area for the HEU with Distributed Sites along Lafayette Creek and Happy Valley Creek. Construction of any new housing units would occur outside of the City’s established creek setbacks and, therefore, have no direct impacts to riparian vegetation or creek habitat. However, project construction could temporarily damage riparian vegetation if heavy equipment or workers were to inadvertently enter the riparian corridor or stage materials there. These would be **potentially significant impacts**.

In addition, implementation of the HEU could indirectly impact riparian habitat if equipment leaks, refueling, or improper storage or containment caused harmful material (e.g., concrete truck washout, sediment) to enter Lafayette Creek or Happy Valley creek, especially during the rainy season. As described in the regulatory setting, construction projects that disturb one or more acres of ground disturbance, or less than one acre but would be part of a larger plan of development or sale, would be required to obtain coverage under the NPDES Construction General Permit. Preparation of a Stormwater Pollution Prevention Plan (SWPPP), along with implementation during construction, is required to comply with the NDPEs Construction General Permit. Title 5, Chapter 5-4 of the Lafayette Municipal Code contains established measures to prevent and reduce stormwater pollution such as development runoff requirements including performance standards to address construction and post-construction impacts to water quality. Consistent with General Plan Policy OS-6.1, these standards are needed to minimize pollutants in storm water runoff and protect watercourses.

With adherence to these standards and NPDES Construction General Permit requirements along with implementation of measures described in the SWPPP, development under either project alternative would not generate water quality violations.

Operations

No operational activities associated with the HEU with Distributed Sites are expected to impact riparian habitat since any housing units built in the vicinity of riparian habitat would conform to the City of Lafayette creek setback requirements and would be built in an area that is already largely developed. Although the density of housing could increase the number of people living in proximity to riparian habitat, the level of human disturbance would be comparable to current levels; therefore, operational impacts would be a **less than significant**.

CDFW Sensitive Natural Community

Construction

Described under Section 4.3.2, the oak woodland within the DeSilva Sites Planning Area under the HEU with Distributed Sites alternative is conservatively considered a CDFW Sensitive Natural Community herein, even though the species of oaks at the site are not known.

Construction of housing units within the DeSilva Sites Planning Area would require clearing and grubbing, tree removal, and grading in preparation for construction. These construction activities would result in permanent and, possibly, temporary impacts to the current habitat. If this habitat were a CDFW Sensitive Natural Community, these impacts would be **potentially significant**.

To reduce the potentially significant impact on sensitive natural communities, Applicable projects associated with the HEU's implementation would implement the following mitigation measure, in which a botanist would determine whether a sensitive natural community is present in the study area as part of the protocol rare plant survey described in the following measure, as prescribed previously under Impact 4.3-1:

- **Mitigation Measure 4.3-1a, Avoid and Mitigate Impacts on Special-status Plants**

In addition to implementation of the above measure, **Mitigation Measure 4.3-2a, Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities** and **Mitigation Measure 4.3-2b, Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan** would reduce construction-related impacts to riparian habitat and sensitive natural communities, if present, to less than significant.

Mitigation Measure 4.3-2a: Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities.

Project development shall be avoided in or adjacent to riparian habitat whenever possible. For work occurring within 20 feet of riparian habitat or sensitive natural communities, these areas shall be clearly delineated with flagging by a qualified biologist. Riparian habitat and sensitive natural communities shall be separated and protected from the work area through silt fencing, amphibian-friendly fiber rolls (i.e., no monofilament), or other appropriate erosion control material. Material staging, and all other Project-related activity shall be located as far possible from riparian habitat and sensitive natural communities. If these areas cannot be avoided, any temporarily impacted areas shall be

restored to pre-construction conditions or better at the end of construction (see *Mitigation Measure 4.3-2b: Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan*).

Mitigation Measure 4.3-2b: Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan.

Where temporary construction impacts on riparian habitat or sensitive natural communities cannot be avoided, revegetation and restoration measures will be developed as part of a revegetation plan approved by CDFW, RWQCB, and if applicable, USACE, and City of Lafayette, pursuant to regulatory agency permitting. The revegetation plan will include specific plans for the revegetation and restoration of impacted riparian woodland. Upon approval by applicable agencies, the City of Lafayette shall develop and implement a Riparian Revegetation Plan. Revegetation measures will include the use of locally obtained plant materials, detailed descriptions of installation methods, after-installation care, weed control measures, success criteria, and corrective measures if the success criteria are not met. Temporarily impacted areas will be restored to pre-construction conditions with equivalent or greater habitat quality. Revegetation will include a 3:1 replacement ratio (or ratio otherwise specified by resource agency permits) of the acreage of riparian woodland lost and for all trees lost as result of the Project to account for the reduced habitat values of smaller trees compared with mature vegetation. Success criteria for replanting will be less than 20 percent mortality annually over a period of 5 years. Replanting will be conducted each year that plantings exceed 20 percent mortality, such that at least 80 percent-plant survival is maintained each year of the 5-year monitoring period. Cover provided by invasive, non-native plant species shall not exceed 5 percent during each year of the 5-year monitoring period. Mitigation for permanent impacts may occur via restoration, creation, or preservation of wetlands or waters. Mitigation will occur at a site acceptable to permitting agencies and pursuant to the Project's permit requirements. If the compensatory mitigation includes restoration, enhancement, or creation of riparian habitat or the sensitive natural community, a qualified biologist will monitor the mitigation site for a minimum of five years to ascertain if the mitigation is successful. Annual reports will be submitted to permitting agencies by December 31 of each monitoring year (or as otherwise specific in permits), describing the results of the monitoring and any remedial actions needed to achieve the specified habitat replacement ratio, or equivalent for permanent impacts on riparian vegetation or sensitive natural communities.

Significance After Mitigation: Implementation of **Mitigation Measures 4.3-1a, 4.3-2a and 4.3-2b** would reduce construction-related impacts by requiring pre-construction surveys to demarcate and avoid of riparian habitat and sensitive natural communities, if present; where avoidance is not possible, development of a Riparian and Sensitive Natural Community Revegetation Plan to guide restoration of temporarily impacted riparian habitat and sensitive natural communities to pre-construction conditions; restoration monitoring to ensure that success criteria are met; and mitigation for permanent impacts to riparian habitat or sensitive natural communities. Therefore, implementation of these mitigation measures would reduce potential impacts to **less than significant with mitigation**.

Operations

Operational activities associated with new housing are limited but could include increased human disturbance to sensitive natural communities due to establishment of bootleg trails connecting to

trails within the Lafayette Reservoir Recreational Area. New housing built in DeSilva Sites Planning Area in and of itself would not be expected to encourage bootleg trails since the site is currently accessible to the public and trails have presumably already been established. Therefore, operational impacts would be **less than significant**.

Downtown-Only Alternative

The study area within the Downtown-Only Alternative includes riparian habitat. Results from the reconnaissance survey suggest that there is no potential for sensitive natural communities in the Downtown-Only Alternative.

Construction

To ensure that impacts to riparian areas are avoided and minimized to the maximum extent practical, the project applicant would be required to implement **Mitigation Measures 4.3-2a and 4.3-2b**, described above under the HEU with Distributed Sites alternative.

Mitigation Measures 4.3-2a and 4.3-2b: See Impact 4.3-2 above.

Significance After Mitigation: Implementation of **Mitigation Measures 4.3-2a and 4.3-2b** would reduce construction-related impacts to riparian habitat by requiring pre-construction surveys to demarcate and avoid of riparian habitat; where avoidance is not possible, development of a Riparian Habitat Revegetation Plan to guide restoration of temporarily impacted riparian habitat to pre-construction conditions; restoration monitoring to ensure that success criteria are met; and mitigation monitoring for permanent impacts to riparian habitat. Therefore, implementation of this mitigation measure would reduce potential impacts on riparian habitat to **less than significant with mitigation**.

Operations

Similar to the HEU with Distributed Sites alternative, operational activities associated with the Downtown-Only Alternative are unlikely to impact riparian habitat due to the baseline level of residential development and associated human disturbance already occurring in and adjacent to the study area. The impact from a relatively minor increase in human disturbance would be **less than significant**.

Mitigation Measure: None required.

Impact 4.3-3: Implementation of the HEU would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (Less than Significant Impact, with Mitigation)

Under CWA Section 404, the U.S. Army Corps of Engineers (USACE) regulates activities that result in the discharge of dredged or fill material into waters of the United States. Waters of the United States include wetlands as well as streams, rivers, lakes, reservoirs, ponds, bays, and oceans (33 CFR 328.3[e]). Wetlands are those areas that are inundated or saturated by surface or

ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328.3[b]). Wetlands, streams, reservoirs, sloughs, and ponds are typically under federal jurisdiction under Section 404 of the CWA and state jurisdiction under the Porter-Cologne Water Quality Control Act. Streams and ponds typically fall under state jurisdiction under Section 1602 of the California Fish and Game Code.

HEU with Distributed Sites

Construction

Jurisdictional waters in the study area include Lafayette Creek and Happy Valley Creek, potential impacts to which are addressed above under Impact 4.3-2. As discussed there, construction impacts to riparian habitat would be reduced to less than significant via implementation of **Mitigation Measures 4.3-2a and 4.3-2b**.

Mitigation Measures 4.3-2a and 4.3-2b: See Impact 4.3-2 above.

Significance After Mitigation: Implementation of **Mitigation Measures 4.3-2a and 4.3-2b** would reduce construction-related impacts by requiring pre-construction surveys to demarcate and avoid of riparian habitat and sensitive natural communities, if present; where avoidance is not possible, development of a Riparian and Sensitive Natural Community Revegetation Plan to guide restoration of temporarily impacted riparian habitat and sensitive natural communities to pre-construction conditions; restoration monitoring to ensure that success criteria are met; and mitigation for permanent impacts to riparian habitat or sensitive natural communities.

Operations

No operational activities associated with the HEU with Distributed Sites alternative are expected to impact jurisdictional waters (i.e., riparian habitat) because any housing units built in the vicinity of riparian habitat would conform to the City of Lafayette creek setback requirements and would be built in an area that is already largely developed. Although the density of housing could increase the number of people living in proximity to riparian habitat, the level of human disturbance would be comparable to current levels; therefore, operational impacts would be a **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

Construction

Jurisdictional waters on within the Downtown-Only Alternative study area include streams, potential impacts to which are addressed above under Impact 4.3-2. As discussed there, construction impacts to riparian habitat would be reduced to less than significant via implementation of **Mitigation Measures 4.3-2a and 4.3-2b**.

Mitigation Measures 4.3-2a and 4.3-2b: See Impact 4.3-2 above.

Operations

No operational activities associated with the Downtown-Only Alternative will impact jurisdictional waters because any housing units built adjacent to riparian habitat would be built in an area that is currently developed and includes a high level of baseline human disturbance. Although the density of housing could increase the number of people living in proximity to riparian habitat, the level of human disturbance would be comparable to current levels; therefore, operational impacts would be a **less than significant**.

Mitigation Measure: None required.

Impact 4.3-4: Implementation of the HEU would not interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. (*Less than Significant*)

HEU with Distributed Sites

Native Wildlife Nursery Sites. Native wildlife nursery sites in the study area would primarily include sites that house communally roosting birds and bats, or individual nesting birds and roosting bats. Potential construction- and operations-related impacts and mitigation measures on individual nesting birds and bats and communally roosting bats are discussed above under Impact 4.3-1. Birds such as herons and egrets that nest in groups, and whose communal nesting sites are referred to as rookeries, are not documented to nest in the study area (CDFW, 2021) and are not expected. Project impacts on native wildlife nursery sites within the HEU with Distributed Sites would be **less than significant**.

Native Wildlife Movement Corridors. Riparian habitat provides movement corridors for native mammals such as Columbian black-tailed deer, raccoon, and western gray squirrel (*Sciurus griseus*). Riparian habitat also provides corridors for bird dispersal, as well as breeding grounds and overwintering and migration stopover sites (RHJV, 2004). Special-status roosting bats may also use riparian habitat as feeding and dispersal corridors. While the study area may occasionally be used by such species, the study area is not a migratory movement corridor for large animals such as deer and bobcat; and would not inhibit access by these species within riparian corridors.

The HEU with Distributed Sites encompasses portions of Lafayette Creek and Happy Valley Creek. Daylighted sections of these creeks have mature riparian canopies that could provide cover and forage for urban-adapted wildlife species. However, these urban riparian corridors are adjacent to existing development, including residential and commercial buildings, city parks, well-used pedestrian paths, and wildlife using these corridors are assumed to be habituated to a moderate to high level of baseline noise and human activity. In addition, some reaches flow through culverts and open concrete channels, which limit their utility as wildlife corridors. No anadromous fish species are present in the portion of the watershed within the study area for the HEU with Distributed Sites or the Downtown-Only Alternative due to downstream obstacles to fish passage. Non-migratory rainbow trout may be present. Riparian corridors, even those in an urban setting, offer natural

cover, food, water, and nest sites for a variety of common birds and mammals, and riparian vegetation maintains temperatures for terrestrial and aquatic habitats. Although wildlife in riparian corridors within the HEU with Distributed Sites study area is habituated to a certain level of light and noise, construction-related increases in artificial night lighting and noise or a change in adjacent uses could impact wildlife in the riparian corridor by disrupting their circadian rhythms,⁷ increasing stress, or masking natural sounds. These changes to baseline conditions could cause animals to temporarily avoid lighted or noisy areas that previously provided suitable resting, dispersal, or feeding habitat, or could cause them to miss auditory cues about predators and/or prey.

Because of the existing high density of residential development adjacent to the Lafayette Creek riparian corridor in the HEU with Distributed Sites study area, most, if not all, construction activity in the vicinity of the riparian corridor would be conducted during daylight hours (7 a.m. to 7 p.m.). If construction were to occur outside of daylight hours, increases in artificial night lighting during construction could temporarily impact wildlife using limited sections of the riparian corridor at night; however, wildlife could continue to use the remainder of the riparian corridor during the construction period. This impact would be **less than significant**.

During building construction, noise would be generated by construction crews, haul trucks, and heavy equipment accessing the construction site via existing primary roadways, and by the operation of construction equipment such as pile drivers, compactors, excavators, concrete trucks, and other heavy equipment. As described in Section 4.11, *Noise and Vibration*, this equipment typically generates noise levels of 80 to 85 decibels (dBA) 50 feet from the noise source. This would be a noticeable but temporary increase in baseline noise levels (excluding construction projects) in residential and commercial areas of Lafayette, which are limited from about 50 to 60 dBA during daytime hours (City of Lafayette, 2021). Similar to nighttime lighting, construction noise could temporarily impact wildlife using limited sections of the riparian corridor; however, wildlife could continue to use the remainder of the riparian corridor during the construction period. This impact would be a **less than significant**.

Mitigation Measure: None required.

Operations

Potential operations-related impacts on riparian habitat, which could impact the utility of riparian habitat as a wildlife corridor, are addressed under Impact 4.3-2. Operational activities associated with the HEU with Distributed Sites alternative are expected to have little to no impact on riparian habitat because any housing units built adjacent to riparian habitat would be similar to the residential development already present, and the impacts would therefore be similar to what is already occurring. Although the density of housing could slightly increase the number of people living in proximity to riparian habitat, the increased human disturbance would be minimal compared to current levels; therefore, operational impacts on riparian wildlife corridors would be **less than significant**.

⁷ A *circadian rhythm* is a natural, internal process that regulates the sleep-wake cycle in animals over an approximately 24-hour period. These rhythms can become altered by external cues such as light.

Downtown-Only Alternative

Construction

Similar to the HEU with Distributed Sites alternative, project construction associated with the Downtown-Only Alternative would have a **less than significant impact** on native wildlife nursery sites and native wildlife movement corridors.

Mitigation Measure: None required.

Operations

Similar to the HEU with Distributed Sites alternative, operational activities associated with the Downtown-Only Alternative are unlikely to indirectly impact riparian habitat due to the baseline level of residential development and associated human disturbance already present in and adjacent to the study area. The relatively small impact, if any, from human disturbance would be **less than significant**.

Mitigation Measure: None required.

Impact 4.3-5: Implementation of the HEU would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant)

The local policies relevant to the biological resources present, or with potential to occur, in the study area include the City of Lafayette General Plan, Lafayette Downtown Specific Plan, and the City of Lafayette Tree Protection Ordinance. These policies, summarized in detail in Section 4.3.3, *Regulatory Framework*, are analyzed for project consistency below.

HEU with Distributed Sites

City of Lafayette General Plan

The HEU is consistent with the goals and policies of the Open Space and Conservation Element to preserve and protect biotic resources, such as woodlands and riparian habitat. The HEU with Distributed Sites alternative is primarily composed of currently developed planning areas, thereby limiting potential impacts on areas of special ecological significance, such as ridges, hillsides, woodlands, wildlife corridors, riparian areas, steep slopes, prominent knolls, swales, and rock outcroppings.

Lafayette Creek extends approximately 0.85 miles through the HEU study area and supports a mature riparian woodland. Under Impacts 4.3-2, the project is analyzed for potential impacts to riparian habitat and **Mitigation Measures 4.3-2a, Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities**, and **4.3-2b, Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan** avoid and minimize impacts to riparian corridors.

The DeSilva Sites Planning Area supports oak woodland, which could have special ecological significance if it is a CDFW sensitive natural community or harbors rare plants. Under

Impacts 4.3-1 and 4.3-2, the project was analyzed for potential impacts to these biotic resources and **Mitigation Measure 4.3-1a, Avoid and Minimize Impacts on Rare Plants and Mitigation Measure 4.3-2a, Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities and 4.3-2b, Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan** avoid and minimize impacts to these resources.

Lafayette Downtown Specific Plan

With implementation of the mitigation measures described under the General Plan discussion immediately above and compliance with the City's tree protection ordinance, the HEU is consistent with the Lafayette Downtown Specific Plan's aim to preserve downtown's natural features, such as creeks and trees.

City of Lafayette Tree Protection Ordinance

With approval of a Category II Tree Protection Permit and compliance with the protected tree replacement requirements outlined in Ordinance Section 1707, the project would not conflict with the City of Lafayette Tree Protection Ordinance, and **no impact** would occur.

City of Lafayette Creek Setback Requirements

With project compliance with the creek setbacks outlined in Article 5 of the Lafayette Municipal Code Ordinance, the project would not conflict with the City of Lafayette Creek Setback Requirements.

With compliance with the above policies and implementation of the mitigation measures presented above, construction and operations impacts would be **less than significant with mitigation**.

Mitigation Measure: 4.3-1a, 4.3-1b, 4.3-1c, 4.3-2a and 4.3-2b: See Impacts 4.3-1 and 4.3-2 above.

Downtown-Only Alternative

The Downtown-Only Alternative includes many of same sensitive biotic resources, protected trees, and riparian habitat that is discussed above under the HEU with Distributed Sites, with the exception of the oak woodland in the DeSilva Sites Planning Area.

With compliance with the above policies and implementation of the mitigation measures presented under the HEU with Distributed Sites, construction and operations impacts would be **less than significant with mitigation**.

Mitigation Measures 4.3-1a, 4.3-1b, 4.3-1c, 4.3-2a and 4.3-2b: See Impacts 4.3-1 and 4.3-2 above.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to biological resources could occur if the incremental impacts of the HEU combined with the incremental impacts of cumulative development identified in Section 4.0.3, *Cumulative Impacts*. The locations of the listed projects are shown in **Figure 4.0-1**.

As previously discussed, the project would have no impact on an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Accordingly, the project could not contribute to cumulative impacts related to this topic and is not discussed further.

Impact 4.3-C: Implementation of the HEU, in combination with past, present, and reasonably foreseeable future development would not result in a cumulatively significant impact related to biological resources. (*Less than Significant with Mitigation*)

Significant cumulative impacts related to biological resources could occur if the incremental impacts of the project combined with the incremental impacts of one or more of the cumulative projects would cause the project to have a cumulatively considerable impact on special-status species, wetlands, or other waters of the United States, or on other biological resources protected by federal, state, or local regulations or policies (based on the significance criteria and thresholds presented earlier). This analysis then considers whether the incremental contribution of the HEU's implementation to this cumulative impact would be considerable. Both conditions must apply for a project's cumulative effects to be significant.

The geographic scope of potential cumulative impacts on biological resources encompasses the HEU planning areas and biologically linked areas that share the Las Trampas Creek watershed and greater San Francisco Bay. Historic development in the region has already caused substantial adverse cumulative changes to biological resources in the study area. This includes the engineering of many portions of the Las Trampas Creek watershed to allow urban development over and around these waterways, and the loss of the riparian corridors and floodplains to urban encroachment.

HEU with Distributed Sites

Special-status Plant Species and Sensitive Natural Communities

Construction within the HEU with Distributed Sites could result in direct temporary or permanent impacts to special-status plant species or sensitive natural communities, if present, and if clearing and grubbing, ground disturbance, site access, or construction staging were to remove or otherwise damage individuals of these special-status plant species or the sensitive natural community.

The cumulative projects identified in Section 4.0 of this EIR, *Introduction to Environmental Analysis* (see **Table 4.0-1** and **Figure 4.0-1**) include 17 multi-family housing developments, ranging from five to 315 units. All but three of these projects have been built or are proposed to be built on parcels that would not support any of the three special-status plants species likely to

occur in and around Lafayette, nor a sensitive natural community, which would occur in open grassland or oak woodland, if present. The other two projects – Lafayette Park Terrace and Terraces of Lafayette – were built or are being proposed for parcels covered in California annual grassland and could support special-status plant species. These projects could potentially impact special-status plants species or a sensitive natural community, if present, due to clearing and grubbing, equipment access and staging, or ground disturbance during construction, which could damage individual plants. These cumulative projects would be required to comply with applicable regulatory requirements protecting biological resources and project-specific mitigation measures (where applicable) similar to those of the HEU.

The HEU, in combination with cumulative projects, could result in a significant cumulative impact on special-status plants and sensitive natural communities during construction. However, with implementation of **Mitigation Measure 4.3-1a, Avoid and Minimize Impacts on Special-Status Plants**, implementation of the HEU would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant.

Nesting Birds and Special-status Roosting Bats

Construction within the HEU with Distributed Sites could result in direct impacts on nesting birds and special-status roosting bats due to tree removal or trimming. Indirect construction-related impacts on nesting birds and roosting bats could include construction noise, vibration, and human activity near active bird nests and bat roosts during construction of multi-family residences.

The cumulative projects identified in Section 4.0 of this EIR include a number of multi-family housing developments, ranging from five to 315 units. All but three of these projects have been built or are proposed to be built on parcels that are already developed, although one of those projects, Woodbury Highlands, which is under construction, has resulted in the removal of trees. Of the three projects that are not on already developed parcels, only one, Towne Center III, was constructed adjacent to riparian habitat, and this reach of Happy Valley Creek now supports a mature native riparian canopy and understory. The other two projects – Lafayette Park Terrace and Terraces of Lafayette – were built or are being proposed for parcels covered in California annual grassland but are in the vicinity of mature tree stands. These projects could potentially indirectly impact nesting birds and roosting bats due to clearing and grubbing, and increased noise, vibration and/or visual disturbance during construction, which could cause nest/roost failure or abandonment. These cumulative projects would be required to comply with applicable regulatory requirements protecting biological resources, the City of Lafayette’s Tree Protection Ordinance, and project-specific mitigation measures (where applicable) similar to those of the HEU.

The HEU, in combination with cumulative projects, could result in a significant cumulative impact on nesting birds and roosting bats during construction. However, with implementation of **Mitigation Measures 4.3-1b, Avoid and Minimize Impacts on Nesting Birds and 4.3-1c, Avoid and Minimize Impacts on Roosting Bats**, implementation of the HEU would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant.

Riparian Habitat and Jurisdictional Waters

Construction within the HEU with Distributed Sites could result in direct impacts on riparian habitat (a category of jurisdictional waters) due to vegetation removal or trimming. Indirect construction-related impacts on riparian habitat could include equipment leaks, refueling, or improper storage or containment caused harmful material (e.g., concrete truck washout, sediment) to enter Lafayette Creek or Happy Valley creek, especially during the rainy season.

The cumulative projects identified in Section 4.0 of this EIR include 17 multi-family housing developments, ranging from five to 315 units. All but one of these projects have been built or are proposed to be built on parcels that are not in the vicinity of riparian habitat. The exception is Towne Center III, which was constructed along a reach of Happy Valley Creek that now supports a mature native riparian canopy and understory. This cumulative project would have been required to comply with applicable regulatory requirements protecting biological resources, the City of Lafayette's Tree Ordinance, the City of Lafayette's creek setback requirements, and project-specific mitigation measures (where applicable) similar to those identified for the HEU in this EIR.

The HEU, in combination with cumulative projects, could result in a significant cumulative impact on riparian habitat during construction. However, with implementation of **Mitigation Measures 4.3-2a, Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities and 4.3-2b, Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan**, the proposed project would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant.

Wildlife Corridors and Nursery Sites

Riparian habitat provides movement corridors for native mammals and birds, and nursery sites for colonial bird species. Potential construction-related impacts on nesting birds, inclusive of colonial roosters, is addressed under *Nesting Birds and Roosting Bats*. Potential construction-related impacts on riparian habitat, which could impact the utility of riparian habitat as a wildlife corridor, are addressed under *Riparian Habitat and Jurisdictional Waters*.

The cumulative projects identified in Section 4.0 of this EIR include 17 multi-family housing developments, ranging from five to 315 units. All but three of these projects have been built or are proposed to be built on parcels that are already developed. Of the three projects that are not on already developed parcels, only one, Towne Center III, was constructed adjacent to riparian habitat, and this reach of Happy Valley Creek now supports a mature native riparian canopy and understory. As stated above, this cumulative project would have been required to comply with applicable regulatory requirements protecting biological resources, the City of Lafayette's Tree Ordinance, the City of Lafayette's creek setback requirements, and project-specific mitigation measures (where applicable) similar to those of the HEU.

The HEU, in combination with cumulative projects, could result in a significant cumulative impact on wildlife corridors and native wildlife nursery sites during construction. However, with implementation of **Mitigation Measures 4.3-1b, Avoid and Minimize Impacts on Nesting Birds; 4.3-1c, Avoid and Minimize Impacts on Roosting Bats Mitigation Measures 4.3-2a;**

and **Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities and 4.3-2b, Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan**, the proposed Project would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant with mitigation.

Policies and Ordinances

The HEU with Distributed Sites alternative is primarily composed of currently developed planning areas, thereby limiting potential impacts on areas of special ecological significance, such as ridges, hillsides, woodlands, wildlife corridors, riparian areas, steep slopes, prominent knolls, swales, and rock outcroppings. Under the HEU with Distributed Sites, the HEU is consistent with the goals and policies under the Lafayette General Plan, the Lafayette Downtown Specific Plan, City of Lafayette Tree Protection Ordinance, and City of Lafayette creek setback requirements.

The cumulative projects identified in Section 4.0 of this EIR include 17 multi-family housing developments, ranging from five to 315 units. All but three of these projects have been built or are proposed to be built on parcels that are already developed, although one of those projects, Woodbury Highlands, which is under construction, has resulted in the removal of trees. Of the three projects that are not on already developed parcels, only one, Towne Center III, was constructed adjacent to riparian habitat, and this reach of Happy Valley Creek now supports a mature native riparian canopy and understory. The other two projects – Lafayette Park Terrace and Terraces of Lafayette – were built or are being proposed for parcels covered in California annual grassland but are in the vicinity of mature tree stands. These projects could potentially indirectly impact special-status plant species, sensitive natural communities, special-status wildlife, riparian habitat, or wildlife corridors due to clearing and grubbing, tree trimming or removal, the inadvertent entry or deleterious materials into creeks, or increased noise, vibration and/or visual disturbance during construction, which could cause nest/roost failure or abandonment. These cumulative projects would be required to comply with applicable regulatory requirements protecting biological resources, the City of Lafayette’s Tree Protection Ordinance, the City of Lafayette creek setback requirements, and project-specific mitigation measures (where applicable) similar to those of the HEU.

The HEU, in combination with cumulative projects, could result in a significant cumulative impact on policies and ordinances during construction. However, with implementation of **Mitigation Measure 4.3-1a, Avoid and Minimize Impacts on Special-Status Plants, Mitigation Measures 4.3-1b, Avoid and Minimize Impacts on Nesting Birds and 4.3-1c, Avoid and Minimize Impacts on Roosting Bats Mitigation Measures 4.3-2a, and Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities and 4.3-2b, Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan**, implementation of the HEU would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant.

Downtown-Only Alternative

Special-status Plant Species and Sensitive Natural Communities

The Downtown-Only Alternative does not include habitat that would support special-status plant species or sensitive natural communities; therefore, implementation of the HEU would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant.

Special-status Wildlife

Similar to the HEU with Distributed Sites, the Downtown-Only Alternative, could result in direct impacts on nesting birds and special-status roosting bats due to tree removal or trimming. Indirect construction-related impacts on nesting birds and roosting bats could include construction noise, vibration, and human activity near active bird nests and bat roosts during construction of multi-family residences.

The cumulative projects identified in Section 4.0 of this EIR include 17 multi-family housing developments, ranging from five to 315 units. All but three of these projects have been built or are proposed to be built on parcels that are already developed, although one of those projects, Woodbury Highlands, which is under construction, has resulted in the removal of trees. Of the three projects that are not on already developed parcels, only one, Towne Center III, was constructed adjacent to riparian habitat, and this reach of Happy Valley Creek now supports a mature native riparian canopy and understory. The other two projects – Lafayette Park Terrace and Terraces of Lafayette – were built or are being proposed for parcels covered in California annual grassland but are in the vicinity of mature tree stands. These projects could potentially indirectly impact nesting birds and roosting bats due to clearing and grubbing, and increased noise, vibration and/or visual disturbance during construction, which could cause nest/roost failure or abandonment. These cumulative projects would be required to comply with applicable regulatory requirements protecting biological resources, the City of Lafayette’s Tree Protection Ordinance, and project-specific mitigation measures (where applicable) similar to those of the HEU.

The HEU, in combination with cumulative projects, could result in a significant cumulative impact on nesting birds and roosting bats during construction. However, with implementation of **Mitigation Measures 4.3-1b, Avoid and Minimize Impacts on Nesting Birds and 4.3-1c, Avoid and Minimize Impacts on Roosting Bats**, implementation of the HEU would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant.

Riparian Habitat and Jurisdictional Waters

Similar to the HEU with Distributed Sites, the Downtown-Only Alternative, construction within the HEU with Distributed Sites could result in direct impacts on riparian habitat (a category of jurisdictional waters) due to vegetation removal or trimming. Indirect construction-related impacts on riparian habitat could include equipment leaks, refueling, or improper storage or containment caused harmful material (e.g., concrete truck washout, sediment) to enter Lafayette Creek or Happy Valley creek, especially during the rainy season.

The cumulative projects identified in Section 4.0 of this EIR include 17 multi-family housing developments, ranging from five to 315 units. All but one of these projects have been built or are proposed to be built on parcels that are not in the vicinity of riparian habitat. The exception is Towne Center III, which was constructed along a reach of Happy Valley Creek that now supports a mature native riparian canopy and understory. This cumulative project would have been required to comply with applicable regulatory requirements protecting biological resources, the City of Lafayette's Tree Ordinance, and project-specific mitigation measures (where applicable) similar to those of the HEU.

The HEU, in combination with cumulative projects, could result in a significant cumulative impact on riparian habitat during construction. However, with implementation of **Mitigation Measures 4.3-2a, Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities and 4.3-2b, Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan**, implementation of the HEU would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant.

Wildlife Corridors and Nursery Sites

Similar to the HEU with Distributed Sites, the Downtown-Only Alternative, riparian habitat provides movement corridors for native mammals and birds, and nursery sites for colonial bird species. Potential construction-related impacts on nesting birds, inclusive of colonial roosters, is addressed under Nesting Birds and Roosting Bats. Potential construction-related impacts on riparian habitat, which could impact the utility of riparian habitat as a wildlife corridor, are addressed under Riparian Habitat and Jurisdictional Waters. In summary, loss of riparian habitat is not anticipated due to the City of Lafayette creek setback requirements, few native migratory species are expected to utilize the riparian corridor due, and indirect disturbance is expected to be minimal relative to baseline levels of disturbance.

The cumulative projects identified in Section 4.0 of this EIR include 17 multi-family housing developments, ranging from five to 315 units. All but three of these projects have been built or are proposed to be built on parcels that are already developed. Of the three projects that are not on already developed parcels, only one, Towne Center III, was constructed adjacent to riparian habitat, and this reach of Happy Valley Creek now supports a mature native riparian canopy and understory. As stated above, this cumulative project would have been required to comply with applicable regulatory requirements protecting biological resources, the City of Lafayette's Tree Ordinance, the City of Lafayette's creek setback requirements, and project-specific mitigation measures (where applicable) similar to those of the HEU.

The HEU, in combination with cumulative projects, could result in a significant cumulative impact on wildlife corridors and native wildlife nursery sites during construction. However, with implementation of **Mitigation Measures 4.3-1b, Avoid and Minimize Impacts on Nesting Birds; 4.3-1c, Avoid and Minimize Impacts on Roosting Bats Mitigation Measures 4.3-2a; and Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities and 4.3-2b, Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan**, implementation of the HEU would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant with mitigation.

Policies and Ordinances

Similar to the HEU with Distributed Sites alternative, the Downtown-Only Alternative is consistent with the goals and policies under the Lafayette General Plan, the Lafayette Downtown Specific Plan, City of Lafayette Tree Protection Ordinance, and City of Lafayette creek setback requirements.

The cumulative projects identified in Section 4.0 of this EIR could potentially indirectly impact special-status plant species, sensitive natural communities, special-status wildlife, riparian habitat, or wildlife corridors due to clearing and grubbing, and/or tree trimming or removal, which could cause nest/roost failure or abandonment. These cumulative projects would be required to comply with applicable regulatory requirements protecting biological resources, the City of Lafayette's Tree Protection Ordinance, the City of Lafayette creek setback requirements, and project-specific mitigation measures (where applicable) similar to those of the HEU.

The HEU, in combination with cumulative projects, could result in a significant cumulative impact on policies and ordinances during construction. However, with implementation of **Mitigation Measure 4.3-1a, Avoid and Minimize Impacts on Special-Status Plants, Mitigation Measures 4.3-1b, Avoid and Minimize Impacts on Nesting Birds and 4.3-1c, Avoid and Minimize Impacts on Roosting Bats Mitigation Measures 4.3-2a, and Avoidance of Impacts on Riparian Habitat and Sensitive Natural Communities and 4.3-2b, Riparian Habitat and Sensitive Natural Community Mitigation and Monitoring Plan**, implementation of the HEU would not result in a considerable contribution to cumulative impacts; therefore, the cumulative impact would be less than significant.

4.3.5 References

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4.4 Cultural Resources

4.4.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects on cultural resources, including historic architectural resources, historic-age and pre-contact archaeological resources, and human remains. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to cultural resources. Further below, existing plans and policies relevant to cultural resources associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to cultural resources that could result from implementation of the HEU in the context of existing conditions.

The HEU's impacts on tribal cultural resources are evaluated separately in Section 4.15 of this Draft EIR, *Tribal Cultural Resources*.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. The City received scoping comments from the Native American Heritage Commission (NAHC) which recommended, pursuant to AB 52, that the County conduct consultation with tribes that are affiliated with the City of Lafayette. The NAHC also recommended that the City conduct a cultural resources records search of the California Historical Resources Information System (CHRIS) and that an archaeological inventory survey report be prepared along with a search of the NAHC's Sacred Lands File (SLF).

The primary sources of information referenced in this section included the following:

- City of Lafayette General Plan (2002).
- City of Lafayette Downtown Specific Plan EIR (2010).
- City of Lafayette Downtown Specific Plan (2012)

The term *indigenous*, rather than *prehistoric*, is used as a synonym for Native American (except when quoting), while *pre-contact* is used as a chronological adjective to refer to the period prior to Euroamerican arrival in the project area. *Indigenous* and *pre-contact* are often, but not always, synonymous, since the former refers to a cultural affiliation and the latter chronological.

4.4.2 Environmental Setting

This section provides an overview of the ethnographic, pre-contact archaeological, and historic-age setting of the project area.

Archaeological Setting

Categorizing the pre-contact period into broad cultural stages allows researchers to describe a broad range of archaeological resources with similar cultural patterns and components during a

given time frame, thereby creating a regional chronology. This section provides a brief discussion of the pre-contact chronology for the area known now as the City of Lafayette.

Archaeologists developed individual cultural chronological sequences tailored to the archaeology and material culture of each subregion of California. Each of these sequences is based principally on the presence of distinctive cultural traits and stratigraphic separation of deposits. Milliken et al. (2007) provide a framework for the interpretation of the San Francisco Bay Area. The authors divided human history in California into three periods: the *Early Period*, the *Middle Period*, and the *Late Period*. In many parts of California four periods are defined; the fourth being the *Paleoindian Period* (11500–8000 B.C.), characterized by big-game hunters occupying broad geographic areas. Evidence of human habitation during the Paleoindian Period has not yet been discovered in the San Francisco Bay Area. Economic patterns, stylistic aspects, and regional phases further subdivide cultural periods into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

During the Early Period (Lower Archaic, 8000–3500 B.C.), geographic mobility continued from the Paleoindian Period and is characterized by the millingslab and handstone as well as large wide-stemmed and leaf-shaped projectile points. The first cut shell beads and the mortar and pestle are first documented in burials during the Early Period (Middle Archaic, 3500–500 B.C.), indicating the beginning of a shift to sedentism. During the Middle Period, which includes the Lower Middle Period (Initial Upper Archaic, 500 B.C.–A.D. 430), and Upper Middle Period (Late Upper Archaic, A.D. 430–1050), geographic mobility may have continued, although groups began to establish longer term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian, and chert concave-base projectile points, as well as the occurrence of sites in a wider range of environments, suggest that the economic base was more diverse. By the Upper Middle Period, mobility was being replaced by the development of numerous small villages. Around A.D. 430, a dramatic cultural disruption occurred as evidenced by the sudden collapse of the *Olivella* saucer bead trade network. During the Initial Late Period (Lower Emergent, A.D. 1050–1550), social complexity developed toward lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

Ethnographic Setting

A compilation of ethnohistorical, historical, and archeological data indicates that the San Francisco Bay Area was inhabited by a cultural group known as the Ohlone before the arrival of Europeans (Milliken, 1995). While traditional anthropological literature portrayed the Ohlone peoples as having a static culture, today it is better understood that many variations of culture and ideology existed within and between villages. While these static descriptions of separations between native cultures of California make it an easier task for ethnographers to describe past behaviors, this approach masks Native adaptability and self-identity. California's Native Americans never saw themselves as members of larger cultural groups, as described by anthropologists. Instead, they saw

themselves as members of specific village communities, perhaps related to others by marriage or kinship ties, but viewing the village as the primary identifier of their origins.

Levy (1978) describes the language group spoken by the Ohlone (often referred to as “Costanoan” in the literature). This term is originally derived from a Spanish word designating the coastal peoples of Central California. Today Costanoan is used as a linguistic term that refers to a larger language family that included distinct sociopolitical groups that spoke at least eight languages of the Penutian language group. The Ohlone once occupied a large territory from San Francisco Bay in the north to the Big Sur and Salinas Rivers in the south. The Lafayette area was occupied by Chochenyo speakers.

Economically, the Ohlone engaged in hunting and gathering. Their territory encompassed both coastal and open valley environments that contained a wide variety of resources, including grass seeds, acorns, bulbs and tubers, bear, deer, elk, antelope, a variety of bird species, and rabbit and other small mammals. The Ohlone acknowledged private ownership of goods and songs, and village ownership of rights to land and/or natural resources; they appear to have aggressively protected their village territories, requiring monetary payment for access rights in the form of clam shell beads, and even shooting trespassers if caught.

In 1770, the Ohlone lived in approximately 50 separate and politically autonomous nations, and the number of Chochenyo speakers reached 2,000, substantially more than the typical size of a village, which ranged from 40 to 200 members. During the Mission Period (1770 to 1835), native populations, especially along the California coast, were brought—usually by force—to the missions by the Spanish missionaries to provide labor. The missionization caused the Ohlone people to experience cataclysmic changes in almost all areas of their life, particularly a massive decline in population caused by introduced diseases and declining birth rate, resulting in large part from colonization by the Spanish missionaries. Following the secularization of the missions by the Mexican government in the 1830s, most Native Americans gradually left the missions and established rancherias in the surrounding areas (Levy, 1978).

After European contact, Ohlone life ways were severely disrupted by missionization, disease, and displacement. Today the Ohlone still have a strong presence in the San Francisco Bay Area, and are very interested in their historic-age and pre-contact past. There are currently six Ohlone groups listed on the Native American Heritage Commission contact list for the Lafayette area.

Historical Architectural Setting

*History*¹

The first European settlers in the Lafayette area were Franciscan priests who came from Spain and established missions. In 1834, a Mexican land grant was granted for Rancho Acalanes. Fourteen years later, the first settlements in Lafayette were built. At this time, Elam Brown, Lafayette’s founding father, bought one square league from the ranch. Early Lafayette was mainly a stopover for wagon drivers on their way from the Moraga Redwoods to the Martinez

¹ City of Lafayette Downtown Lafayette Specific Plan EIR, 2010, page 4.4-9.

lumber shipping point. Brown built a home for himself and the first Lafayette Grammar School opened in 1852. Brown subsequently established a grist mill in 1853. Lafayette was first granted its name in 1855 when the town's first schoolteacher applied for a post office. With increasing lumbering traffic, a blacksmith shop, hotels, and taverns opened. In addition, Brown deeded a 100-foot by 150-foot piece of open land to the town as a gathering place, and this is now Lafayette Plaza. Lafayette's commercial center continued to grow. For example, the Way Side Inn was erected in 1894, serving as a hotel, tavern, meat market, ice cream parlor, insurance office, private home, and antique shop. In addition, Brown began to grow barley, the first of his agricultural successes. The area's fertile farmland attracted many farmers. Soon, Lafayette contained vineyards, pear orchards, and vegetable gardens. By 1859, Lafayette convened a County Agricultural Society.

In the latter half of the nineteenth century, development occurred along Lafayette's two pioneer roads, now Mount Diablo Boulevard and Moraga Road. In addition, the downtown area was further established as the Pony Express stopped at the intersection of these pioneer roads. Progressing into the twentieth century, more forms of transportation brought more people into Lafayette, creating a need for larger schools and other amenities, such as Lafayette's third school, which was erected in 1893. Two decades later, train service between Oakland and Sacramento stopped in downtown, increasing the demand for more social facilities. The extant Town Hall, for example, was built in 1914, and served as a dance hall.

During the rest of the twentieth century more stores and markets opened. Lafayette's fourth school was erected in 1927. Eleven years later the Acalanes High School District was established. This development happened at roughly the same time that the Caldecott Tunnel opened to serve traffic between Oakland and Berkeley and Contra Costa County. Further population expansion occurred in the 1950s and 1960s, during which Lafayette grew from 7,000 to 20,000 residents. Like many parts of the country, Lafayette experienced a suburban boom as existing agricultural fields were paved over with housing developments. With this growth, the City was formally incorporated in 1968. Only three years before, the decision was made to locate the BART station in the downtown.

Current Setting

Planning Area 1 – Downtown West End (north)

Planning Area 1 is bound by Hwy 24 to the north, Mount Diablo Boulevard to the south, Risa Road to the west, and Dolores Drive to the east (see **Figure 3-3** in Chapter 3 of this EIR, *Project Description*). The majority of this planning area is dominated by recent construction as well as a large, active construction site at the east end for a mixed use development including condominiums and commercial uses. The assessor's records indicate that the buildings were constructed between 1947 and 2020. Only two buildings appear to be historic-age (i.e., 45 years old or older); 3688 Mount Diablo Boulevard, constructed in 1964, and 3690 Mount Diablo Boulevard, constructed in 1947. There are no previously identified historic resources in Planning Area 1.

Planning Area 2 – Downtown West End (south)

Planning Area 2 includes those properties along the south side of, and fronting, Mount Diablo Boulevard from Mountain View Drive to the east and 3275 Mount Diablo Boulevard to the west (see Figure 3-3). The buildings consist of one and two story commercial buildings that the assessor's records indicate were constructed between 1939 and 1988. The buildings in the area represent a variety of architectural styles. There are no previously identified historic resources in Planning Area 2.

Planning Area 3 – Downtown Core (north)

Planning Area 3 is bound by Hwy 24 to the north, Mount Diablo Boulevard to the south, Dolores Drive to the west, and 1st Street to the east (see Figure 3-3). The area primarily consists of one and two story commercial buildings with some multi- and single-family residences behind the commercial buildings that front Mount Diablo Boulevard. The assessor's records indicate the buildings were constructed between 1936 and 2017. The buildings in the area represent a variety of architectural styles. The majority of the buildings west of Oak Hill Road are smaller scale with the storefronts abutting the sidewalk, whereas east of Oak Hill Road is a large scale shopping center set back from the sidewalk with a large parking lot. There are no previously identified historic resources in Planning Area 3, except for the former site of the James Bickerstaff home.

Planning Area 4 – Downtown Core (south)

Planning Area 4 includes those properties along the south side, and fronting, Mount Diablo Boulevard from 1st Street on the east to Mountain View Drive on the west as well as those along Lafayette Circle between Whitten Lane and Mount Diablo Boulevard and Golden Gate Way west of 1st Street (see Figure 3-3). The assessor's records indicate that the buildings were constructed between 1923 and 2019. The buildings in the area represent a variety of architectural styles. The majority of the buildings west of Oak Hill Road are smaller scale with the storefronts abutting the sidewalk. Buildings and sites identified as significant during previous efforts in Planning Area 4 are noted in Table 1.

Planning Area 5 – Downtown East End (north)

Planning Area 5 is bounded by Hwy 24 to the north, 1st Street to the west, and Mount Diablo Boulevard to the south (see Figure 3-3). The assessor's records indicate that the buildings were constructed between 1922 and 2013. The buildings that front Mount Diablo Boulevard are mostly one and two-story commercial building constructed in the mid-20th century. They are constructed in a variety of styles and include both strip malls and individual buildings. There are no previously identified historic resources in Planning Area 5.

Planning Area 6 – Downtown East End (south)

Planning Area 6 includes those properties along the south side, and fronting, Mount Diablo Boulevard from 1st Street on the west and Pleasant Hill Road on the east as well as properties fronting Golden Gate Way east of 1st Street (see Figure 3-3). The assessor's records indicate that the buildings were constructed between 1932 and 2007. The buildings that front Mount Diablo Boulevard are mostly one and two-story commercial building constructed in the mid-20th century. They are constructed in a variety of styles and include both strip malls and individual buildings.

There are no previously identified historic resources in Planning Area 6 except for the Lafayette Cemetery.

Planning Area 7 – BART

Planning Area 7 is bound by Hwy 24 to the south, Sierra Vita Way to the east, Deer Hill Road to the north, and Happy Valley Road to the west (see Figure 3-3). There are no historic-age buildings or structures present. There are no previously identified historic resources in Planning Area 7.

Planning Area 8 – Deer Hill Corridor

Planning Area 8 includes those properties along the north side of Deer Hill Road just past Elizabeth Street to the east and to Via Oneg to the west as well as those properties along Dolores Drive north of Hwy 24, Happy Valley Lane, Hester Lane, Lois Lane, and Happy Valley Court (see Figure 3-3). The assessor's records indicate that the buildings were constructed between 1939 and 2006. This planning area is dominated by single family homes in a variety of architectural styles. There are no previously identified historic resources in Planning Area 8.

Planning Area 9 – DeSilva Sites

Planning Area 9 consists primarily of open space with the exception of three multi-family residential buildings constructed between 1951-1961 that are clustered around northmost end of Paulson Court (see Figure 3-3). There are no previously identified historic resources in Planning Area 9.

Planning Area 13 – Dewing/Brook/Rosedale

Planning Area 13 consists of those properties south of Mount Diablo Boulevard and Planning Area 4 along portions of Bickerstaff Road, Chestnut Street, Walnut Street Dewing Avenue, Oak Street, Bell Street, Hough Avenue, Wildwood Lane, Bell Street, East Street, Colina Court, Brook Street, Moraga Road, Moraga Boulevard, Rosendale Avenue, and School Street (see Figure 3-3). The majority of the area consists of one and two-story residential buildings in a variety of architectural styles. The assessor's records indicate that the buildings were constructed between 1911 and 1990. Buildings and sites identified as significant during previous efforts in Planning Area 13 are noted below in **Table 4.4-1**.

Previously Identified Cultural Resources

For the purposes of this section, cultural resources are defined as physical evidence or a place of past human activity, including sites, objects, landscapes, or structures of significance to a group of people traditionally associated with it. Archaeological resources can be both pre-contact and historic-age and consist of cultural resources which are on the surface or in the subsurface. Historic resources are historic-age (i.e., 45 years old or older) buildings or structures that have been determined as significant and eligible for, or listed on, the National Register of Historic Places (National Register) and/or California Register of Historical Resources (California Register) and/or by the City of Lafayette as a City Historic Landmark (local register).

**TABLE 4.4-1
KNOWN HISTORIC RESOURCES**

Name of Resource	Location	Status	Date of Construction	Notes
Lafayette Plaza/Elam and Margaret Allen Brown Plaza Park	Southeast corner of Mount Diablo Boulevard and Moraga Road	California Register-listed, City Historic Landmark	1852 (land donated)	Planning Area #4
Pioneer Store	3535 Plaza Way	California Register-listed, City Historic Landmark	1860s	Planning Area #4
Site of Elam Brown Grist mill	Near Lafayette Plaza	California Register-listed	n/a	Planning Area #4
Geils Building	3531 Plaza Way	California Register-listed	1880s	Planning Area #4
Lafayette Methodist Church a.k.a. Third Lafayette Grammar School or Old Lafayette Grammar School	955 Moraga Road	California Register-listed, City Historic Landmark	1893	Planning Area #13
Way Side Inn	3521 Golden Gate Way	California Register-listed, City Historic Landmark	1898	Planning Area #4
Town Hall Theater	Southeast corner of Moraga Road and School Street	California Register-listed, City Historic Landmark	1914	Planning Area #13
Garrett Building	3565 Mount Diablo Boulevard	California Register-listed	1937	Planning Area #4
Juan Bernal Adobe - Site of first non-indigenous settlement in Lafayette	3662 Happy Valley Road		n/a	Outside of Planning Areas. Adobe was demolished in 1906.
Site of James Bickerstaff home	3615 Mount Diablo Boulevard	Guide to Historic Lafayette California	n/a	Planning Area #3 Site only, no extant buildings
Garrett Building	3565 Mount Diablo Boulevard	Guide to Historic Lafayette California	1930s	Planning Area #4
	201 Lafayette Circle	Guide to Historic Lafayette California	c1920	Planning Area #4 Moved from corner facing Mount Diablo
Site of Elam Brown House	32 Lafayette Circle	Guide to Historic Lafayette California	c1858	Demolished in 1929
Second School House	3535 Mount Diablo Boulevard	Guide to Historic Lafayette California	1871, moved to 3535 Mount Diablo Blvd in 1927/28	Planning Area #4
Third School House	955 Moraga Road	Guide to Historic Lafayette California	1893	Planning Area #13
Grist Mill Wheel	Plaza Park	Guide to Historic Lafayette California		Planning Area #4 Mill dismantled in 1880
Lafayette Cemetery	Near intersection of Mount Diablo Boulevard and Pleasant Hill Rd.	Guide to Historic Lafayette California	1874	Planning Area #6

SOURCE: Guide to Historical Lafayette, General Plan, Lafayette Historical Society

ESA completed a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System on July 21, 2021 (File No. 21-0109). The review included the HEU Planning Areas. Previous surveys, studies, and site records were accessed. Records were also reviewed in the Built Environment Resources Directory for Contra Costa County, which contains information on places of recognized historical significance including those evaluated for listing in the National Register of Historic Places, the California Register of Historical Resources, the California Inventory of Historical Resources, California Historical Landmarks, and California Points of Historical Interest. The purpose of the records search was to (1) determine whether known cultural resources have been recorded within the project vicinity; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

Identified Historic Resources

The following provides a list of previously identified historic resources as identified in a number of City documents as well those listed on the California Register. There are no National Register-listed buildings within any of the Planning Areas. The reconnaissance survey provided important information on the current architectural setting of the Planning Areas as well verify the status of the known and potential historic resources. It did not identify any additional resources since evaluation was outside of the scope of this effort.

As a part of the Downtown Specific Plan effort in 2009, Knapp Architects surveyed 320 properties and identified six potential historic resources (**Table 4.4-2**).

**TABLE 4.4-2
 POTENTIAL HISTORIC RESOURCES IDENTIFIED IN THE DOWNTOWN SPECIFIC PLAN AREA**

Name of Resource	Location	Status	Date of Construction	Notes
	240-270 Lafayette Circle	Identified in the Downtown Specific Plan	1978/79	No evaluation completed by ESA
Old Firehouse School	984 Moraga Road	Identified in the Downtown Specific Plan	unknown	No evaluation completed by ESA
Round Up Saloon	3553 Mount Diablo Boulevard	Identified in the Downtown Specific Plan	1938	No evaluation completed by ESA
Hen House	20 Lafayette Circle	Identified in the Downtown Specific Plan	1920	No evaluation completed by ESA
Park Theater	3519 Golden Gate Way	Identified in the Downtown Specific Plan	1941	No evaluation completed by ESA

SOURCE: Knapp Architects, Lafayette Downtown Specific Plan – Appendix C, 2009

Identified Archaeological Resources

The NWIC records search indicated that four pre-contact archaeological resources are recorded within the HEU Planning Areas. **Table 4.4-3** describes the four archaeological resources within the HEU Planning Areas.

**TABLE 4.4-3
 PREVIOUSLY RECORDED ARCHAEOLOGICAL RESOURCES**

Name of Resource	Location	Source	Description	Eligibility
Saclan Indian Burial Grounds (CCO Burial 09-01, 09-02, and 09-03)	Planning Area #4	Guide to Historic Lafayette California / NWIC	Pre-contact burials	Not evaluated, Potential historical resource
Anaclario Site (P-07-000108)	Planning Area #3	NWIC	Pre-contact habitation site with burials	Not evaluated, Potential historical resource
Lafayette (P-07-000109)	Planning Area #13	NWIC	Pre-contact habitation site with burials	Not evaluated, Potential historical resource
P-07-000110	Planning Area #4	NWIC	Pre-contact habitation site with burials	Not evaluated, Potential historical resource

SOURCE: Guide to Historic Lafayette California, NWIC 2021

None of the archaeological resources have been formally evaluated for the California Register or National Register. However, the Saclan Indian Burial Grounds are mentioned in the Guide to Historic Lafayette as place with local significance and it is mentioned as such in the Downtown Specific Plan EIR (2010). Since all of these resources include human remains, it is likely that these archaeological resources would be eligible for the California Register and/or the National Register, if evaluated.

4.4.3 Regulatory Setting

Federal

Under federal law, historical and archaeological resources are considered through the National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. 306108), and its implementing regulations. Before an “undertaking” (e.g., federal funding or issuance of a federal permit) is implemented, Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties (i.e., properties listed in or eligible for listing in the national register) and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register. Under the NHPA, a property is considered significant if it meets the National Register listing criteria A through D, at 36 Code of Federal Regulations 60.4, as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

- a) Are associated with events that have made a significant contribution to the broad patterns of our history, or
- b) Are associated with the lives of persons significant in our past, or
- c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
- d) Have yielded, or may be likely to yield, information important in prehistory or history.

For a resource to be eligible for the National Register, it must also retain enough integrity to be recognizable as a historic property and to convey its significance. Resources that are less than 50 years old are generally not considered eligible for the National Register.

Federal review of the effects of undertakings on significant cultural resources is carried out under Section 106 of the NHPA and is often referred to as “Section 106 review.” This process is the responsibility of the federal lead agency and occurs when an undertaking involves federal funding or a federal approval action. Section 106 review typically involves a four-step procedure, which is described in detail in the implementing regulations of the NHPA (36 Code of Federal Regulations 800):

- Define the Area of Potential Effects in which an undertaking could directly or indirectly affect historic properties;
- Identify historic properties in consultation with the State Historic Preservation Office and interested parties;
- Assess the significance of effects of the undertaking on historic properties; and
- Consult with the State Historic Preservation Officer, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify the Advisory Council on Historic Preservation and proceed with the project according to the conditions of the agreement.

State

The State of California implements the NHPA of 1966, as amended, through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation, as an office of the California Department of Parks and Recreation, implements the policies of the preservation act on a statewide level. The Office of Historic Preservation also maintains the California Historical Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state’s jurisdictions.

CEQA and the California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from

substantial adverse change” (PRC Section 5024.1[a]). Certain resources are determined by the statute to be automatically included in the California Register, including those formally determined eligible for or listed in the National Register (PRC 5024.1[d][1]). These resources are termed “historical resources.”

Based on Section 15064.5(a) of the CEQA Guidelines, historical resources include, but are not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant or that is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Generally, a resource is considered by a lead agency to be “historically significant” if the resource meets the criteria for listing in the California Register (PRC Section 5024.1), or qualifies as a “unique historical resource” (PRC Section 21083.2).

To be eligible for the California Register, a cultural resource must meet one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

For a resource to be eligible for the California Register, it must also retain enough integrity of location, design, setting, materials, workmanship, feeling, and association to be recognizable as a historical resource and to convey its significance. Resources that are less than 45 years old are generally not considered eligible for the California Register.

Impact assessment under CEQA considers only historically significant cultural resources; that is, resources that meet CEQA criteria for eligibility to the California Register (historical resources) or qualify as unique archaeological resources, as detailed below. Impacts on resources that do not meet these criteria are not considered in impact assessment under CEQA. Similarly, for projects with federal involvement, only resources that meet the criteria of eligibility for the National Register receive further consideration in impact analysis.

CEQA considers archaeological resources as an intrinsic part of the physical environment and thus requires that, for any project, the potential of the project to adversely affect archaeological resources be analyzed (CEQA Section 21083.2). For a project that may have an adverse effect on a significant archaeological resource, CEQA requires preparation of an environmental impact report (CEQA Section 21083.2 and CEQA Guidelines Section 15065). CEQA recognizes two different categories of significant archaeological resources: “unique” archaeological resource (CEQA Section 21083.2) and an archaeological resource that qualifies as a “historical resource” under CEQA (CEQA Section 21084.1 and CEQA Guidelines Section 15064.5).

Public Resources Code Section 21074 (AB 52)

Assembly Bill 52 (AB52), enacted in September 2014, amended CEQA to explicitly recognize that California Native American tribes have expertise with regard to their tribal history and practices. AB 52 established a new category of cultural resources known as tribal cultural resources in order to consider tribal cultural values when determining impacts on cultural resources. Public Resources Code Section 21074(a) defines a tribal cultural resource as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - included or determined to be eligible for inclusion in the California Register; or
 - included in a local register of historical resources, as defined in Public Resources Code Section 5020.1(k).²
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c).³ In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.
- A cultural landscape that meets the criteria of CEQA Section 21074(a)⁴ also is a tribal cultural resource if the landscape is geographically defined in terms of the size and scope.
- An historical resource as described in CEQA Section 21084.1,⁵ a unique archaeological resource as defined in CEQA Section 21083.2,⁶ or a non-unique archaeological resource as defined in CEQA Section 21083.2⁷ may also be a tribal cultural resource if it meets the criteria of CEQA Section 21074(a).

AB 52 requires lead agencies to analyze project impacts on “tribal cultural resources” separately from archaeological resources (Public Resources Code §§21074, 21083.09), in recognition that

² Public Resources Code Section 5020.1(k) defines “local register of historical resources” as “a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.”

³ The criteria set forth in Public Resources Code Section 5024.1(c) include whether a resource: “(1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage. (2) Is associated with the lives of persons important in our past. (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values. (4) Has yielded, or may be likely to yield, information important in prehistory or history.”

⁴ A cultural landscape meets the criteria of Public Resources Code Section 21074(a) if it either is “included or determined to be eligible for inclusion in the California Register of Historical Resources” or is “included in a local register of historical resources” pursuant to Section 5020.1(k).

⁵ Public Resources Code Section 21084.1 defines an “historical resource” as “a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources.”

⁶ Public Resources Code Section 21083.2(g) defines “unique archaeological resource” as “an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information. (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type. (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.”

⁷ Public Resources Code Section 21083.2(h) defines “nonunique archaeological resource” as “an archaeological artifact, object, or site which does not meet the criteria in subdivision (g).”

archaeological resources have cultural values beyond their ability to yield data important to prehistory or history. AB 52 also defines “tribal cultural resources” in Public Resources Code Section 21074 (see above), and requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (Public Resources Code §§21080.3.1, 21080.3.2, 21082.3).

Senate Bill 18

Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code section 65300 et seq.) and specific plans (defined in Government Code section 65450 et seq.). The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places.

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to Cultural Resources are listed below.

Goal LU-22: Preserve archaeological and historic resources.

Policy LU-22.1: Preserve Archaeological Resources. Protect archaeological resources.

Program LU-22.1.1: Require that areas found to contain significant historic or prehistoric artifacts be examined by a qualified consulting archaeologist.

Program LU-22.1.5: All development applications within mapped archaeological sensitivity areas shall require a records search to be conducted. If that records search recommends a survey of the site, the applicant shall be required to have a search done by a qualified professional archaeologist. In the absence of this map, development applications within 200 feet of a stream shall be required to have a records search and, if necessary, a field survey conducted.

Program LU-22.1.6: When a site has been identified as having value as an archaeological resource, development shall be situated or designed to avoid impact on archaeological resources. This may be accomplished in any of the following ways.

- a. Siting improvements to completely avoid the archaeological site.
- b. Incorporating the site into a park or dedicated open space, or by deeding the site into a permanent conservation easement.

- c. “Capping” the site (i.e. covering the site with a layer of undisturbed soil) may be appropriate after the site has been thoroughly studied by a professional archaeologist and a report written on the resources found on the site.

In the event that the site cannot be feasibly developed by avoidance of the resource, it can be developed if the site is completely studied by a professional archaeologist and that archaeologist determines that the site is not unique. The archaeologist will prepare a complete report on the site and its resources prior to any development being allowed.

Program LU-22.1.7: In the event archaeological resources are uncovered on any construction project in the City, all work must be halted and an evaluation undertaken by a qualified archaeologist.

Policy LU-22.2 Historic Buildings, Sites and Districts. Identify, recognize and protect sites, buildings, structures and districts with significant cultural, aesthetic and social characteristics which are part of Lafayette's heritage.

Program LU-22.2.1: Update and continue to implement the Zoning Ordinance requirements regarding buildings with historic and cultural significance.

Program LU-22.2.2: Establish incentives for preservation and restoration of historic buildings and sites. Consider the following incentives: interest-free or reduced interest loans for rehabilitation consistent with the original character of the building; tax incentives for the preservation of historic structures, including the use of Mills Act preservation contracts; reduced processing fees and awards and grants for preservation and protection of historic buildings and those with cultural significance; use of the State Historic Building Code where applicable

Lafayette Downtown Specific Plan

The Lafayette Downtown Specific Plan focuses on the downtown portion of Lafayette, south of Highway 24 along Mount Diablo Boulevard between Dolores Drive and Pleasant Hill Road. This area includes the HEU Planning Areas 1-6, and 13 (City of Lafayette, 2012). Goals and policies related to Cultural Resources are listed below.

Goal 4: Downtown Character – Cultural and Historic Resources. Preserve Lafayette’s history in the downtown.

Policy 4.1: Encourage the preservation of downtown historic resources by exploring appropriate and viable reuse.

4.4.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to cultural resources are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project would have a significant impact on the environment if it would:

- a. Cause a substantial adverse change in the significance of a historical resource pursuant to Public Resources Code §15064.5.

- b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Public Resources Code §15064.5
- c. Disturb any human remains, including those interred outside of formal cemeteries.

Methodology and Assumptions

This is a program-level EIR that considers the potential impacts from implementing the HEU. While the HEU would be applicable Citywide, special focus was given to those study areas where multifamily housing development is planned. Impacts on cultural resources are evaluated using the criteria listed above and based on information included in the *City of Lafayette General Plan* (2002) and the *City of Lafayette Downtown Specific Plan* (2012). Impacts to architectural historic resources were also informed by a reconnaissance survey conducted in July 2021 by a qualified architectural historian.

Impacts and Mitigation Measures

Impacts

Impact 4.4-1: Implementation of the HEU could cause a substantial adverse change in the significance of an architectural historic resource pursuant to CEQA Guidelines Section 15064.5. (Significant and Unavoidable Impact, with Mitigation)

The primary purpose of the HEU is to comply with the requirements of State law by updating goals, policies, objectives, and implementation programs for the preservation, improvement, and development of housing, and providing a list of viable development sites to meet the City's RHNA requirement plus a buffer. The City has identified the Planning Areas discussed above as potential locations for new multifamily housing. As described above in the *Environmental Setting*, archival research identified known and potential architectural historic resources in the HEU Planning Areas as well as whether or not buildings and structures that are historic-age, and are therefore considered as potentially eligible, are present in that Planning Area.

Modification or demolition of buildings associated with physical development that could occur under the HEU could result in damage to or destruction of architectural historic resources, which would constitute a significant impact.

As detailed in the *Regulatory Setting* above, there are a number of federal, state, and local regulations in place to protect architectural historic resources. CEQA requires lead agencies to determine, prior to approval, if a project would have a significant adverse effect on historical resources and requires the lead agency to prescribe any feasible mitigation measures that would reduce significant impacts.

In addition, the General Plan and Downtown Specific Plan include policies and implementation programs designed to identify and protect architectural historic resources. For example, General Plan Policy LU-22.2 calls for the identification, recognition, and protection of significant resources and Downtown Specific Plan Policy 4.1 encourages appropriate reuse of significant resources.

While the aforementioned regulations and policies to protect architectural historic resources are aimed at protecting resources by requiring projects to identify and mitigate impacts to potential architectural historic resources, there remains the potential for construction activities to damage or destroy architectural historic resources.

HEU with Distributed Sites

The HEU with Distributed Sites Alternative would plan for multifamily housing development in all 10 planning areas (Planning Areas 1 through 9 and Planning Area 13). Known architectural historic resources have been identified in Planning Areas 3, 4, 6, and 13. Additionally, there may be currently unknown architectural historic resources within the HEU Planning Areas as there are many historic-age buildings that have not been evaluated. While the aforementioned regulations and policies to protect architectural historic resources are aimed at protecting resources by requiring projects to identify and mitigate impacts to potential architectural historic resources, there remains the potential for construction activities to damage or destroy architectural historic resources. For this reason, this impact is considered **potentially significant**.

Downtown-Only Alternative

The Downtown-Only Alternative would plan for multifamily housing development in Planning Areas 1 through 6 only. Known architectural historic resources have been identified in Planning Areas 3, 4, and 6. Additionally, there may be currently unknown architectural historic resources within the HEU Planning Areas. While the aforementioned regulations and policies to protect architectural historic resources are aimed at protecting resources by require projects to identify and mitigate impacts to potential architectural historic resources, there remains the potential for construction activities to damage or destroy architectural historic resources. For this reason, this impact is considered **potentially significant**.

Mitigation Measures

Mitigation Measure 4.4-1A: Identify Architectural Historic Resources.

Prior to any demolition work or significant alterations to any building or structure that is 45 years old or older, the City shall ensure that a qualified architectural historian who meets the Secretary of the Interior’s Professional Qualification Standards evaluate the building or structure for eligibility for listing on the National Register, California Register, and as a City Historic Landmark.

Mitigation Measure 4.4-1B: Identify Character-Defining Features.

Prior to any demolition work or significant alterations initiated at known historical resource or a resource identified via implementation of Mitigation Measure 4.4-1A, the City shall ensure that a qualified architectural historian who meets the Secretary of the Interior’s Professional Qualification Standards identifies character-defining features of each historical resource. Despite being presumed or having been previously determined eligible for listing in the National Register and/or California Register, character-defining features of the historical resources that would be demolished or may be significantly altered may not have been explicitly or adequately identified. According to guidance from the National Park Service, a historical resource “must retain... the essential physical features [i.e., character-defining features] that enable it to convey its historic identity. The

essential physical features are those features that define both *why* a property is significant...and *when* it was significant” (National Park Service, 1997). The identification of character-defining features is necessary for complete documentation of each historical resource as well as appropriate public interpretation and salvage plans.

Mitigation Measure 4.4-1C: Document Architectural Historic Resources Prior to Demolition or Alteration.

Prior to any demolition work or significant alterations initiated of a known historical resource or a resource identified via implementation of Mitigation Measure 4.4-1A, the City shall ensure that a qualified architectural historian who meets the Secretary of the Interior’s Professional Qualification Standards thoroughly documents each building and associated landscaping and setting. Documentation shall include still photography and a written documentary record of the building to the National Park Service’s standards of the Historic American Buildings Survey (HABS) or the Historic American Engineering Record (HAER), including accurate scaled mapping and architectural descriptions. If available, scaled architectural plans will also be included. Photos include large-format (4”x5”) black-and-white negatives and 8”x10” enlargements. Digital photography may be substituted for large-format negative photography if archived locally. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site-specific and comparative archival research and oral history collection as appropriate. Copies of the records shall be submitted to the Northwest Information Center at Sonoma State University.

Significance After Mitigation: Housing development planned under the HEU could result in the demolition or significant alteration of historical resources, which would constitute a substantial adverse change in the significance of the resources. While the mitigation measures included above would require identification and documentation of the resources, they would not fully mitigate these actions to a less-than-significant level if these resources were permanently lost. Therefore, even with implementation of Measures 4.4-1A, 4.4-1B, and 4.4-1C the impact would be **significant and unavoidable**.

Impact 4.4-2: Implementation of the HEU would not cause a substantial adverse change in the significance of an archaeological historical resource or a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5 21074 or could disturb human remains, including those interred outside of formal cemeteries. (*Less than Significant Impact, with Mitigation*)

As described above in the *Environmental Setting*, a records search identified previously recorded pre-contact archaeological resources in the HEU Planning Areas. Given the long history of pre-contact and historic-age human occupation, the City is considered sensitive for the presence of subsurface pre-contact, Native American, and historic-age cultural resources and human remains.

Archaeological resources have the potential to contain intact deposits of artifacts, associated features, and burials that could contribute to the regional pre-contact or historic record and be of substantial importance to members of the local and regional community. Ground disturbance associated with physical development that could occur under the HEU could result in damage to or destruction of these resources, which would constitute a significant impact.

As detailed in the *Regulatory Setting* above, there are federal, state, and local regulations in place to protect archaeological resources and human remains. CEQA requires lead agencies to determine, prior to approval, if a project would have a significant adverse effect on historical or unique archaeological resources and requires the lead agency to make provisions for handling the inadvertent discovery of historical or unique archaeological resources during construction. In the event that human remains are discovered in any location other than a dedicated cemetery, PRC Section 5024.1(e) requires all work to stop until the coroner in the county where the remains are discovered is contacted. If the coroner determines the remains to be Native American, the coroner must contact the Native American Heritage Commission within 24 hours. The Commission would then identify any person or persons it believes to be the most likely descended from the deceased individual.

As described previously in this section, SB 18 requires local governments to consult with tribes prior to making certain planning decisions and provides California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to cultural places. In accordance with the requirements of Senate Bill 18 (SB 18), Lafayette City staff conducted Native American outreach and consultation efforts. As a part the SB 18 process for the proposed HEU, City staff sent tribal outreach letters to the 13 Native American representatives from nine tribes that were identified by the NAHC to consult on the HEU. The City received one response, on August 31, 2021, from Wilton Rancheria, who stated that they had no concerns about the project (Wilton Rancheria, 2021). No other responses were received within 90 days of receipt of the consultation letters.

In addition, the proposed HEU and associated General Plan includes policies and implementation programs designed to identify and protect archaeological resources that could be adversely affected by development activities. For example, Program LU-22.1.1 and LU-22.1.7 requires that if archaeological material is identified, particularly during project construction, work must halt, and an archaeological investigation must be undertaken by a qualified archaeologist to evaluate the find. In addition, Program LU-22.1.6 prioritizes avoidance of valuable archaeological resources when identified and, if the resource cannot be avoided, archaeological investigation will occur, and a report is required prior to development of the area with the resource.

A map of known resources, based on the NWIC records search of the HEU Planning Areas has been provided to the City to support the protection of known cultural resources. This map does not constitute the archaeological sensitivity map as per Program LU-22.1.4.

While the aforementioned regulations and policies proposed under the HEU to protect archaeological resources and human remains are substantially protective and require projects to identify and mitigate impacts to potential archaeological resources prior to ground disturbance, there remains the potential for ground-disturbing construction activities to inadvertently damage or destroy archaeological resources or human remains. However, these policies and programs do not establish a project review process for cultural resources or an exact policy for inadvertent discovery of archaeological resources during project construction and do not address tribal involvement during the inadvertent discovery of indigenous resources during project construction.

HEU with Distributed Sites

Several indigenous archaeological resources with human remains have been identified within the HEU Planning Areas that may be eligible for the California Register and/or the National Register within this area. Additionally, there may be currently unknown archaeological resources or human remains within the HEU Planning Areas. This alternative covers a larger area and therefore may include a higher potential to impact archaeological resources and/or human remains as more ground area would potentially be disturbed which may contain these resources. Therefore, this alternative is considered to have a **potentially significant** impact on archaeological resources and human remains.

Downtown-Only Alternative

Several indigenous archaeological resources with human remains have been identified within the Downtown-Only Alternative Planning Areas that may be eligible for the California Register and/or the National Register within this area. Additionally, there may be currently unknown archaeological resources and/or human remains within the Downtown-Only Alternative Planning Areas. This alternative covers a smaller area than the Distributed Sites alternative, however all of the previously recorded archaeological resources within the HEU Planning Areas are within the Downtown-Only Alternative Planning Areas. Therefore, this alternative is considered to have a **potentially significant** impact on archaeological resources and human remains.

Mitigation Measures

Mitigation Measure 4.4-2A: Cultural Resources Review Requirements.

For all discretionary projects that require ground disturbance (i.e. excavation, trenching, grading, etc.), any projects that meet General Plan Program LU-22.1.5 criteria (within mapped archaeological sensitivity areas, or within 200 feet of a stream), a cultural resources records search must be performed at the Northwest Information Center (NWIC) of the California Historical Resources Information System for the project area. An archaeologist meeting the U.S. Secretary of the Interior's Standards (SOIS) for Archeology, must review the results and identify if the project would potentially impact cultural resources. If the archaeologist determines that known cultural resources or potential archaeological sensitivity areas may be impacted by the project, a pedestrian survey must be conducted under the supervision of SOIS-qualified archaeologist of all accessible portions of the project area, if one has not been completed within the previous 5 years. Additional research, subsurface testing, and/or a cultural resources awareness training may be required to identify, evaluate, and mitigate impacts to cultural resources, as recommended by the SOIS qualified archaeologist. A cultural report detailing the results of the research shall be prepared and submitted for review by the City and a final draft shall be submitted to the NWIC.

Mitigation Measure 4.4-2B: Inadvertent Discovery of Cultural Resources and/or Human Remains.

If pre-contact or historic-age archaeological resources are encountered during project construction and implementation, all construction activities within 100 feet shall halt and the City shall be notified. Pre-contact archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or

shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-age materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. An archaeologist meeting the U.S. Secretary of the Interior's Standards (SOIS) for Archeology shall inspect the findings within 24 hours of discovery.

If the City determines that the resource qualifies as a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines) and that the Project has potential to damage or destroy the resource, mitigation shall be implemented in accordance with PRC Section 21083.2 and CEQA Guidelines Section 15126.4, with a preference for preservation in place. If preservation in place is feasible, this may be accomplished through one of the following means as per Program LU-22.1.6 of the General Plan: (1) siting improvements to completely avoid the archaeological resource; (2) incorporating the resource into a park or dedicated open space, or by deeding the resource into a permanent conservation easement; (3) capping and covering the resource before building the project on the resource site after the resource has been thoroughly studied by a SOIS qualified archaeologist and a report written on the findings.

If avoidance is not feasible, the City shall consult with appropriate Native American tribes (if the resource is pre-contact), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3)

In the event of discovery of any human remains during project implementation, project construction activities within 100 feet of the find shall cease until the Contra Costa County Coroner has been contacted to determine that no investigation of the cause of death is required. The Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, if the Coroner determines the remains to be Native American in origin. The NAHC will then identify the person or persons it believes to be the most likely descendant from the deceased Native American (PRC Section 5097.98), who in turn would make recommendations to the City for the appropriate means of treating the human remains and any associated funerary objects (CEQA Guidelines Section 15064.5[d]).

Significance After Mitigation: Less than Significant. Implementation of Mitigation Measures 4.4-2A and 4.4-2B, would reduce the potential impact to a less-than-significant level because all projects with ground-disturbance would be reviewed by an SOIS qualified archaeologist and any potential archaeological resources identified, that may also be considered tribal cultural resources, would be evaluated and treated appropriately, including consulting with Native American representatives.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects. Significant cumulative impacts related to cultural resources could occur if the incremental impacts of the HEU combined with the incremental impacts of cumulative development identified in Section 4.0.3, *Cumulative Impacts*, would be significant and if the HEU's contribution to the significant impact is cumulatively considerable. The locations of the listed projects are shown in **Figure 4.0-1** in Section 4.0 of this EIR, *Introduction to Environmental Analysis*.

Impact 4.4-3: Implementation of the HEU, in combination with other cumulative development, could cause a substantial adverse change in the significance of architectural historic resources pursuant to CEQA Guidelines Section 15064.5. (Significant and Unavoidable Impact, with Mitigation)

The geographic context for the analysis of cumulative architectural historic resources impacts is cumulative development in the City of Lafayette.

Future development under the HEU as well as other residential projects within the City of Lafayette could potentially impact architectural historic resources that may be present. The cumulative effect of this future development is the continued loss of significant architectural historic resources. Potential future development increases the likelihood that additional architectural historic resources could be lost. It is therefore possible that cumulative development could result in the demolition or destruction of significant architectural historic resources. The loss of these resources would result in a significant impact, and impacts associated with the HEU would be considered cumulatively considerable, resulting in a **significant impact** for the HEU with Distributed Sites and the Downtown Only Alternative.

Implementation of Measures 4.1-A through 4.1-C, which would require previously unevaluated historic-age resources be evaluated, character-defining features of historic resources be identified, and documentation of those significant historic resources that would be altered or demolished, would reduce the severity of impacts associated with the HEU, but they would remain significant. As a result, the significant impact would be considered cumulatively considerable and a significant cumulative effect.

Mitigation Measure: Implement **Mitigation Measures 4.4-1A, 4.4-1B, and 4.4-1C.**

Significance After Mitigation: Because demolition or significant alteration of potential historical resources could result in a substantial adverse change in the significance of historical resources, no measures would fully mitigate these actions to a less-than-significant level. Therefore, even with implementation of Measures 4.4-1A, 4.4-1B, and 4.4-1C the impact would be **significant and unavoidable.**

Impact 4.4-4: Implementation of the HEU, in combination with other cumulative development, would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5 or a tribal cultural resource as defined in Public Resources Code Section 21074 or could disturb human remains, including those interred outside of formal cemeteries. (*Less than Significant Impact, with Mitigation*)

The geographic context for the analysis of cumulative archaeological resource and human remains impacts is cumulative development in the City of Lafayette.

Since much of Lafayette was developed prior to widespread awareness and concern about archaeological resources, or before implementation of regulations to protect such resources, it can be assumed that many significant pre-contact and historic-age archaeological resources have been disturbed or destroyed by construction work associated with the development of Lafayette over numerous decades of urban development.

Future development in the City under the HEU could include excavation and grading that could potentially impact archaeological resources and human remains that may be present. The cumulative effect of this future development is the continued loss of cultural remains. Excavations in the City of Lafayette have uncovered evidence of indigenous cultural presence in the area. Potential future development increases the likelihood that additional archaeological resources could be uncovered. It is therefore possible that cumulative development could result in the demolition or destruction of unique archaeological resources, which could contribute to the erosion of the pre-contact record of the region. The loss of these resources would result in a potentially significant cumulative impact, and the project's contribution would be cumulatively considerable prior to mitigation.

Though archaeological resources can sometimes be preserved when discovered during excavation, there is no guarantee that these resources can be protected and preserved. Both HEU scenarios would contribute a negligible **less than significant** impact after the implementation of Measures 4.4-2A and 4.4-2B, which would require a SOIS qualified archaeologist to conduct a review of discretionary projects, or projects near known cultural resources, or within archaeological sensitivity areas, prior to construction, the cessation of activities in the vicinity of finds, and tribal consultation when indigenous resources are inadvertently identified during project construction. As a result, the less-than-significant incremental impact would not be cumulatively considerable and thus would not combine with the incremental impact of other projects in the cumulative scenario to cause a significant cumulative effect.

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4.5 Energy

4.5.1 Introduction

This section evaluates the potential for the HEU to result in substantial adverse effects on energy. The Environmental Setting portion of this section summarizes the types of energy used and the provides most recent consumption data available. Existing plans and policies relevant to energy at the federal, state and local levels applicable to the implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to energy that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021, and a scoping meeting was held on August 16th, 2021. The NOP and the comments received during the public comment period can be found in Appendix A of this EIR. No comments relating to energy were received during the NOP comment period.

The information in this section has been prepared in accordance with Public Resources Code (PRC) Section 21100(b)(3), CEQA Guidelines Section 15126.2(b), and CEQA Guidelines Appendix F. CEQA Guidelines Section 15126.2(b) and Appendix F provide that an EIR should evaluate potential impacts of a proposed project as a result of the demand for energy during the project's construction and operational phases and encourage measures to avoid or reduce inefficient, wasteful, or unnecessary consumption of energy.

4.5.2 Environmental Setting

State Energy Profile

In 2019, total energy usage in California was 7,802 trillion British thermal units (Btu) (the most recent year for which these specific data are available), which equates to an average of 198 million Btu per capita per year. These figures place California second among the 50 states in total energy use and 50th in per-capita consumption. Of California's total energy usage, the breakdown by sector is roughly 39.4 percent transportation, 23.1 percent industrial, 18.8 percent commercial, and 18.7 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum-based fuel consumption is generally accounted for by transportation-related energy use (United States Energy Information Administration [USEIA], 2022).

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, coal, and nuclear gas generation resources. Approximately 70 percent of the electrical power needed to meet California's demand is produced in the state; the balance, approximately 30 percent, is imported from the Pacific Northwest and the Southwest. In 2020, California's in-state electricity use was derived from natural gas (48 percent); coal (< 1 percent); large hydroelectric resources (9 percent); nuclear sources (9 percent); renewable resources that include geothermal, biomass, small hydroelectric resources, wind, and solar (33 percent) (CEC, 2022a).

Regional Setting

Electricity

Electricity, as a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of resources—including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources—into useable energy. The delivery of electricity involves several system components for distribution and use. Electricity is distributed through a network of transmission and distribution lines commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours. For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on would be 100 watt-hours. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 watt-hours or 1 kilowatt-hour. On a utility scale, the capacity of a generator is typically rated in megawatts (MW), which is 1 million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours, which is one billion watt-hours.

Pacific Gas and Electric Company (PG&E) provides electrical and natural gas services to approximately 16 million people throughout its 70,000-square-mile service area in northern and central California, from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east (PG&E, 2022a). PG&E produces and purchases energy from a mix of conventional and renewable generating sources. Approximately 31 percent of PG&E’s 2020 electricity purchases were from renewable sources (PG&E, 2022b). Refer to **Table 4.5-1** for a summary of electricity use in the state and PG&E service area.

**TABLE 4.5-1
EXISTING ANNUAL STATE AND REGIONAL ENERGY USE**

Source	Amount
Electricity (State/PG&E) ^a	279,510 GWh / 78,519 GWh
Natural Gas (State/PG&E) ^a	1,232,858,394 MMBtu / 450,746,500 MMBtu
Gasoline (Statewide/Contra Costa County) ^b	12,572 million gallons / 336 million gallons
Diesel (Statewide/ Contra Costa County) ^b	4,254 million gallons / 56 million gallons

NOTES:

MMBtu = million British thermal units; MWh = megawatt-hours; PG&E = Pacific Gas and Electric Company.

SOURCES: ^a CEC, 2022b; ^b CEC, 2020a

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs and delivered through high-pressure transmission pipelines. Natural gas provides almost one-third of California’s total energy requirements and is measured in terms of both cubic feet and Btu.

PG&E provides natural gas transportation services to “core” customers and to “non-core” customers (industrial, large commercial, and natural gas-fired electric generation facilities) that

are connected to its gas system in its service territory. Core customers can purchase natural gas procurement service (natural gas supply) from either PG&E or non-utility third-party gas procurement service providers (referred to as “core transport agents”). When core customers purchase gas supply from a core transport agent, PG&E still provides gas delivery, metering, and billing services to those customers. When PG&E provides both transportation and procurement services, PG&E refers to the combined service as “bundled” natural gas service.

PG&E does not provide procurement service to non-core customers, who must purchase their gas supplies from third-party suppliers. PG&E offers backbone gas transmission, gas delivery (local transmission and distribution), and gas storage services as separate and distinct services to its non-core customers. Access to PG&E’s backbone gas transmission system is available for all natural gas marketers and shippers, as well as non-core customers. PG&E also delivers gas to off-system customers (i.e., outside of PG&E’s service territory) and to third-party natural gas storage customers. 2020 natural gas usage for the state and the PG&E service region are also shown in Table 4.5-1.

Transportation Energy

In 2021, 11.5 billion gallons of gasoline and 2.6 billion gallons of diesel fuel were consumed in California (CDTFA, 2022a, 2022b). Petroleum-based fuels currently account for more than 85 percent of ground transportation fuel use in California (USEIA, 2021).

The State is now working on developing flexible strategies to reduce petroleum used. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHG emissions from the transportation sector, and reduce vehicle miles traveled (VMT). Accordingly, total gasoline consumption in California has declined. According to fuel sales data from the California Energy Commission (CEC), fuel consumption in Contra Costa County was approximately 336 million gallons of gasoline and 56 million gallons of diesel fuel in 2020 (CEC, 2020a). Refer to Table 4.5-1 for a summary of statewide fossil fuel consumption in 2020.

Local Setting

The City of Lafayette has an Environmental Task Force that is committed to the development and implementation of environmentally conscious policies such as water-efficient landscape regulations, green building standards, and electric vehicle campaigns. This task force is focused on the energy use of the City, where a majority of the land is used for residential and commercial purposes. Residents and businesses have the option to choose between PG&E or Marin Clean Energy (MCE) as a provider to supply their power (City of Lafayette, 2022). By default, consumers in Lafayette are enrolled in MCE’s “light green” power supply, which is made up of 50-percent renewable power. MCE customers can also choose to opt-up to MCE’s “deep green” 100 percent renewable option or MCE’s “local sol” 100 percent local solar option. Consumers can also opt to keep PG&E as their energy provider, whose energy clicks in at about 30-percent renewables at any time.

4.5.3 Regulatory Setting

Federal

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA) serves as the underlying authority for federal energy management goals and requirements. Signed into law in 1978, NECPA has been regularly updated and amended by subsequent laws and regulations. This law is the foundation of most federal energy requirements. NECPA established energy-efficiency standards for consumer products and includes a residential program for low-income weatherization assistance, grants, and loan guarantees for energy conservation in schools and hospitals, and energy-efficiency standards for new construction. New and continuing initiatives in these areas are ongoing.

Energy Policy Act of 1992

The Energy Policy Act of 1992 was enacted to reduce U.S. dependence on foreign petroleum and improve air quality. This law includes several provisions intended to build an inventory of alternative-fueled vehicles in large, centrally-fueled fleets in metropolitan areas. The Energy Policy Act of 1992 requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty alternative fuel vehicles capable of running on alternative fuels each year. Financial incentives are also included. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of alternative fuel vehicles. The Energy Policy Act of 1992 also requires states to consider a variety of incentive programs to help promote alternative-fuel vehicles.

Energy Policy Act of 2005

The Energy Policy Act of 2005 includes provisions for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), signed in 2007, strengthens the key energy management goals for the federal government and sets more challenging goals than the Energy Policy Act of 2005. The energy reduction and environmental performance requirements of Executive Order 13423 were expanded upon in Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance), which was signed in 2009.

Corporate Average Fuel Economy Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. Congress has specified that CAFE standards must be set at the “maximum feasible level” with consideration given to

(1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) the need for the nation to conserve energy.¹

Fuel-efficiency standards for medium- and heavy-duty trucks have been jointly developed by EPA and NHTSA. The Phase 1 heavy-duty truck standards applied to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014–2018, and required a reduction in fuel consumption by 6 to 23 percent over the 2010 baseline, depending on the vehicle type (USEPA, 2011). EPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021–2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline, depending on the compliance year and vehicle type (USEPA, 2016).

In September 2019, USEPA finalized the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program and announced its decision to withdraw the Clean Air Act preemption waiver granted to the State of California in 2013 (USEPA & NHTSA, 2019).

Influence of the U.S. Department of Transportation, U.S. Department of Energy, and U.S. Environmental Protection Agency on Transportation Energy

On the federal level, the U.S. Department of Transportation, U.S. Department of Energy, and EPA have substantial influence over energy policies related to fuel consumption in transportation. Generally, federal agencies influence transportation energy consumption by establishing and enforcing fuel economy standards for automobiles and light trucks, and by funding projects for energy-related research and development for transportation infrastructure.

State

California Public Utilities Commission

The California Public Utilities Commission (CPUC) is a state agency created by a constitutional amendment to regulate privately owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation services, and in-state moving companies. The CPUC is responsible for assuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The CPUC regulates the planning and approval for the physical construction of electric generation, transmission, and distribution facilities, and the local distribution pipelines for natural gas.

California Energy Commission

The CEC is the primary energy policy and planning agency in California. Created by the California Legislature in 1974, the CEC has five major responsibilities: (1) forecast future energy needs and keep historical energy data; (2) license thermal power plants 50 MW or larger; (3) promote energy efficiency through appliance and building standards; (4) develop energy technologies

¹ For more information on the CAFE standards, refer to <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>.

and support renewable energy; and (5) plan for and direct the state response to energy emergencies.

Senate Bill 1389

Senate Bill (SB) 1389 (PRC Sections 25300–25323) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the electricity, natural gas, and transportation fuel sectors in California, and to provide policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state economy; and protect public health and safety (PRC Section 25301(a)).

The 2019 Integrated Energy Policy Report provides the results of CEC assessments on a variety of energy issues facing California:

- Energy efficiency;
- Strategies related to data for improved decisions in the Existing Buildings Energy Efficiency Action Plan;
- Building energy efficiency standards;
- The impact of drought on California’s energy system;
- Achieving 50 percent renewables by 2030;
- The California Energy Demand Forecast;
- The Natural Gas Outlook;
- The Transportation Energy Demand Forecast;
- Alternative and Renewable Fuel and Vehicle Technology Program benefits updates;
- An update on electricity infrastructure in Southern California;
- An update on trends in California sources of crude oil;
- An update on California nuclear plants; and
- Other energy issues.

California Global Warming Solutions Act of 2006

In 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (codified in the California Health and Safety Code, Division 25.5), which focused on reducing GHG emissions in California to 1990 levels by 2020. Under Health and Safety Code Division 25.5, the California Air Resources Board (CARB) has the primary responsibility for reducing GHG emissions in California; however, AB 32 also tasked the CEC and CPUC with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

In 2016, Governor Jerry Brown signed SB 32 and its companion bill, AB 197. SB 32 and AB 197 amended Health and Safety Code Division 25.5 and established a new climate pollution reduction

target of 40 percent below 1990 levels by 2030, with provisions to ensure that the benefits of state climate policies reach into disadvantaged communities. Refer to Section 4.7, *Greenhouse Gas Emissions*, for additional details regarding these statutes.

Senate Bills 1078, 107, and 100, and Executive Order S-14-08

The State of California adopted standards to increase the percentage of electricity that retail sellers, including investor-owned utilities and community choice aggregators, must provide from renewable resources. The standards are referred to as the Renewables Portfolio Standard (RPS). The reduces use of non-renewable energy sources, thereby reducing GHG emissions and other negative impacts that are associated with use of non-renewable, finite energy sources. The legislation requires utilities to increase the percentage of electricity obtained from renewable sources to 33 percent by 2020 and 50 percent by 2030.

On September 10, 2018, Governor Brown signed SB 100, which further increased the California RPS and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030. SB 100 also specifies that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045.

CPUC and the CEC jointly implement the RPS program. The responsibilities of the CPUC are to: (1) determine annual procurement targets and enforce compliance; (2) review and approve the renewable energy procurement plan of each investor-owned utility; (3) review contracts for RPS-eligible energy; and (4) establish the standard terms and conditions used in contracts for eligible renewable energy (CPUC, 2022). Refer to Section 4.7, *Greenhouse Gas Emissions*, for additional details regarding this program.

Assembly Bill 117 and Senate Bill 790

In 2002, the State of California passed AB 117, enabling public agencies and joint power authorities to form a Community Choice Aggregation (CCA). SB 790 strengthened it by creating a “code of conduct” that the incumbent utilities must adhere to in their activities relative to CCAs. CCAs allow a city, county, or group of cities and counties to pool electricity demand and purchase/generate power on behalf of customers within their jurisdictions in order to provide local choice. CCAs work with PG&E to deliver power to its service area. The CCA is responsible for the electric generation (procure or develop power) while PG&E is responsible for electric delivery, power line maintenance, and monthly billing.

California Building Standards Code (Title 24, Parts 6 and 11)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations [CCR] Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020. These standards include requirements for solar photovoltaic systems in all new

homes, requirements for newly constructed healthcare facilities that were previously not included, the encouragement of demand response and light-emitting diode (LED) technology for both residential and nonresidential buildings, and the use of more efficient air filters to trap hazardous particulates (CEC, 2020b).

The current (2019) version of the California Green Building Standards Code (CCR Title 24, Part 11) is commonly referred to as the CALGreen Code. The 2019 CALGreen Code includes mandatory measures for non-residential development related to site development, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality (California Buildings Standards Commission, 2019). The 2019 Energy Code includes provisions for smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential lighting requirements. The 2019 Energy Code aims to reduce energy use in new homes by requiring that all new homes include individual or community solar photovoltaic systems or community shared battery storage systems that achieve equivalent time-dependent value energy use reduction.

On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for or after January 1, 2023, must comply with the 2022 Energy Code.

Assembly Bill 1493

In 2019, the transportation sector accounted for approximately 40 percent of carbon dioxide equivalent (CO₂e) emissions in California (CARB, 2021a). AB 1493 (commonly referred to as the Pavley regulations), enacted on July 22, 2002, requires CARB to set GHG emissions standards for new passenger vehicles, light-duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009–2016 and Phase II established standards for model years 2017–2025 (CARB, 2013; USEPA, 2012). Refer to Section 4.7, *Greenhouse Gas Emissions*, for additional details regarding this regulation.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions (13 CCR Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel-fueled commercial vehicles from idling for more than 5 minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Airborne Toxic Control Measure for Stationary Compression Ignition Engines

In 2004, CARB adopted an Airborne Toxic Control Measure to reduce public exposure to emissions of diesel particulate matter and criteria pollutants from stationary diesel-fueled compression ignition engines (17 CCR Section 93115). The measure applies to any person who owns or operates a stationary compression ignition engine in California with a rated brake horsepower greater than 50, or to anyone who either sells, offers for sale, leases, or purchases a stationary compression ignition engine. This measure outlines fuel and fuel additive requirements; emissions standards; recordkeeping, reporting and monitoring requirements; and compliance schedules for compression ignition engines.

Truck and Bus Regulation

In addition to limiting exhaust from idling trucks, in 2008 CARB approved the Truck and Bus Regulation to reduce the emissions of oxides of nitrogen and particulate matter from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. This regulation will be implemented in phases, with full implementation by 2023.

CARB also promulgated emissions standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installing diesel soot filters and encouraging the retirement, replacement, or repowering of older, dirtier engines with newer emissions-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

California Air Resources Board Advanced Clean Trucks Program

On June 25, 2020, CARB adopted the Advanced Clean Trucks rule, which requires truck manufacturers to transition from diesel vehicles to electric zero-emission vehicles beginning in 2024, with the goal of reaching 100 percent zero-emission vehicles by 2045. The goal of the legislation is to help California meet its climate targets of a 40 percent reduction in GHG emissions and a 50 percent reduction in petroleum use by 2030, and an 80 percent reduction in GHG emissions by 2050.

Truck manufacturers will be required to sell zero-emission vehicles as an increasing percentage of their annual sales from 2024 through 2035. Companies with large distribution fleets (50 or more trucks) will be required to report information about their existing fleet operations in an effort to identify future strategies for increasing zero-emission fleets statewide (CARB, 2021b).

Zero-emission vehicles are two to five times more energy efficient than diesel vehicles, and the Advanced Clean Trucks rule will reduce GHG emissions with the co-benefit of reducing dependence on petroleum fuels.

California Air Resources Board Advanced Clean Car Program

The Advanced Clean Cars emissions-control program, approved by CARB in 2012, is closely associated with the Pavley regulations (CARB, 2013). The program requires a greater number of zero-emissions vehicle models for years 2015 through 2025, to control smog, soot, and GHG emissions. This program includes the Low-Emissions Vehicle regulations to reduce emissions of criteria air pollutants and GHGs from light- and medium-duty vehicles; and the Zero-Emissions Vehicle regulations, which require manufacturers to produce an increasing number of pure zero-emissions vehicles (battery and fuel cell electric vehicles) and include the provision to produce plug-in hybrid electric vehicles between 2018 and 2025. The increase in low- and zero-emissions vehicles will result in a decrease in the consumption of non-renewable fuels such as gasoline and diesel.

Sustainable Communities and Climate Protection Act of 2008 (SB 375)

Signed into law on October 1, 2008, SB 375 supplements the GHG emissions reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, CARB approved GHG reduction targets in February 2011 for California's 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations. The target reductions for the Bay Area are a regional reduction of per-capita CO₂ emissions from cars and light-duty trucks by 7 percent by 2020 and by 15 percent by 2035, compared to a 2005 baseline. The Association of Bay Area Governments (ABAG) addresses these goals in *Plan Bay Area*, which identifies Priority Development Areas near transit options to reduce use of on-road vehicles.

California Environmental Quality Act

Under CEQA (PRC Section 21100(b)(3)), EIRs are required to discuss the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. If the analysis of a proposed project shows that the project may result in significant environmental effects due to the wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources, then the EIR must identify mitigation measures to address that energy use. This analysis should include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include project size, location, orientation, equipment use, and any renewable energy features that could be incorporated into the project (CEQA Guidelines Section 15126.2(b)).

CEQA Guidelines Appendix F lists the energy-related topics that should be analyzed in the EIR, and more specifically identifies the following topics for consideration in the evaluation of energy impacts in an EIR, to the extent the topics are applicable or relevant to the proposed project:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.

- The effects of the project on peak and base-period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.²

The effects of the project relevant to each of these issues are addressed in this section.

Regional

Plan Bay Area 2040

The Metropolitan Transportation Commission (MTC) is the federally recognized Metropolitan Planning Organization for the nine-county Bay Area, which includes Contra Costa County. On July 18, 2013, *Plan Bay Area* was jointly approved by ABAG's Executive Board and the MTC (MTC & ABAG, 2013). The plan includes the region's Sustainable Communities Strategy, as required under SB 375, and the 2040 Regional Transportation Plan. The Sustainable Communities Strategy lays out how the region will meet GHG reduction targets set by CARB. CARB's current targets call for the region to reduce per-capita vehicular GHG emissions 10 percent by 2020 and 19 percent by 2035 from a 2005 baseline (CARB, 2018).

A central GHG emissions reduction strategy of *Plan Bay Area* is to concentrate future growth in Priority Development Areas (PDA) and Transit Priority Areas (TPA). To be eligible for designation as a PDA, an area must be within an existing community, near existing or planned fixed transit or served by comparable bus service and planned for more housing. A TPA is defined in California Public Resource Code, Section 21099 as an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan. The BAAQMD and the Bay Conservation and Development Commission designated downtown Lafayette as a PDA, as part of their regional planning initiative. The PDA designation does not demand growth; however, it may support the growth that the City is planning and experiencing. This designation will enable the City to establish guidelines and policies to foster and guide growth through technical assistance, planning grants, and capital grants. Planning Areas 1 through 6 and 13 identified by the HEU with the Distributed Sites would be located within the PDA, while areas 7, 8 and 9 would not be. Under the Downtown-Only Alternative, all identified planning areas would be located within the PDA (City of Lafayette, 2013).

On July 26, 2017, the MTC adopted *Plan Bay Area 2040*, a focused update that builds upon the growth pattern and strategies developed in the original *Plan Bay Area*, but with updated planning

² CEQA Guidelines Appendix F(II)(C).

assumptions that incorporate key economic, demographic, and financial trends since the original plan was adopted (MTC & ABAG, 2017).

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to energy are listed below.

Goal OS-11: Reduce the consumption of non-renewable energy resources.

Policy OS-11.1: Energy Conservation Measures in Buildings. Encourage energy conservation in new development and the retrofit of existing structures.

Policy OS-11.2: City Services. The City will consider energy consumption impacts when selecting locations and types of services, buildings, and vehicles.

Goal H-1: Conserve and improve the existing housing supply to provide adequate, safe, and decent housing for all residents, with emphasis on maintaining the semi-rural character of the City.

Policy H-1.5: Energy Conservation, Sustainability and Climate Change. Promote available energy conservation programs and develop new programs to address sustainability and climate change issues.

4.5.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to energy are based on Appendix G of the *CEQA Guidelines*. Implementation of the HEU would have a significant impact on the environment if it would:

- Cause wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Methodology and Assumptions

This analysis considers the State CEQA Guidelines Appendix G thresholds, as described above, in determining whether the HEU's implementation would result in the inefficient, wasteful, or unnecessary use of energy. The evaluation is based on a review of regulations and determining their applicability to the HEU. As discussed earlier, there are several plans and policies at the federal, state and local levels to increase energy conservation and the use of renewable energy.

Consistency of the HEU with these regulations would also ensure that the HEU would not result in the inefficient, wasteful, or unnecessary use of energy.

Impacts and Mitigation Measures

Impacts

Impact 4.5-1: Implementation of the HEU would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction and operation or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (Less than Significant Impact)

The project consists of updating the City's General Plan Housing Element, and no actual development is proposed at this point that would produce environmental impacts. Implementation of the HEU with both the Distributed Sites and Downtown-Only Alternative would result in the development of housing required to meet the City of Lafayette's RHNA allocation. Construction and operation of the housing facilitate by the HEU's implementation and the rezoning of parcels to allow for greater densities than currently allowed within the City would increase energy consumption within the City. Future development facilitated by the HEU would be subject to project-level environmental review and approval of permits prior to construction and operation of new housing.

HEU with Distributed Sites and Downtown-Only Alternative

Development of housing proposed under both the HEU with Distributed Sites and the Downtown-Only Alternative would consume energy during both construction and operation. Operational energy use would primarily include building energy use and transportation use, with a smaller contribution from area sources.

Construction Equipment and Vehicles

Energy use during future housing construction would primarily occur in association with fuel use in construction equipment and vehicles. Energy use would vary throughout the construction period of projects based on the construction activities being performed and would cease upon completion of construction. Fuels used for construction would typically include diesel and gasoline; use of natural gas and electricity would be minimal.

Heavy-duty equipment associated with construction during development allowed for by the HEU would rely on diesel fuel, as would vendor trucks involved in delivery of materials to the individual construction sites and haul trucks exporting demolition material or other materials off site. Construction workers would travel to and from each of the parcels within the rezoning program throughout the duration of construction. Construction worker trips in light-duty vehicles would primarily be gasoline-powered.

All development proposed under the HEU would be subject to CARB's In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation (1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; (2) requires all vehicles to be reported to CARB

(using the Diesel Off-Road Online Reporting System) and labeled; (3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and (4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The fleet must either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the Best Achievable Control Technology requirements.

Construction activities would use fuel-efficient equipment consistent with federal and state regulations, such as fuel efficiency regulations in CARB's Pavley Phase II standards; the anti-idling regulation in 13 CCR Section 2485; and fuel requirements for stationary equipment in 17 CCR Section 93115 (concerning the Airborne Toxic Control Measures). In accordance with 13 CCR Sections 2485 and 2449, idling by commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower would be limited to a maximum of five minutes. The intent of these regulations is to reduce construction emissions; however, compliance with the anti-idling and emission reduction regulations discussed above would also result in fuel savings from the more efficient use of equipment.

The diesel and gasoline use for construction activities would be temporary and constitute a small fraction of the regional usage; therefore, the construction energy demand of the HEU would be within the supply and infrastructure service capabilities of PG&E and MCE and would not require additional local or regional capacity.

Overall, construction activities that would be required as part of implementation of the HEU would not be unusual as compared to overall local and regional demand for energy resources and would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or state. Therefore, the HEU would not result in the inefficient, wasteful, or unnecessary consumption of energy during construction. Therefore, impacts would be less than significant, and no mitigation is required.

Operational Building Efficiency

Future housing development would require electricity for building operation (e.g., appliances, lighting, air conditioning) and natural gas for various purposes including but not limited to, space heating, water heating and in cooking appliances. Prior to development at individual parcel sites, applicants would be required to ensure that proposed development would meet Title 24 requirements applicable at that time, as required by state regulations through their plan review process. Title 24 reduces energy use in residential and commercial buildings through progressive updates to both the Green Building Standards Code (Title 24, Part 11) and the Energy Efficiency Standards (Title 24, Part 6). Title 24 standards are updated periodically (every 3 years). Provisions added to Title 24 over the years include consideration and incorporation of new energy efficiency technologies and methods for building features such as space conditioning, water heating, and lighting, as well as construction waste diversion goals. Additionally, some standards focus on larger energy-saving concepts such as reducing loads at peak periods and seasons, improving the quality of energy-saving installations, and performing energy system inspections.

Past updates to the Title 24 standards have proven very effective in reducing building energy use; the 2013 update to the energy efficiency standards was estimated to reduce energy consumption in residential buildings by 25 percent relative to the 2008 standards (CEC, 2012). The current 2019 Title 24 standards further reduce energy use compared to the 2016 standards, with single-family residential savings of 79 percent for electricity and 9 percent for natural gas. For low-rise multi-family buildings, savings are 79 percent for electricity and 5 percent for natural gas by requiring photovoltaic (PV) systems for new low-rise residential buildings under three stories (CEC, 2018).

Implementation of development envisioned under the HEU would occur between 2023 and 2040. Thus, further energy use reductions beyond the current 2019 standards can be anticipated from future Title 24 code revision cycles, as building permits are issued at future dates corresponding to those code updates. Goals and policies encouraged by the City, including those set forth in the City's General Plan also support increased energy conservation in new development, such as that which would occur under the HEU. These requirements would decrease the amount of energy required for building operation and ensure that building energy use related to development facilitated by the HEU would not be inefficient or wasteful.

In addition, as part of the RPS program detailed earlier, electric utilities including investor-owned utilities and community choice aggregators are required to increase the percentage of electricity provided from renewable resources. Though the RPS program does not necessarily increase energy efficiency, implementation of this program reduces use of non-renewable energy sources. The legislation requires utilities to increase the percentage of electricity obtained from renewable sources to 33 percent by 2020 and 50 percent by 2030. SB 100 furthered these standards to require electric utilities to procure eligible renewable electricity for 44 percent of retail sales by 2024, 52 percent by 2027, and 60 percent by December 2030. SB 100 also specifies that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. CPUC and the CEC jointly implement the RPS program and PG&E and MCE, electric utility providers to the City of Lafayette are required to adhere to these standards and deadlines. Therefore, housing developed as part of the HEU would be consistent with these regulations.

Transportation

Vehicle trips generated by housing developed pursuant to the HEU would increase use of transportation fuels, primarily gasoline and diesel. Enhanced fuel economies realized pursuant to federal and state regulatory actions such as increasingly stringent CAFE/Pavley standards for vehicle fuel efficiency, and transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would decrease future gasoline fuel demands per VMT. Additionally, the location of the parcels identified for development by HEU proximate to regional and local roadway systems and transit facilities reduces VMT within the region, acting to also reduce regional vehicle energy demands. Furthermore, approval of the HEU itself, as a policy document update, would not change these regulations and would not provide any goals, policies, or programs that would result in transportation energy consumption. Therefore, transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary and the HEU would be consistent with regulations to reduce transportation energy use.

Considering these requirements, energy use associated with the construction and operation of housing facilitated by the HEU would not be considered unnecessary and wasteful and would be consistent with all applicable plans, policies and regulations developed to encourage energy conservation and renewable energy use. Therefore, impacts would be **less than significant**.

Though this would be a less than significant impact, Mitigation Measure 4.7-1, presented in Section 4.7 of this EIR (*Greenhouse Gas Emissions*), would further help increase the amount of renewable energy used by the HEU with both Distributed Sites and Downtown-Only Alternative by reducing the consumption of non-renewable fuels such as natural gas in buildings and petroleum based transportation fuels. Mitigation Measure 4.7-1a, also in Section 4.7, would require housing development proposed as part of the HEU to be all electric construction with no natural gas infrastructure. While this would increase the electricity use associated with the development, the increasing percentage of electricity from renewable sources provided by PG&E and MCE in response to RPS standards would result in a transition from the use of non-renewable energy to cleaner, renewable energy sources.

In addition, Mitigation Measure 4.2-3b, presented in Section 4.2 of this EIR, *Air Quality*, requires the use of cleaner construction equipment meeting the USEPA's Tier 4 Final standards if subsequent projects proposed as part of the HEU are found to generate construction emissions in excess of the BAAQMD's project-level construction thresholds. Newer equipment meeting the Tier 4 Final standards would also be energy efficient when compared to older equipment, which would further reduce energy use during construction.

Mitigation Measure: None required.

Cumulative Impacts

Cumulative impacts of the HEU related to the wasteful, inefficient, or unnecessary consumption of energy during construction and operation and the potential to conflict with or obstruct adopted energy conservation plans or violate energy efficiency standards would be the same as discussed under Impact 4.5-1. Energy consumption effects related to individual projects are localized and would not combine with similar effects in other locations. However, continued growth in the City of Lafayette and throughout PG&E and MCE's service areas could contribute to ongoing increases in demand for electricity and natural gas, which are discussed below.

Impact 4.5-2: Implementation of the HEU, in conjunction with cumulative development in the City, would not result in energy use that would be considered wasteful and unnecessary or conflict with or obstruct a state or local plan for renewable energy or energy efficiency under cumulative conditions. (*Less than significant*)

The HEU, in conjunction with cumulative development in the City, would increase housing in an already developed area and result in increased energy consumption. Potential impacts to energy resources from future housing development that is facilitated by the HEU would be site-specific and would require applications for development permits that would be evaluated on a case-by-

case basis. Each cumulative project would require separate discretionary approval and evaluation under CEQA, which would address potential energy consumption impacts, if any, and identify necessary mitigation measures, where appropriate. Additionally, any future housing development facilitated by the HEU would be subject to compliance with all federal, state, and local requirements for energy efficiency, including the California Energy Code Building Energy Efficiency Standards (CCR Title 24, Part 6), the CALGreen Code (CCR Title 24, Part 11), and SB 743. Consequently, future housing development facilitated by the HEU would not result in significant environmental impacts from the wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation; and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the HEU's contribution to the cumulative energy impact would be **less than significant** with both the HEU with Distributed Sites and Downtown-Only Alternative.

Mitigation Measure: None required.

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4.6 Geology and Paleontological Resources

4.6.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects on Geology and Paleontological Resources. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to these topics. Further below, existing plans and policies relevant to these topics associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to these topics that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relating to Geology and Paleontological Resources were received during the NOP comment period.

4.6.2 Environmental Setting

Regional Geology

The City of Lafayette is within the Coast Ranges geomorphic province, which is in the East Bay Region of the San Francisco Bay Area, approximately 9 miles east of the San Francisco Bay. The Coast Ranges are a northwest-trending mountain ranges and valleys that run along the Pacific coast from Santa Barbara to the Oregon border, subparallel to the San Andreas Fault Zone (CGS, 2002). The City of Lafayette is separated from Berkeley and Oakland by the Berkeley Hills to the west, and is bordered to the north by the Black Hills; the Diablo Foothills Regional Park and Mount Diablo is approximately 5 miles west, with the Las Trampas Regional Wilderness Park and Las Trampas Peak approximately 5 miles to the southwest.

Local Geology

Geologic mapping by Dibblee and Minch (2005) indicates that the surficial geology within the planning area is comprised of Holocene-age alluvium (Qa), Pliocene to late Miocene-age Orinda Formation (Tor), and Miocene-age Briones Sandstone (Tbr) and Monterey Formation (Tmc and Tms).

Holocene-age alluvium

These sediments date to the Holocene (recent – 11,700 years ago) and consist of pebble gravel, sand, and clay of valley areas (Dibblee and Minch, 2005a; 2005b). Due to the relatively young age of these deposits, they have low paleontological sensitivity at the surface; however, these sediments increase in age with depth, and therefore fossil resources may be encountered in the deeper levels of this unit [i.e., over 5,000 years, as defined by the Society for Vertebrate Paleontology (SVP), 2010]. While the exact depth at which the transition to older sediments is not known in the planning area, fossils have been discovered in central California as shallow as 5

to 10 feet below ground surface (Jefferson, 1991a; Jefferson, 1991b). However, given that the planning area is largely built out, the top several feet would be fill or highly disturbed alluvium and would be unlikely to contain recoverable or recognizable paleontological resources.

Orinda Formation

The Orinda Formation dates to the Pliocene (2.4 million to 5.3 million years before present) and late Miocene (5.3 million to 23 million years before present) and consists of interbedded bluish- and greenish-gray conglomerate, sandstone, siltstone, and grayish-red claystone (Poust, 2016).

The Orinda Formation has produced significant fossil finds including a plastron, carapace, and eggshell from a turtle, as well as horse and rodent remains (Poust, 2016). The closest of these localities, based on the University of California Museum of Paleontology (UCMP) records, is approximately 4.7 miles southwest of the planning area, which were discovered during the construction of the Caldecott Tunnel (Powell et al., 2019; UCMP, 2021a).

Briones Sandstone

The Briones Sandstone outcrops to the north, northeast, and northwest of the planning area (Dibblee & Minch, 2005a; Dibblee & Minch, 2005b). The Briones Sandstone dates to the late Miocene and consists of a medium grained, arkosic marine sandstone known to preserve fossils (Dibblee & Minch, 2005a; Dibblee & Minch, 2005b). Fossils from the Briones Sandstone include invertebrates such as echinoderms and mollusks as well as vertebrates such as *Desmostylus*, an extinct marine mammal somewhat similar to a hippopotamus (Chetelat, 1995). The closest fossil locality known to the UCMP was discovered near the San Pablo Dam (UCMP, 2021b). The Briones Sandstone has high paleontological sensitivity.

Monterey Formation

The Monterey Formation outcrops to the north, northeast, and northwest of the planning area. The Monterey Formation dates to the late- to middle-Miocene (between 13 and 5 million years before present) and generally consists of fine- to medium-grained, arkosic sandstone, clayey shale, and siltstone (Dibblee & Minch, 2005a; Dibblee & Minch, 2005b).

Soils

Expansive Soils

Expansive soils are soils that possess a “shrink-swell” characteristic, also referred to as linear extensibility. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying; the volume change is reported as a percent change for the whole soil. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater.¹ This cyclical change in soil volume is measured using the coefficient of linear extensibility (COLE) (NRCS, 2017). The Natural Resources Conservation Service (NRCS) relies on linear extensibility measurements to

¹ Perched groundwater is a local saturated zone above the water table that typically exists above an impervious layer (such as clay) of limited extent.

determine the shrink-swell potential of soils. If the linear extensibility percent is more than 3 percent (COLE=0.03), shrinking and swelling may cause damage to building, roads, and other structures (NRCS, 2017). Structural damage may occur incrementally over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

NRCS Web Soil Survey data indicates a majority of the soils underlying the planning area have between a 6.9 and 9.4 percent linear extensibility rating, which is considered a high to very high linear extensibility rating (NRCS, 2021a). There is a small portion of the Downtown East End (South) area is within an area that has a low to moderate linear extensibility rating (NRCS, 2021a).

Geologic Hazards

Faulting

There are no known Holocene-active² faults within the planning area (CGS, 2010). There are two pre-Holocene³ faults within the planning area: the Southhampton and Franklin faults (CGS, 2010). The active Calaveras, Hayward, and Concord fault zones are present in the region, outside of the planning area (CGS, 2021).

Surface Fault Rupture

The State Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) prohibits the development of structures for human occupancy across active fault traces. Under this Act, the California Geological Survey (CGS) has established “Zones of Required Investigation” on either side of an active fault that delimits areas susceptible to surface fault rupture. The zones are referred to as Earthquake Fault Zones (EFZs) and are shown on official maps published by the CGS. Surface rupture occurs when the ground surface is broken due to a fault movement during an earthquake; typically, these types of hazards occur within 50 feet of an active fault.

The planning area is not within an established EFZ; the nearest EFZs are the Calaveras fault zone (approximately 4.4 miles to the southeast of the Downtown East [South]), Hayward fault zone (approximately 5.2 miles to the southwest of the De Silva Sites area) and the Concord fault zone (approximately 5.6 miles to the northeast of the Downtown East [South]) (CGS, 2021).

Seismic Ground Shaking

Ground shaking occurs due to a seismic event and can cause extensive damage to life and property, and may affect areas hundreds of miles away from the earthquake’s epicenter. The extent of the damage varies by event and is determined by several factors, including (but not limited to) magnitude and depth of the earthquake, distance from epicenter, duration and intensity of the shaking, underlying soil and rock types, and the integrity of structures.

² Holocene-active faults show evidence of displacement within the Holocene Epoch, or the last 11,700 years are considered active (CGS 2008).

³ Pre-Holocene faults have not shown evidence of displacement in the last 11,700 years (CGS 2008).

The entire San Francisco Bay Area, including the City of Lafayette, could be subject to strong groundshaking during earthquakes. The 2014 Working Group on California Earthquake Probabilities (WGCEP)⁴ concluded that there is a 72 percent probability that a magnitude (M_w) 6.7 earthquake or higher could occur in the San Francisco Bay Area before the year 2045 (Field et al., 2015). Further, the Hayward fault zone is considered to have a 32 percent probability (Field et al., 2015).

According to the ShakeMap that corresponds with the earthquake planning scenario generated by the USGS, if a large earthquake were to occur on either of the active faults in the region (i.e., the Hayward and/or Concord fault zones), the planning area could experience strong to very strong seismic groundshaking (USGS, 2016a; USGS, 2016b).

Liquefaction and Lateral Spreading

Liquefaction is a phenomenon in which unconsolidated, water saturated sediments become unstable due to the effects of strong seismic shaking. During an earthquake, these sediments can behave like a liquid, potentially causing severe damage to overlying structures. Lateral spreading is a variety of minor landslide that occurs when unconsolidated liquefiable material breaks and spreads due to the effects of gravity, usually down gentle slopes. Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore-pressure buildup or liquefaction in a shallow underlying deposit during an earthquake. The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of ground shaking, particle-size distribution, and density of the soil.

The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of structure slabs due to sand boiling, and buckling of deep foundations due to ground settlement. Dynamic settlement (i.e., pronounced consolidation and settlement from seismic shaking) may also occur in loose, dry sands above the water table, resulting in settlement of and possible damage to overlying structures. In general, a relatively high potential for liquefaction exists in loose, sandy soils that are within 50 feet of the ground surface and are saturated (below the groundwater table). Lateral spreading can move blocks of soil, placing strain on buried pipelines that can lead to leaks or pipe failure.

As previously discussed, the surficial geology underlying the planning area includes Holocene alluvium (Qa) and Orinda Formation (Tor). Groundwater data provided by the State Water Resources Control Board (SWRCB) GeoTracker database indicates that the depth to groundwater within the planning area is between 3 and 36 feet below ground surface (bgs) (SWRCB, 2020; SWRCB, 2021). Additionally, liquefaction susceptibility assessment mapping by Witter et al. (2006) indicates that the alluvial deposits mapped within the planning area are considered to have a moderate liquefaction susceptibility potential (Witter et al., 2006). The available data suggests

⁴ Also referred to as WGCEP 2014, this is a working group comprised of seismologists from the U.S. Geological Survey (USGS), California Geological Survey (CGS), Southern California Earthquake Center (SCEC), and California Earthquake Authority (CEA).

that the liquefaction potential within the planning area is—at the very least—moderate, with potentially higher risk areas within portions of the City.

Landslides

Landslides are one of the various types of downslope movements in which rock, soil, and other debris are displaced due to the effects of gravity. The potential for material to detach and move down slope depends on multiple factors including the type of material, water content, and steepness of terrain. Generally, earthquake-induced landslides occur within deposits of a moderate to high landslide potential, when ground shaking triggers slope failures during or as a result of a nearby earthquake.

A majority of the planning area is within urban, previously developed land, and areas where the topography is relatively flat (i.e., areas within the alluvial deposits), where there is a low potential for landslide-related hazards. As previously mentioned, the geology within the planning area is primarily Holocene alluvium and Orinda Formation. Landslide hazard analysis by Haydon correlates the geologic units in the area with a specific landslide hazard risk, and each unit is given a specific landslide hazard rating; areas mapped as Holocene-age alluvium are given as least susceptible to landslides and the Orinda Formation deposits are rated as most susceptible (Haydon, 1995). According to geologic mapping, there is no evidence of previous landslides in either the alluvial deposits or the Orinda Formation in the planning area (Dibblee & Minch, 2005a; Dibblee & Minch, 2005b), however, landslide hazard analysis indicates that, historically, landslides are common to very common in the Orinda Formation (Haydon, 1995).

Subsidence

Land subsidence is the gradual settling or sudden sinking of the earth's surface due to subsurface movement of earth materials (USGS, 1999). Regional ground subsidence or settlement is typically caused by compaction of alluvial deposits, or other saturated deposits in the subsurface (USGS, 1999). Local subsidence can occur when areas containing compressible soils are subjected to foundation or fill loads. The extraction of groundwater or oil can also cause subsidence.

The Contra Costa County General Plan (2005) provides a flood hazard map in the Safety Element, which depicts Countywide flood hazard areas. A correlation is made between flood hazard areas and subsidence susceptibility; according to the map, portions of the planning area is within areas susceptible to subsidence (Contra Costa County, 2005).

Paleontological Resources

Paleontological resources are the mineralized (fossilized) remains of prehistoric plants and animals, including body fossils, such as bones, bark or wood, and shell, as well as trace fossils, such as shell, leaf, skin, or feather impressions, footprints, burrows, or other evidence of an organism's life or activity. These resources are located within sedimentary rocks or alluvium and are considered to be nonrenewable.

The Society of Vertebrate Paleontology (SVP) has established standard guidelines that outline professional protocols and practices for conducting paleontological resource assessments and surveys; monitoring and mitigation; data and fossil recovery; sampling procedures; and specimen preparation, identification, analysis, and curation (SVP, 2010). Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as provided in its standard guidelines.

The SVP (SVP, 2010: 11) defines a significant fossil resource as:

fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).

Based on the significance definitions of SVP (2010), all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely would a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment,⁵ and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

Paleontological sensitivity is defined as the potential for a geologic formation to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources*, the SVP (2010:1–2) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential:

- **High Potential:** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources.
- **Low Potential:** Rock units that are poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule.
- **Undetermined Potential:** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment.

⁵ A paleoenvironment is the past environment of an area during a given time period in the past.

- **No Potential:** Rock units like high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites) that will not preserve fossil resources.

As indicated by geologic mapping, the surficial geology within the planning area is composed of Holocene-age alluvium and Pliocene- to late Miocene-age Orinda Formation. However, given that the planning area is largely built out, surficial deposits would consist either of fill or highly disturbed alluvium with little to no potential for paleontological resources down to several feet. Although not mapped at the surface within the planning area, Pleistocene-age alluvium, the Miocene-age Briones Sandstone, and the Miocene-age Monterey Formation occur in the vicinity of the planning area and are expected to be present at variable unknown depths beneath the surficial deposits.

As discussed, in general, Holocene-age alluvial deposits are considered to have a low potential to contain significant paleontological resources, based on the relatively recent age of the deposits (SVP, 2010); the youngest Holocene-age deposits (i.e., younger than 5,000 radiocarbon years) have a particularly low potential. Deposits that date to the middle Holocene (i.e., older than 5,000 radiocarbon years) have a potential that increases as the depth into the deposits increases. In the case of the planning area, it is almost entirely underlain by Holocene-age alluvium with fill or highly disturbed alluvium in the top few feet. Older, Pleistocene-age deposits are mapped in the vicinity of the planning area and are inferred to be present beneath the Holocene deposits. In general, Pleistocene-age sedimentary deposits are considered to have a high potential to contain significant paleontological resources, as is evident by the numerous fossil discoveries throughout California (UCMP, 2021c; Sub Terra Consulting, 2017)—as well as within Contra Costa County (UCMP, 2021d). The exact transition from Holocene- to Pleistocene-age deposits is not known in the planning area; however, Pleistocene-age fossils have been encountered in Santa Clara County in deposits mapped as Holocene-age alluvium, indicating fossiliferous deposits have been encountered at shallow depths in Holocene-age alluvium (Maguire & Holroyd, 2016). Records that are available through the UCMP online fossil localities database indicate just one Holocene-age vertebrate fossil locality in Contra Costa County, and there are 65 recorded Pleistocene-age fossil localities (UCMP, 2021d). In summary, the surficial Holocene-age alluvial deposits are considered to have a low potential to contain significant paleontological resources, with the potential increasing to high within the deeper layers of the unit; any Pleistocene-age deposits encountered in the subsurface are considered to have a high potential to encounter significant paleontological resources.

The Orinda Formation occurs at the surface within the planning area. In addition to the possible Pleistocene-age deposits underlying the Holocene alluvium, deep excavations in the Holocene alluvium could expose deposits of the Orinda Formation as well. The UCMP database contains records for 23 vertebrate fossil localities from the Orinda Formation within Contra Costa County (UCMP, 2021a), as well as 3 vertebrate fossil localities from neighboring Alameda County (UCMP, 2021a). Based on the published literature and UCMP records (Jefferson, 1991; Poust, 2016; Powell et al., 2019; UCMP, 2021a), the Orinda Formation has a high potential to contain significant paleontological resources.

Records indicate that the nearby Briones Sandstone and Monterey Formation have been found to contain significant fossil resources as well (UCMP, no date; Bramlette, 1946; Chetelat, 1995; UCMP, 2021b, UCMP, 2021e).

4.6.3 Regulatory Setting

Federal

There are no federal regulations pertaining to Geology and Paleontology that are applicable to the proposed HEU.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to protect structures for human occupancy from the hazard of surface faulting. In accordance with the act, the State Geologist has established regulatory zones—called earthquake fault zones—around the surface traces of active faults, and has published maps showing these zones. Buildings for human occupancy cannot be constructed across surface traces of faults that are determined to be active. Because many active faults are complex and consist of more than one branch that may experience ground surface rupture, earthquake fault zones extend approximately 200 to 500 feet on either side of the mapped fault trace. This act does not apply to the Project because no active faults cross the Project site.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones, and cities, counties, and other local permitting agencies to regulate certain development projects within these zones. For projects that would locate structures for human occupancy within designated Zones of Required Investigation, the Seismic Hazards Mapping Act requires project applicants to perform a site-specific geotechnical investigation to identify the potential site-specific seismic hazards and corrective measures, as appropriate, prior to receiving building permits. The *CGS Guidelines for Evaluating and Mitigating Seismic Hazards* (Special Publication 117A) provides guidance for evaluating and mitigating seismic hazards (CGS, 2008). The CGS has completed a delineation for the USGS quadrangle in which project components are proposed; however, the City of Lafayette is not located within a designated Zones of Required Investigation.

California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate

and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2019 edition of the CBC is based on the 2018 International Building Code (IBC) published by the International Code Council, which replaced the Uniform Building Code (UBC). The code is updated triennially, and the 2019 edition of the CBC was published by the California Building Standards Commission on July 1, 2019, and took effect starting January 1, 2020. The 2019 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, Minimum Design Loads for Buildings and Other Structures, provides requirements for general structural design and includes means for determining earthquake loads⁶ as well as other loads (such as wind loads) for inclusion into building codes. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures should be able to (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some nonstructural damage; and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Seismic design specifications are determined according to the SDC in accordance with CBC Chapter 16. CBC Chapter 18 covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (Section 1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting

⁶ A load is the overall force to which a structure is subjected in supporting a weight or mass, or in resisting externally applied forces. Excess load or overloading may cause structural failure.

appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Requirements for geotechnical investigations are included in Appendix J, CBC Section J104, Engineered Grading Requirements. As outlined in Section J104, applications for a grading permit are required to be accompanied by plans, specifications, and supporting data consisting of a soils engineering report and engineering geology report. Additional requirements for subdivisions requiring tentative and final maps and for other specified types of structures are in California Health and Safety Code Sections 17953 to 17955 and in 2013 CBC Section 1802. Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

The design of the proposed homes and associated infrastructure would be required to comply with CBC requirements, which would make the Project consistent with the CBC.

National Pollutant Discharge Elimination System (NPDES) Construction General Permit

Project's that would disturb one acre or more of land surface and could affect the quality of stormwater discharges into waters of the U.S. would be subject to the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit regulates construction-related discharges of pollutants in stormwater to waters of the U.S. from sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines. See Section 4.9, *Hydrology and Water Quality*, for additional details.

Public Resources Code Section 5097.5 and Section 30244

State requirements for management of paleontological resources are included in Public Resources Code (PRC) Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts on paleontological resources from developments on public (state, county, city, district) lands.

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to Geology and Paleontology are listed below.

Goal OS-6: Improve water quality in watercourses.

Policy OS-6.1: Reduce Watercourse Pollution. Minimize pollutants in storm water runoff.

Goal OS-7: Protect and preserve soil as a natural resource.

Policy OS-7.1: Control Soil Erosion. Control soil erosion to prevent flooding and landslides, maintain water quality, and reduce public costs of flood control and watercourse maintenance.

Goal S-1: Minimize risks to Lafayette residents and property from landslide hazard in the City.

Policy S-1.1: Slope and Soil Stability. Consider slope and soil stability when reviewing future projects. Development proposals in areas with landslide hazards shall be reviewed by an engineering geologist to determine whether the proposed development is feasible, and to define the required construction standards and mitigation measures.

Policy S-1.2: Density and Location of Buildings. Limit building in areas with significant risk potential. Intensity of development shall be minimal in areas of high risk. Consider potential seismic or geologic hazards when determining building density and in siting dwellings.

Policy S-1.3: Roadways and Roadway Improvements. Prohibit new roadways or roadway modifications that would create unstable geological conditions. (An example would be cuts and fills in areas with unstable soils.)

Policy S-1.4: Creekbank Protection. Prohibit structures of any kind that might be impacted by creekbank slippage and erosion.

Goal S-2: Minimize risk to Lafayette residents and property from earthquakes.

Policy S-2.1: Seismic Hazards. New development, including subdivisions, new construction, and remodels or expansions of existing structures, shall minimize exposure to seismic hazards through site planning and building design.

Policy S-2.2: Areas of Significant Risk Potential. Locate construction of high density residential and other critical, high-occupancy or essential services buildings outside high risk zones.

Policy S-3.1: Reduce Flood Hazards. Reduce flood risk by maintaining effective flood drainage systems and regulating construction.

Goal S-3: Reduce flood hazards.

Policy S-3.3: Storm Drainage System. Maintain unobstructed water flow in the storm drainage system.

4.6.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to geology and paleontology are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project could have a significant impact on the environment if it would:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42,
 - ii. Strong seismic ground shaking,
 - iii. Seismic-related ground failure, including liquefaction,
 - iv. Landslides.
- b) Result in substantial soil erosion or the loss of topsoil;
- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- d) Be located on expansive⁷ soil creating substantial direct or indirect risks to life or property;
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;
- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Issues Not Discussed in Impacts

Rupture of a known earthquake fault: Based on the most current mapping, there are no known active faults or EFZs within the planning area. New developments proposed under either the HEU with Distributed Site or a Downtown-Only Alternative scenario would not be affected by any known active faults or EFZs as delineated by the State Geologist. Given the absence of any known active fault or EFZ, there would be no impact under this criterion, and this issue is not discussed further.

⁷ Appendix G cites Table 18-1-B of the 1994 Uniform Building Code. However, in California, expansive soils are currently defined in California Building Code (2019) Section 1803.5.3.

Methodology and Assumptions

Information for this assessment of impacts related to geology and paleontology is based on a review of information gathered from geologic maps, scientific literature, museum records, and data from the U.S. Geological Survey (USGS), CGS, and NRCS.

Because the Housing Element establishes policies, goals and guidelines, and describes potential housing development that may or may not be built on any particular site, environmental review of the HEU will necessarily be general.

Development activities associated with the HEU would be regulated by the various laws, regulations, and policies summarized in the Regulatory Setting. Compliance with applicable federal, state, and local laws and regulations is assumed in this analysis, and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. It should be noted that compliance with many of the regulations is a condition of permit approval.

A significant impact would occur if development activities associated with the HEU could not be mitigated for after consideration of applicable regulatory requirements. For those impacts considered to be significant, mitigation measures are proposed to reduce the identified impacts.

Impacts and Mitigation Measures

Impacts

Impact 4.6-1: Implementation of the HEU would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. (*Less than Significant Impact*)

HEU with Distributed Sites and Downtown-Only Alternative

Due to the proximity to the Calaveras, Hayward, and Concord fault zones, new developments proposed under either the HEU with Distributed Sites or a Downtown-Only Alternative scenario would be subject to strong seismic ground shaking in the event of an earthquake originating from one of the previously mentioned fault zones. Strong seismic ground shaking could potentially cause damage to new developments, resulting in loss, injury, or death.

As required by California law, any new developments would be subject to the seismic design criteria of the California Building Code (CBC), which requires that all improvements be constructed to withstand anticipated ground shaking from regional fault sources. Each new development would be required to obtain a site-specific geotechnical report prior to the issuance of individual grading permits; each new development would be required to retain a licensed geotechnical engineer to design new structures to withstand probable seismically induced ground shaking. The CBC standards require all new developments to be designed consistent with a site-specific, design-level geotechnical report, which would be fully compliant with the seismic recommendations of a California-registered professional geotechnical engineer. Adherence to the applicable CBC requirements would ensure that the HEU's implementation would not directly or

indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Therefore, impacts would be **less than significant**.

Mitigation Measure: None required.

Impact 4.6-2: Implementation of the HEU would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

HEU with Distributed Sites and Downtown-Only Alternative

Based on the available data (i.e., geologic mapping, liquefaction susceptibility mapping, and groundwater data), any new development in either the HEU with Distributed Sites or the Downtown-Only Alternative scenario would be subject to—at the very least—moderate soil liquefaction. New developments under the HEU would be subjected to the damaging effects of liquefaction in the event of an earthquake in the region.

As required by California law, any new developments would be subject to the seismic design criteria of the CBC, which requires that all improvements be constructed to withstand any anticipated seismic-related ground failures, including liquefaction, due to ground shaking from regional fault sources. Each new development would be required to obtain a site-specific geotechnical report prior to the issuance of individual grading permits; each new development would be required to retain a licensed geotechnical engineer to investigate and evaluate each new development site and design new structures to withstand probable seismic-related ground failures, such as liquefaction. The CBC standards require all new developments to be designed consistent with a site-specific, design-level geotechnical report, which would be fully compliant with the seismic recommendations of a California-registered professional geotechnical engineer. Liquefaction hazards can generally be addressed through site preparation measures or foundation design measures such as removal and replacement of liquefiable soils, densification of these soils, or specific foundation design recommendations. Implementation of these measures in accordance with building code requirements can effectively reduce the hazard to minimize any potential for substantive damage.

Compliance with all applicable CBC requirements would ensure that implementation of the HEU would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Therefore, impacts would be **less than significant**.

Mitigation Measure: None required.

Impact 4.6-3: Implementation of the HEU would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

HEU with Distributed Sites and Downtown-Only Alternative

A majority of the planning area is within urban, previously developed land with relatively flat topography and little to no landslide risk. Landslide hazard analyses suggest that areas that are mapped as Holocene alluvium are the areas least susceptible to landslide hazards; areas mapped as Orinda Formation are the most susceptible to landslide hazards. Therefore, any new developments within or adjacent to outcrops of the Orinda Formation are at risk of being affected by landslide hazards.

As previously stated, all new developments will be required to have geotechnical investigations performed prior to construction of any new structures. Each specific final, design-level geotechnical report would include specific design requirements that would inform the structural and geotechnical engineering as it related to slope stability, as required by the CBC. Implementation of these geotechnical design requirements can effectively reduce any potential hazard associated with earthquake-induced landslides.

Compliance with CBC requirements, including implementation of recommendations provided in site-specific geotechnical reports would reduce or avoid impacts related to landslides. Implementation of the HEU would not directly or indirectly result in adverse effects related to landslides, and the impact would be **less than significant**.

Mitigation Measure: None required.

Impact 4.6-4: Implementation of the HEU would not result in substantial soil erosion or the loss of topsoil. (*Less than Significant*)

HEU with Distributed Sites and Downtown-Only Alternative

New developments under either the HEU with Distributed Sites or the Downtown-Only Alternative scenario would include ground disturbance activities, such as grading, grubbing, or mass excavation. These ground disturbing activities are some examples of activities that could contribute to substantial soil erosion or the loss of topsoil. Any new development that would require the disturbance of one or more acres during construction would be subject to the requirements of the National Pollutant Discharge and Elimination System (NPDES) General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities (Construction General Permit). The NPDES permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which would include Best Management Practices (BMPs) designed to control and reduce soil erosion. The BMPs may include dewatering procedures, storm water runoff quality control measures, watering for dust control, and the construction of silt fences, as needed. Compliance with this independently enforceable existing requirement, and implementation of these soil and erosion control measures would ensure that impacts related to erosion and soil loss would be **less than significant**.

Mitigation Measure: None required.

Impact 4.6-5: Implementation of the HEU would not result in projects that would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potential result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (*Less than Significant*)

HEU with Distributed Sites and Downtown-Only Alternative

As discussed above, areas included in both the HEU with Distributed Sites and Downtown-Only Alternative scenario boundaries would be subject to the potential effects of unstable soils. Any new developments that are proposed in areas determined to be susceptible to geotechnical hazards (e.g., liquefaction or landslide) would be subject to the damaging effects of these hazards. Also discussed above, is the requirement that subjects all new developments to the building standards of the CBC. Included in this requirement is the obligation to retain a geotechnical engineer to analyze the conditions at each specific new development site. Geotechnical investigations include the analysis of potential unstable soil conditions at a site. If unstable soil conditions are determined to be present at a given site, the geotechnical report specific to that site would include site-specific design requirements to implement to reduce or avoid adverse effects associated with unstable soils.

Compliance with CBC requirements, including implementation of recommendations provided in site-specific geotechnical reports would reduce or avoid impacts related to unstable soils. Implementation of the HEU would not directly or indirectly result in adverse effects related to unstable soils, and the impact would be **less than significant**.

Mitigation Measure: None required.

Impact 4.6-6: Implementation of the HEU would not result in projects that would be located on expansive soil creating substantial direct or indirect risks to life or property. (*Less than Significant*)

HEU with Distributed Sites and Downtown-Only Alternative

Web Soil Survey data suggests that expansive soils are present within a majority of the planning area. Both the HEU with Distributed Sites and Downtown-Only Alternative scenarios would include new developments within areas of high to very high soil expansion potential. Analysis of expansive and soils is standard during geotechnical investigations, as the CBC outlines specific soil engineering parameters to identify and mitigate for expansive soils. If expansive soils are detected during the geotechnical investigation process further laboratory testing is warranted to determine the exact nature of the affected soils, which will inform the specific soil engineering requirements.

Compliance with the CBC requirement to determine the potential for expansive soils for each individual new development that could be constructed under the HEU, would ensure that all problematic soils are identified and soil engineering requirements are implemented. Soil engineering is used to adjust the existing problematic properties of certain soils so that they are suitable for new developments. Adherence to the requirements of the CBC and geotechnical investigation would avoid impacts resulting from potentially expansive soils. Implementation of the HEU would not create substantial direct or indirect risks to life or property related to expansive soils, and impacts would be **less than significant**.

Mitigation Measure: None required.

Impact 4.6-7: Implementation of the HEU would not result in projects that would not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water. (*Less than Significant Impact*)

HEU with Distributed Sites and Downtown-Only Alternative

All or most of the new developments under either the HEU with Distributed Sites or Downtown-Only Alternative scenarios would generate waste water. Most new development would connect to existing sewer lines, and on-site septic tanks and alternative waste water disposal systems would be rare, if allowed at all. Web Soil Survey septic tank absorption field data suggests that all of the land in the planning area is considered very limited and may have one or more features that are unfavorable to septic tank usage (NRCS, 2021b). Any new development that would include the utilization of a septic tank or alternative waste water disposal system, would be regulated by the Contra Costa Health Services Environmental Health Division. Obtaining a permit would be required prior to the construction of any septic tank or alternative waste water disposal system, and each system would be constructed within the parameters of the State Water Resources Control Board (SWRCB) Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (SWRCB, 2012), as well as the Contra Costa County Health Officer Regulations for Sewage Collection and Disposal (Contra Costa County, 2018). As this procedure would be required prior to construction of any and all septic tanks and alternative waste water disposal systems, all new developments would be subject to these state and local requirements. Proper soils are essential for installation and maintenance of septic tank and alternative waste water disposal systems; compliance with these state and local requirements would ensure that impacts related to adequate soils for supporting such systems is **less than significant**.

Mitigation Measure: None required.

Impact 4.6-8: Implementation of the HEU would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (*Less than Significant Impact, with Mitigation*)

HEU with Distributed Sites and Downtown-Only Alternative

Geologic mapping indicates that the surficial deposits within the planning area are composed of Holocene-age alluvium and the Pliocene- to late Miocene-age Orinda Formation. Additionally, although not mapped at the surface within the planning area, Pleistocene-age alluvium, Miocene-age Briones Sandstone, and Miocene-age Monterey Formation occurs in the vicinity of the planning area. However, given that the planning area is largely built out, the top several feet would consist of fill or highly disturbed alluvium, which would not contain paleontological resources.

A review of geologic maps of the area, UCMP online fossil localities database, and available scientific literature indicates that the Holocene-age alluvium has a low potential to contain significant paleontological resources near the surface, but the potential increases in the deeper, older layers of these deposits. The review further indicates that the Orinda Formation is considered to have a high potential to contain significant paleontological resources, due to the numerous previous fossil discoveries within the formation from Contra Costa County.

The addition of new developments in the planning area, under both the HEU with Distributed Sites and the Downtown-Only Alternative scenarios, would require grading and excavation during the construction phases of future projects. Paleontological resources may be encountered in deep excavations (generally, approximately 6 or more feet bgs, depending on project and site-specific information) into previously undisturbed Holocene-age alluvium (where Pleistocene-age sediments could be present beneath the surface). Excavations at any depth in previously undisturbed deposits of the Orinda Formation have the potential to encounter significant paleontological resources, and deeper excavations into this formation may expose the older Briones Sandstone and Monterey Formation. If significant paleontological resources are encountered and inadvertently destroyed during construction of new developments, that would constitute a **potentially significant impact**.

To ensure potential impacts to significant paleontological resources are less than significant **Mitigation Measure 4.6-1: Determination of Paleontological Potential** would be required to ensure that each new development that includes disturbing soil at depths of 6 or more feet will undergo individual CEQA analyses and be assigned paleontological sensitivity specific to each site based on site-specific project information (i.e., the extent of ground disturbance and potential geologic units that would be encountered). Based on the project-specific details, individual paleontological resource assessment reports will be prepared and would include appropriate mitigation to be implemented to reduce potential impacts to significant paleontological resources.

Mitigation Measures

Mitigation Measure 4.6-1: Determination of Paleontological Potential.

Prior to issuance of a grading permit for any project that requires ground disturbance (i.e., excavation, grading, trenching, etc.) to depths of 6 or more feet in previously undisturbed

deposits of Holocene-age alluvium and/or the Orinda Formation, the project will undergo a CEQA-level analysis to determine the potential for a project to encounter significant paleontological resources, based on a review of site-specific geology and the extent of ground disturbance associated with each project. The analysis shall include, but would not be limited to: 1) a paleontological records search, 2) geologic map review, and 3) peer-reviewed scientific literature review. If it is determined that a site has the potential to disturb or destroy significant paleontological resources, a professional paleontologist (meeting the Society of Vertebrate Paleontology [SVP] standards), will be retained to recommend appropriate mitigation to reduce or avoid significant impacts to paleontological resources, based on project-specific information. Such measures could include, but would not be limited to: 1) preconstruction worker awareness training, 2) paleontological resource monitoring, and 3) salvage of significant paleontological resources.

Significance After Mitigation: Implementation of Mitigation Measure 4.6-1 would ensure that a thorough analysis of the potential to encounter significant paleontological resources is performed in accordance with SVP standard guidelines. If it is determined that the potential exists for a project to encounter and destroy significant paleontological resources, the appropriate steps will be followed to ensure that a professional paleontologist is retained to prepare a paleontological resource management plan (or similar), which will include appropriate mitigation recommendations to avoid a potentially significant impact. Compliance with Mitigation Measure 4.6-1 will reduce impacts to **less than significant**.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to geology and paleontology could occur if the incremental impacts of the HEU combined with the incremental impacts of cumulative development identified in Section 4.0.3, *Cumulative Impacts*.

Impact 4.6-C: Implementation of the HEU, in combination with past, present, and reasonably foreseeable future development would not result in a cumulatively significant impact related to geology and paleontology. (*Less than Significant Impact, with Mitigation*)

As discussed above, implementation of the HEU would not be located on an active fault. Therefore, implementation of the HEU would neither could cause or contribute to any potential significant cumulative impact regarding these considerations, and being located on an active fault is not considered further. The potential for the HEU's implementation to cause or contribute to a potential significant cumulative impact with respect to the remaining geology, soils, or paleontological resources considerations is evaluated below.

Impacts related to geology and paleontology tend to be site-specific and depend on the local geology and soil conditions. For these reasons, the geographic scope for potential cumulative impacts consists of the planning areas and adjacent areas.

The area would be subject to potential strong, seismically-induced ground shaking and seismic-induced ground failures (e.g., landslides, liquefaction). However, as discussed in Impact 4.6-1, projects deriving from the HEU would be designed and constructed in accordance with the most current building code requirements, and the potential for the HEU to exacerbate seismic hazards would be less than significant. State and local building regulations and standards have been established to address and reduce the potential for projects to cause or exacerbate seismic hazard impacts. Any cumulative projects that are occurring in proximity to the HEU planning areas would be required to comply with same applicable provisions of these laws and regulations. Compliance with these requirements would limit the potential for impacts to a less than significant level. The purpose of the CBC (and related local ordinances) is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Based on compliance with these requirements, the incremental impacts of the HEU's implementation combined with impacts of other projects in the area would not combine to cause a significant cumulative impact related to seismic hazards.

If site drainage is not managed properly, drainage from the HEU's implementation in combination with drainage from other cumulative project sites could cause soil erosion or loss of topsoil at a local and regional level. As with the proposed potentially derived from the HEU, all other cumulative projects would be required to comply with the same existing codes, standards, and permitting requirements (e.g., preparation of a SWPPP under the state construction general permit) to reduce erosion impacts. Potential impacts to soil erosion and loss of topsoil would be reduced through the implementation of the BMPs identified in the SWPPP. Requirements in the state construction general permit are designed to reduce adverse cumulative effects of erosion and sedimentation. Compliance with stormwater control requirements would reduce the overall cumulative impact to a less than significant level.

The geographic scope of cumulative impacts to paleontological resources includes the planning areas and adjacent areas where deposits with a high potential to contain paleontological resources could be disturbed. If there are potential paleontological resources that extend across areas of ground disturbance of the potential HEU projects and cumulative projects, the projects could result in the loss of paleontological resources, a potentially significant impact.

However, with implementation of Mitigation Measure 4.8-6: Determination of Paleontological Potential, implementation of the HEU would effectively avoid the potential loss of paleontological resources in the event of inadvertent discovery during construction. Therefore, while implementation of cumulative projects could have a significant effect related to paleontological resources, the project's contribution to such effect would be less-than-significant.

Mitigation Measures

Mitigation Measure 4.6-1: Determination of Paleontological Potential.

Prior to issuance of a grading permit for any project that requires ground disturbance (i.e., excavation, grading, trenching, etc.) to depths of 6 or more feet in previously undisturbed deposits of Holocene-age alluvium and/or the Orinda Formation, the project will undergo a CEQA-level analysis to determine the potential for a project to encounter significant paleontological resources, based on a review of site-specific geology and the extent of

ground disturbance associated with each project. The analysis shall include, but would not be limited to: 1) a paleontological records search, 2) geologic map review, and 3) peer-reviewed scientific literature review. If it is determined that a site has the potential to disturb or destroy significant paleontological resources, a professional paleontologist (meeting the Society of Vertebrate Paleontology [SVP] standards), will be retained to recommend appropriate mitigation to reduce or avoid significant impacts to paleontological resources, based on project-specific information. Such measures could include, but would not be limited to: 1) preconstruction worker awareness training, 2) paleontological resource monitoring, and 3) salvage of significant paleontological resources.

Significance After Mitigation: Implementation of Mitigation Measure 4.6-1 would ensure that a thorough analysis of the potential to encounter significant paleontological resources is performed in accordance with SVP standard guidelines. If it is determined that the potential exists for a project to encounter and destroy significant paleontological resources, the appropriate steps will be followed to ensure that a professional paleontologist is retained to prepare a paleontological resource management plan (or similar), which will include appropriate mitigation recommendations to avoid a potentially significant impact. Compliance with Mitigation Measure 4.6-1 will reduce impacts to **less than significant**.

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4.7 Greenhouse Gas Emissions

4.7.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in significant adverse environmental impacts from greenhouse gas (GHG) emissions. The section provides a description of the existing conditions relevant to GHG emissions, a summary of regulations, existing plans and policies relevant to GHG emissions associated with implementation of the HEU and an impact discussion evaluating potential impacts to GHG emissions that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16th, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relating to GHG emissions were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- The 2017 California Air Resources Board (CARB) Scoping Plan Update
- The City of Lafayette Environmental Action Plan (2017)
- The draft GHG significance thresholds proposed by the Bay Area Air Quality Management District (BAAQMD)
- City of Lafayette General Plan (2002)

4.7.2 Environmental Setting

Climate Science

“Global warming” and “climate change” are common terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century. Natural processes and human actions have been identified as affecting the climate. The Intergovernmental Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward.

However, increasing GHG concentrations resulting from human activity since the 19th century, such as fossil fuel combustion, deforestation, and other activities, are believed to be a major factor in climate change. GHGs in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space—a phenomenon sometimes referred to as the “greenhouse effect.” Some GHGs occur naturally and are necessary for keeping the Earth’s surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have trapped solar radiation and decreased the amount that is reflected into space, intensifying the natural greenhouse effect, and resulting in the increase of global average temperature.

Carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are the principal GHGs. When concentrations of these gases exceed historical concentrations in the atmosphere, the greenhouse effect is intensified. CO₂, methane, and nitrous oxide occur naturally and are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane results from off-gassing, natural gas leaks from pipelines and industrial processes, and incomplete combustion associated with agricultural practices, landfills, energy providers, and other industrial facilities. Nitrous oxide emissions are also largely attributable to agricultural practices and soil management. CO₂ sinks include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution, and are two of the largest reservoirs of CO₂ sequestration. Other human-generated GHGs include fluorinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, which have much higher heat-absorption potential than CO₂ and are byproducts of certain industrial processes.

CO₂ is the reference gas for climate change, as it is the GHG emitted in the highest volume. The effect that each of the GHGs have on global warming is the product of the mass of their emissions and their global warming potential (GWP). GWP indicates how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. For example, methane and nitrous oxide are substantially more potent GHGs than CO₂, with GWPs of 25 and 298 times that of CO₂ respectively, which has a GWP of 1 (CARB, 2022).

In emissions inventories, GHG emissions are typically reported as metric tons (MT) of CO₂ equivalent (CO₂e). CO₂e is calculated as the product of the mass emitted of a given GHG and its specific GWP. While methane and nitrous oxide have much higher GWPs than CO₂, CO₂ is emitted in higher quantities and it accounts for the majority of GHG emissions in CO₂e, both from commercial developments and human activity in general.

Effects of Global Climate Change

The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of and inability to accurately model Earth's climate system, the uncertainty surrounding climate change may never be eliminated completely. Nonetheless, the IPCC's AR5 states that is extremely likely that the dominant cause of the observed warming since the mid-20th century is the anthropogenic increase in GHG concentrations (IPCC, 2014). The National Academies of Science from 80 countries have issued statements endorsing the consensus position that humans are the dominant cause for global warming since the mid-20th century (Cook et al., 2016).

The Fourth California Climate Change Assessment (Fourth Assessment), published in 2018, found that the potential impacts in California due to global climate change include: loss in snow pack; sea-level rise; more extreme heat days per year; more high ozone days; more extreme forest

fires; more severe droughts punctuated by extreme precipitation events; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation (California Office of Planning and Research [OPR], California Energy Commission [CEC] & California Natural Resources Agency [CNRA], 2018). The Fourth Assessment's findings are consistent with climate change studies published by the CNRA since 2009, starting with the *California Climate Adaptation Strategy* (CNRA, 2009) as a response to the Governor's Executive Order S-13-2008. In 2014, the CNRA rebranded the first update of the 2009 adaptation strategy as the *Safeguarding California Plan* (CNRA, 2014). The 2018 update to *Safeguarding California Plan* identifies hundreds of ongoing actions and next steps state agencies are taking to safeguard Californians from climate impacts within a framework of 81 policy principles and recommendations (CNRA, 2018).

In 2016, the CNRA released *Safeguarding California: Implementation Action Plans* in accordance with Executive Order B-30-15, identifying a lead agency to lead adaptation efforts in each sector (CNRA, 2016). In accordance with the 2009 *California Climate Adaptation Strategy*, the CEC was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers. The website, known as Cal-Adapt, became operational in 2011. The information provided on the Cal-Adapt website represents a projection of potential future climate scenarios comprised of local average values for temperature, sea-level rise, snowpack and other data representative of a variety of models and scenarios, including potential social and economic factors. Below is a summary of some of the potential effects that could be experienced in California as a result of global warming and climate change.

Temperature Increase

The primary effect of adding GHGs to the atmosphere has been a rise in the average global temperature. The impact of human activities on global temperature is readily apparent in the observational record. Since 1895, the contiguous US has observed an average temperature increase of 1.5°F per century (National Oceanic and Atmospheric Association [NOAA], 2019). The 5-year period from 2014–2018 was the warmest on record for the contiguous U.S. (NOAA, 2019); of the top 10 hottest years on record in the U.S., seven have occurred since the year 2000, with the top six years all occurring since 2012 (Climate Central, 2022). The Fourth Assessment indicates that average temperatures in California could rise 5.6°F to 8.8°F by the end of the century, depending on the global trajectory of GHG emissions (OPR, CEC & CNRA, 2018). According to the Cal-Adapt website, the portion of the state in which the HEU sites are located could result in an average increase in temperature of approximately 4.2° to 6.9°F by 2070–2090, compared to the baseline period of 1961–1990.

With climate change, extreme heat conditions and heat waves are predicted to impact larger areas, last longer, and have higher temperatures. Heat waves, defined as three or more days with temperatures above 90°F, are projected to occur more frequently by the end of the century. Extreme heat days and heat waves can negatively impact human health. Heat-related illness includes a spectrum of illnesses ranging from heat cramps to severe heat exhaustion and life-threatening heat stroke (Red Cross Red Climate Crescent Center [RCCC], 2019).

Wildfires

The hotter and dryer conditions expected with climate change will make forests more susceptible to extreme wildfires. California's Fourth Climate Change Assessment found that if GHG emissions continue to rise, the frequency of extreme wildfires burning over approximately 25,000 acres would increase by nearly 50 percent, and the average area burned statewide each year would increase by 77 percent, by the year 2100. In the areas that have the highest fire risk, wildfire insurance is estimated to see costs rise by 18 percent by 2055 and the fraction of property insured would decrease (Westerling, 2018).

Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California and make it more difficult for the state to achieve air quality standards. Climate change may increase the concentration of ground-level ozone, which can cause breathing problems, aggravate lung diseases such as asthma, emphysema, chronic bronchitis, and cause chronic obstructive pulmonary disease (COPD) but the magnitude of the effect, and therefore, its indirect effects, are uncertain. Emissions from wildfires can lead to excessive levels of particulate matter, ozone, and volatile organic compounds (NOAA, 2022). Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (RCCC, 2019).

Precipitation and Water Supply

There is a high degree of uncertainty with respect to the overall impact of global climate change on future water supplies in California. Studies indicate considerable variability in predicting precise impacts of climate change on California hydrology and water resources. Increasing uncertainty in the timing and intensity of precipitation will challenge the operational flexibility of California's water management systems. Warmer and wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff would occur at a time when some basins are either being recharged at their maximum capacity or are already full. Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge (CNRA, 2018).

Hydrology and Sea-Level Rise

As discussed above, climate changes could potentially affect: the amount of snowfall, rainfall and snowpack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea-level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion. Sea-level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply. Sea level has risen eight to nine inches (21–24 centimeters) since 1880. In 2020, global sea level set a new record high of 91.3 mm (3.6 inches) above 1993 levels. The rate of sea level rise is accelerating; it has more than doubled from 0.06 inches (1.4 millimeters) per year throughout most of the twentieth century to 0.14 inches (3.6 millimeters) per year from 2006–2015. In many locations along the U.S. coastline, high-tide flooding is now 300 percent to more

than 900 percent more frequent than it was 50 years ago. Sea level could rise as much as 8.2 feet (2.5 meters) above 2000 levels by 2100 (NOAA, 2021). Rising seas could impact transportation infrastructure, utilities, and regional industries.

Agriculture

California has a massive agricultural industry that represents over 13 percent of total US agricultural revenue (California Department of Food and Agriculture [CDFA], 2020). Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, a changing climate presents significant risks to agriculture due to changes in maximum and minimum temperatures, reduction of winter chill hours, extreme heat leading to additional costs for livestock cooling and losses in production, and declines in water quality, groundwater security, soil health, and pollinator species, and increased pest pressures (CNRA, 2018).

Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increased concentrations of GHGs are likely to accelerate the rate of climate change. As stated in the *Safeguarding California Plan*, “species and ecosystems in California are valued both for their intrinsic worth and for the services they provide to society. Air purification, water filtration, flood attenuation, food provision, recreational opportunities such as fishing, hunting, wildlife viewing, and more are all services provided by ecosystems. These services can only be maintained if ecosystems are healthy and robust, and continue to function properly under the impacts of climate change. A recent study examined the vulnerability of all vegetation communities statewide in California and found that 16 of 29 were highly or nearly highly vulnerable to climate change, including Western North American freshwater marsh, Rocky Mountain subalpine and high montane conifer forest, North American Pacific coastal salt marsh, and more.” Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. With climate change, ecosystems and wildlife will be challenged by the spread of invasive species, barriers to species migration or movement in response to changing climatic conditions, direct impacts to species health, and mismatches in timing between seasonal life-cycle events such as species migration and food availability (CNRA, 2018).

United States Emissions

In 2019, the United States emitted about 6,558 million metric tons (MMT) of CO₂e (MMTCO₂e), with 76 percent of those emissions coming from fossil fuel combustion for electricity, heat and transportation. Of the major sectors nationwide, transportation accounts for the highest amount of GHG emissions (approximately 29 percent), followed by electricity (25 percent), industry (23 percent), commercial and residential energy use (13 percent), and agriculture (9 percent). Between 1990 and 2017, total GHG emissions rose by 1.8 percent, but emissions have generally decreased since peaking in 2007 (United States Environmental Protection Agency [USEPA], 2021).

California GHG Emissions Inventory

The California Air Resources Board (CARB) compiles GHG inventories for the state. Based on the 2019 GHG inventory data (i.e., the latest year for which data are available from CARB), emissions from GHG emitting activities statewide were 418.1 MMTCO_{2e} (CARB, 2021a). Between 1990 and 2021, the population of California grew by approximately 10 million from 29.6 to 39.5 million (California Department of Finance [CDF], 2022a). This represents an increase of approximately 34 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from \$773 billion in 1990 to \$3.14 trillion in 2019, representing an increase of approximately 306 percent (more than three times the 1990 gross state product) in today’s dollars (CDF, 2022b).

Despite the population and economic growth, CARB’s 2019 statewide inventory indicated that California’s net GHG emissions in 2019 were 13 MMTCO_{2e} below 1990 levels, which is the 2020 GHG reduction target codified in California Health and Safety Code Division 25.5, also known as the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). **Table 4.7-1** identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2019. As shown in the table, the transportation sector is the largest contributor to statewide GHG emissions at approximately 39.7 percent in 2019.

**TABLE 4.7-1
 CALIFORNIA GHG EMISSIONS INVENTORY**

Category	Total 1990 Emissions Using IPCC SAR (MMTCo _{2e})	Percent of Total 1990 Emissions	Total 2019 Emissions Using IPCC AR4 (MMTCo _{2e})	Percent of Total 2019 Emissions
Transportation	150.7	35%	166.1	40%
Electric Power	110.6	26%	58.8	14%
Commercial & Residential Fuel Use	44.1	10%	43.8	11%
Industrial	103.0	24%	88.2	21%
Recycling and Waste ^a	—	—	8.9	2%
High GWP/Non-Specified ^b	1.3	<1%	20.6	5%
Agriculture/Forestry	23.6	6%	31.8	8%
Forestry Sinks	-6.7	-2%	— ^c	—
Net Total (IPCC SAR)	426.6	100%^e	—	—
Net Total (IPCC AR4)^d	431	100%^e	429.4	100%^e

NOTES:

AR4 = Fourth Assessment Report; GWP = global warming potential; IPCC = Intergovernmental Panel on Climate Change; MMTCO_{2e} = million metric tons of carbon dioxide equivalents; SAR = Second Assessment Report

^a Included in other categories for the 1990 emissions inventory.

^b High GWP gases are not specifically called out in the 1990 emissions inventory.

^c Revised methods under development (not reported for 2019).

^d CARB revised the state’s 1990-level GHG emissions using GWPs from the IPCC AR4.

^e Total of individual percentages may not add up to 100% due to rounding

SOURCES: CARB, 2007; CARB, 2021a.

Bay Area GHG Emissions

Based on 2015 data, in the nine-county San Francisco Bay Area, GHG emissions from the transportation sector represent the largest source of the Bay Area’s GHG emissions at 41 percent, followed by the stationary industrial sources at 26 percent, electricity generation and co-generation at 14 percent, and fuel use (primarily natural gas) by buildings at 10 percent. The remaining 8 percent of emissions is composed of fluorinated gas emissions and emissions from solid waste and agriculture. According to the BAAQMD, of the total transportation emissions in 2015, on-road sources accounted for approximately 87 percent, while off-road sources accounted for the remainder (BAAQMD, 2017a).

City of Lafayette Emissions Inventory

The City’s GHG emissions data is based off an initial 2005 emissions inventory report with subsequent updates to the inventory conducted in 2010 and 2015. The GHG emissions inventory and forecast provides a summary of community-wide and municipal GHG emissions, GHG emissions by sector, and major sources of GHGs in Lafayette. The City of Lafayette Environmental Action Plan (City of Lafayette, 2017) provides the City’s most recent GHG emissions inventory for the year 2015. The transportation sector remains the greatest contributor of GHG emissions, as is typical statewide (CARB, 2021a). For a sector-by-sector summary of GHG emissions, see **Table 4.7-2**.

**TABLE 4.7-2
 CITY OF LAFAYETTE EMISSIONS BY SECTOR**

Sector	GHG Emissions as MTCO ₂ e per year	
	2005	2015
Transportation	248,424	251,411
Residential Energy	54,700	56,654
Commercial & Industrial Energy	18,215	18,281
Solid Waste	8,892	1,840
Wastewater	600	612
Municipal Sector	821	864
Total	331,652	329,659

NOTES:

MTCO₂e = metric tons of carbon dioxide equivalents

SOURCE: City of Lafayette, 2017.

4.7.3 Regulatory Setting

Federal

Clean Air Act and U.S. Environmental Protection Agency “Endangerment” and “Cause or Contribute” Findings

In 2007, the United States Supreme Court held that the USEPA, the federal agency responsible for implementing the Clean Air Act (CAA), must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, twelve states and cities, including California, together with several environmental organizations sued to require EPA to regulate GHGs as pollutants under the CAA (127 S. Ct. 1438 [2007]). The Supreme Court ruled that GHGs fit within the CAA’s definition of a pollutant and EPA had the authority to regulate GHGs.

On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under CAA Section 202(a):

Endangerment Finding: The current and projected concentrations of the six key GHGs—CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations.

Cause or Contribute Finding: The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Vehicle Emissions Standards

In 1975, Congress enacted the Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, EPA and the National Highway Traffic Safety Administration (NHTSA) are responsible for establishing additional vehicle standards. In August 2012, standards were adopted for model years 2017 through 2025 for passenger cars and light-duty trucks. According to EPA, a model year 2025 vehicle would emit half the GHG emissions of a model year 2010 vehicle (USEPA & NHTSA, 2010). Notably, the State of California harmonized its vehicle efficiency standards through 2025 with the federal standards at this time (see *Advanced Clean Cars Program* below).

In August 2018, EPA and the NHTSA proposed maintaining the 2020 corporate average fuel economy (CAFE) and CO₂ standards for model years 2021 through 2026. The estimated CAFE and CO₂ standards for model year 2020 are 43.7 miles per gallon (mpg) and 204 grams of CO₂ per mile for passenger cars and 31.3 mpg and 284 grams of CO₂ per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. In September 2019, EPA finalized the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program and announced its decision to withdraw the Clean Air Act preemption waiver granted to the State of California in 2013 (USEPA & NHTSA, 2019).

State

California Environmental Quality Act and Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's OPR to prepare, develop, and transmit to the CNRA guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. On December 30, 2009, the CNRA adopted amendments to the CEQA Guidelines, as required by SB 97. The CEQA Guidelines amendments, effective March 18, 2010, provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents.

CEQA Guidelines

The CEQA Guidelines are embodied in the California Code of Regulations (CCR), Title 14, beginning with Section 15000. The current CEQA Guidelines Section 15064.4 states that "a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project." Section 15064.4 further states:

A lead agency should consider the following factors, when determining the significance of impacts from greenhouse gas emissions on the environment:

- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;*
- (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.*
- (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see e.g., section 15183.5(b)).*

The CEQA Guidelines also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (CEQA Guidelines Section 15064(h)(3)).

The CEQA Guidelines do not require or recommend a specific analytical method or provide quantitative criteria for determining the significance of GHG emissions, nor do they set a numerical threshold of significance for GHG emissions. Section 15064.7(c) clarifies that "when adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

When GHG emissions are found to be significant, CEQA Guidelines Section 15126.4(c) includes the following direction on measures to mitigate GHG emissions:

Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision.*
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures.*
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions.*
- (4) Measures that sequester greenhouse gases.*
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.*

State of California Executive Orders

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, then-Governor Arnold Schwarzenegger issued Executive Order S-3-05, which set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Executive Order S-1-07

Executive Order S-1-07, signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It established a low carbon fuel standard (LCFS) with a goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020.

In September 2018, CARB extended the LCFS program to 2030, making significant changes to the design and implementation of the program, including a doubling of the carbon intensity reduction to 20 percent by 2030.

Executive Orders S-14-08 and S-21-09

In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Portfolio Standard (RPS) to 33 percent renewable power by 2020. In September 2009, Governor Schwarzenegger continued California's commitment to the RPS by signing Executive Order S-21-09, which directs CARB under its authority granted by the California Global Warming Solutions Act of 2006 (AB 32) to enact regulations to help the state meet its RPS goal of 33 percent renewable energy by 2020.

Executive Order S-13-08

Governor Schwarzenegger signed Executive Order S-13-08 on November 14, 2008. The order resulted in the *2009 California Climate Adaptation Strategy* report, developed to summarize the best known science on climate change impacts in the state to assess vulnerability and outline possible solutions that can be implemented within and across state agencies to promote resiliency. The state has also developed an Adaptation Planning Guide to provide a decision-making framework intended for use by local and regional stakeholders to aid in the interpretation of climate science and to develop a systematic rationale for reducing risks caused or exacerbated by climate change (CNRA, 2012).

Executive Order B-16-12

In March 2012, then-Governor Jerry Brown issued an executive order establishing a goal of 1.5 million zero-emission vehicles (ZEVs) on California roads by 2025. In addition to the ZEV goal, Executive Order B-16-12 stipulated that by 2015 all major cities in California will have adequate infrastructure and be "zero-emission vehicle ready"; that by 2020 the state will have established adequate infrastructure to support 1 million ZEVs; that by 2050, virtually all personal transportation in the state will be based on ZEVs; and that GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

Executive Order B-30-15

Governor Brown signed Executive Order B-30-15 on April 29, 2015, which:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030;
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets; and
- Directed CARB to update the Climate Change Scoping Plan (Scoping Plan) to express the 2030 target in terms of million metric tons of CO₂ equivalent.

Executive Order B-48-18

On January 26, 2018, Governor Brown issued an executive order establishing a goal of 5 million ZEVs on California roads by 2030.

Executive Order B-55-18

On September 10, 2018, Governor Brown signed Executive Order B-55-18, committing California to total, economy-wide carbon neutrality by 2045. Executive Order B-55-18 directs CARB to work with relevant state agencies to develop a framework to implement and accounting to track progress toward this goal. AB 1395 would codify this carbon neutral target.

Executive Order N-79-20

On September 23, 2020, Governor Newsom signed Executive Order N-79-20, which sets new statewide goals for phasing out gasoline-powered cars and trucks in California. EO N-79-20 requires that 100 percent of in-state sales of new passenger cars and trucks are to be zero-emission by 2035; 100 percent of in-state sales of medium- and heavy-duty trucks and busses are to be zero-emission by 2045 where feasible; and 100 percent of off-road vehicles and equipment sales are to be zero-emission by 2035 where feasible.

State of California Policy and Legislation

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed AB 1493. AB 1493 required that CARB develop and adopt, by January 1, 2005, regulations to achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State.”

To meet the requirements of AB 1493, in 2004 CARB approved amendments to the CCR adding GHG emissions standards to California’s existing standards for motor vehicle emissions. All mobile sources were required to comply with these regulations as they were phased in from 2009 through 2016.

Senate Bills 1078 and 107

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Assembly Bill 32 and Senate Bill 32

In September 2006, Governor Schwarzenegger signed AB 32. AB 32 established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and established a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction was to be accomplished by enforcing a statewide cap on GHG emissions that would be phased in starting in 2012. To effectively implement the cap, AB 32 directed CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specified that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also included language stating that if the AB 1493 regulations could not be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

In 2016, SB 32 and its companion bill AB 197 amended Health and Safety Code Division 25.5, establishing a new climate pollution reduction target of 40 percent below 1990 levels by 2030, and included provisions to ensure that the benefits of state climate policies reach disadvantaged communities.

Climate Change Scoping Plan

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. CARB developed and approved the initial scoping plan in 2008, outlining the regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs that would be needed to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives (CARB, 2008).

CARB approved the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update) in December 2017. The 2017 Scoping Plan Update outlines the proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels (CARB, 2017). Through a combination of data synthesis and modeling, CARB determined that the target statewide 2030 emissions limit is 260 MMTCO_{2e}, and that further commitments will need to be made to achieve an additional reduction of 50 MMTCO_{2e} beyond current policies and programs. The cornerstone of the 2017 Scoping Plan Update is an expansion of the cap-and-trade program to meet the aggressive 2030 GHG emissions goal and ensure achievement of the 2030 limit set forth by Executive Order B-30-15.

In the 2017 Scoping Plan Update, CARB recommends statewide targets of no more than 6 MTCO_{2e} per capita by 2030 and no more than 2 MTCO_{2e} per capita by 2050. CARB acknowledges that because the statewide per-capita targets are based on the statewide GHG emissions inventory that includes all emissions sectors in the state, it is appropriate for local jurisdictions to derive evidence-based local per-capita goals based on local emissions sectors and growth projections.

To demonstrate how a local jurisdiction can achieve its long-term GHG goals at the community plan level, CARB recommends developing a geographically specific GHG reduction plan (i.e., climate action plan) consistent with the requirements of CEQA Section 15183.5(b). A so-called "CEQA-qualified" GHG reduction plan, once adopted, can provide local governments with a streamlining tool for project-level environmental review of GHG emissions, provided there are adequate performance metrics for determining project consistency with the plan. Absent conformity with such a plan, CARB recommends "that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions. Achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." While acknowledging that recent land use development projects in California have demonstrated the feasibility to achieve zero net additional GHG emissions (e.g., Newhall Ranch Resource Management and Development Plan), the 2017 Scoping Plan Update states that:

Achieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of

a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA. Lead agencies have the discretion to develop evidence-based numeric thresholds (mass emissions, per capita, or per service population) consistent with this Scoping Plan, the State’s long-term GHG goals, and climate change science...To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT [vehicle miles traveled], and direct investments in GHG reductions within the project’s region that contribute potential air quality, health, and economic co-benefits locally.

Cap-and-Trade Program

Initially authorized by the California Global Warming Solutions Act of 2006 (AB 32), and extended through the year 2030 with the passage of AB 398 (2017), the California Cap-and-Trade Program is a core strategy that the state is using to meet its GHG reduction targets for 2020 and 2030, and ultimately achieve an 80 percent reduction from 1990 levels by 2050. CARB designed and adopted the California Cap-and-Trade Program to reduce GHG emissions from “covered entities”¹ (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 MTCO₂e per year), setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve reductions.² Under the Cap-and-Trade Program, an overall limit is established for GHG emissions from capped sectors. The statewide cap for GHG emissions from the capped sectors commenced in 2013. The cap declines over time. Facilities subject to the cap can trade permits to emit GHGs.³

Senate Bill 375

Signed into law on October 1, 2008, SB 375 supplements GHG reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, CARB approved GHG reduction targets in February 2011 for California’s 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations. The target reductions for the Bay Area are a regional reduction of per-capita GHG emissions from cars and light-duty trucks by 7 percent by 2020 and by 15 percent by 2035, compared to a 2005 baseline.

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) address these goals in *Plan Bay Area 2040*, which identifies Priority Development Areas (PDAs) near transit options to reduce the use of on-road vehicles. By focusing and incentivizing future growth in PDAs, *Plan Bay Area 2040* demonstrates how the nine-county Bay Area can reduce per-capita CO₂ emissions by 16 percent by 2035 (MTC, ABAG, 2017). In a March 2018 hearing, CARB approved revised targets: to reduce per-capita emissions 10 percent by 2020 and 19 percent by 2035 (CARB, 2018a).

¹ “Covered entity” means an entity in California that has one or more of the processes or operations and has a compliance obligation as specified in Subarticle 7 of the Cap-and-Trade Regulation; and that has emitted, produced, imported, manufactured, or delivered in 2008 or any subsequent year more than the applicable threshold level specified in section 95812(a) of the Regulation.

² 17 CCR 95800–96023.

³ See generally 17 CCR 95811 and 95812.

Senate Bill X 1-2

SB X 1-2, signed by Governor Brown in April 2011, enacted the California Renewable Energy Resources Act. The law obligated all California electricity providers, including investor-owned and publicly owned utilities, to obtain at least 33 percent of their energy from renewable resources by the year 2020.

Advanced Clean Cars Program

In January 2012, pursuant to Recommended Measures T-1 and T-4 of the Scoping Plan, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZEVs. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

In response to a midterm review of the standards in March 2017, CARB directed staff to begin working on post-2025 model year vehicle regulations (Advanced Clean Cars II) to research additional measures to reduce air pollution from light-duty and medium-duty vehicles. Additionally, as described earlier, in September 2020, Governor Newsom signed Executive Order N-79-20 that established a goal that 100 percent of California sales of new passenger car and trucks be zero-emission by 2035 and directed CARB to develop and propose regulations toward this goal. The primary mechanism for achieving these targets for passenger cars and light trucks is the Advanced Clean Cars II Program.

Mobile Source Strategy

In May 2016, CARB released the updated Mobile Source Strategy that demonstrates how the state can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next 15 years. The strategy promotes a transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of vehicle miles traveled (VMT). The Mobile Source Strategy calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) by 2025 and 4.2 million ZEVs by 2030. The strategy also calls for more-stringent GHG requirements for light-duty vehicles beyond 2025 as well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero emission trucks primarily for class 3–7 “last mile” delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions from mobile sources and a 50 percent reduction in the consumption of petroleum-based fuels (CARB, 2016).

Similar to the 2016 Mobile Source Strategy, the 2020 Strategy is a framework that identifies the levels of cleaner technologies necessary to meet the many goals and high-level regulatory concepts that would allow the State to achieve the levels of cleaner technology. The 2020 Strategy will inform the development of other planning efforts including the State Implementation Plan (SIP) which will translate the concepts included into concrete measures and commitments for specific levels of emissions reductions, the 2022 Climate Change Scoping Plan (2022 Scoping Plan Update), and Community Emissions Reduction Plans (CERPs) required for

communities selected as a part of CARB's Community Air Protection Program. Central to all of these planning efforts, and CARB actions on mobile sources going forward, will be environmental justice as CARB strives to address longstanding environmental and health inequities from elevated levels of toxics, criteria pollutants, and secondary impacts of climate change (CARB, 2021b). The 2020 Mobile Source Strategy illustrates that an aggressive deployment of ZEVs will be needed for the State to meet federal air quality requirements and the State's climate change targets.

Senate Bill 743

In 2013, Governor Brown signed SB 743, which added Public Resources Code Section 21099 to CEQA. SB 743 changed the way that transportation impacts are analyzed in Transit Priority Areas (TPAs) under CEQA, better aligning local environmental review with statewide objectives to reduce GHG emissions, encourage infill mixed-use development in designated priority development areas, reduce regional sprawl development, and reduce VMT in California.

As required under SB 743, OPR developed potential metrics to measure transportation impacts that may include, but are not limited to, VMT, VMT per capita, automobile trip generation rates, or automobile trips generated. The new VMT metric is intended to replace the use of automobile delay and level of service as the metric to analyze transportation impacts under CEQA.

In its 2018 *Technical Advisory on Evaluating Transportation Impacts in CEQA*, OPR recommends different thresholds of significance for projects depending on land use types (OPR, 2018). For example, residential and office space projects must demonstrate a VMT level that is 15 percent less than that of existing development to determine whether the mobile-source GHG emissions associated with the project are consistent with statewide GHG reduction targets. With respect to retail land uses, any net increase of VMT may be sufficient to indicate a significant transportation impact.

Senate Bill 350

SB 350, the Clean Energy and Pollution Reduction Act of 2015 (Chapter 547, Statutes of 2015), was approved by Governor Brown on October 7, 2015. SB 350 increased the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 33 percent to 50 percent by December 31, 2030. The act requires the State Energy Resources Conservation and Development Commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in existing electricity and natural gas final end uses of retail customers by January 1, 2030.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the RPS goals that were established by SB 350 in 2015. Specifically, the law increases the percentage of energy that both investor-owned utilities and publicly owned utilities must obtain from renewable sources from 50 percent

to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. The updated RPS goals are considered achievable, because many California energy providers are already meeting or exceeding the RPS goals established by SB 350.

Senate Bill 1383 (Short-Lived Climate Pollutants)

SB 1383, enacted in 2016, requires statewide reductions in short-lived climate pollutants across various industry sectors. The climate pollutants covered under SB 1383 include methane, fluorinated gases, and black carbon—all GHGs with a much higher warming impact than CO₂ and with the potential to have detrimental effects on human health. SB 1383 requires CARB to adopt a strategy to reduce methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The methane emissions reduction goals include a 75 percent reduction in the level of statewide disposal of organic waste from 2014 levels by 2025.

Assembly Bill 341

AB 341, which became law in 2011, established a new statewide goal of 75 percent recycling through source reduction, recycling, and composting by 2020, and changed the way that the state measures progress toward the 75 percent recycling goal, focusing on source reduction, recycling, and composting. AB 341 also requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The purpose of the law is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and expand the opportunity for additional recycling services and recycling manufacturing facilities in California (California Department of Resources Recycling and Recovery [CDRRR], 2021).

Assembly Bill 1826

AB 1826, known as the Commercial Organic Waste Recycling Law, became effective on January 1, 2016, and requires businesses and multi-family complexes (with five units or more) that generate specified amounts of organic waste (compost) to arrange for organics collection services. The law phases in the requirements on businesses with full implementation realized in 2019:

- **First Tier:** Commencing in April 2016, the first tier of affected businesses included those that generate 8 or more cubic yards of organic materials per week.
- **Second Tier:** In January 2017, the affected businesses expanded to include those that generate 4 or more cubic yards of organic materials per week.
- **Third Tier:** In January 2019, the affected businesses expanded further to include those that generate 4 or more cubic yards of commercial solid waste per week.

State of California Building Codes

California Building and Energy Efficiency Standards (Title 24)

The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although the standards were not originally intended to reduce GHG emissions,

increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and non-residential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods. The current Title 24, Part 6 standards (2019 standards; CEC, 2018) were made effective on January 1, 2020.

On August 11, 2021, the CEC adopted the 2022 Energy Code and was approved by the California Building Standards Commission for inclusion into the California Building Standards Code (CEC, 2022). The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for or after January 1, 2023, must comply with the 2022 Energy Code. The 2022 Update includes measures that will reduce energy use in single family, multifamily, and nonresidential buildings. These measures will:

1. Affect newly constructed buildings by adding new prescriptive and performance standards for electric heat pumps for space conditioning and water heating, as appropriate for the various climate zones in California;
2. Require PV and battery storage systems for newly constructed multifamily and selected nonresidential buildings;
3. Update efficiency measures for lighting, building envelope, HVAC; and
4. Make improvements to reduce the energy loads of certain equipment covered by (i.e., subject to the requirements of) the Energy Code that perform a commercial process that is not related to the occupant needs in the building (such as refrigeration equipment in refrigerated warehouses, or air conditioning for computer equipment in data processing centers).

California Green Buildings Standards Code

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code is intended to encourage more sustainable and environmentally friendly building practices, require low-pollution-emitting substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment. CALGreen covers a number of fields, with regulations encompassing energy efficiency, water conservation, sustainable building materials, site design, and air quality.

Since 2011, the CALGreen Code has been mandatory for all new residential and non-residential buildings constructed in the state. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code is reviewed and updated on a three-year cycle.

The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and non-residential uses; the new measures took effect on January 1, 2020 (California Building Standards Commission [CBSC], 2019). The 2019 standards prescribe EV charging requirements for residential and non-residential buildings.

The 2022 CALGreen update simplifies the code and its application in several ways. It offers new voluntary prerequisites for builders to choose from, such as battery storage system controls and heat pump space, and water heating, to encourage building electrification. While the 2019 CALGreen Code only requires provision of EV Capable spaces with no requirement for chargers to be installed at multifamily dwellings, the 2022 CALGreen code mandates chargers (California Housing and Community Development, n.d).

Regional

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the regional government agency that regulates stationary sources of air pollution in the nine San Francisco Bay Area counties. BAAQMD regulates GHG emissions through the following plans, programs, and guidelines.

Clean Air Plan

BAAQMD and other air districts prepare clean air plans in accordance with the federal and state Clean Air Acts. On April 19, 2017, the BAAQMD Board of Directors adopted the 2017 *Clean Air Plan: Spare the Air, Cool the Climate*, an update to the 2010 Clean Air Plan (BAAQMD, 2017a). The Clean Air Plan is a comprehensive plan that focuses on the closely related goals of protecting public health and protecting the climate. Consistent with the state's GHG reduction targets, the plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

BAAQMD Climate Protection Program

BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the San Francisco Bay Area Air Basin. The climate protection program includes measures that promote energy efficiency, reduce VMT, and develop alternative sources of energy, all of which assist in reducing GHG emissions and reducing air pollutants that affect the health of residents. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

BAAQMD CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed in the Bay Area. The guidelines also include recommended assessment methods for air toxics, odors, and GHG emissions. In June 2010, BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the BAAQMD CEQA Guidelines, which included significance thresholds for GHG emissions based on the emission reduction goals for 2020 articulated by the California Legislature in AB 32. The first threshold, 1,100 MTCO₂e per year, is a numeric emissions level below which a project's contribution to global climate change would be less than cumulatively considerable. For larger and mixed-use projects, the guidelines state that emissions would be less than cumulatively significant if the project as a whole would result in an efficiency of 4.6 MTCO₂e per service

population or better. Because these thresholds are based on a 2020 GHG target they are no longer relevant for current and future projects. Under the current BAAQMD Air Quality Guidelines, a local government may prepare a qualified GHG reduction strategy that is consistent with AB 32 goals. If a project is consistent with an adopted qualified GHG reduction strategy and general plan that addresses the project's GHG emissions, it can be presumed that the project will not have significant GHG emissions under CEQA (BAAQMD, 2017b).

On December 9, 2021, in response to SB 32 and 2017 Scoping Plan Update targets for 2030 and EO B-15 target for carbon neutrality no later than 2045, the BAAQMD proposed draft CEQA significance thresholds for GHGs at a public workshop (BAAQMD, 2021).

Metropolitan Transportation Commission/Association of Bay Area Governments Sustainable Communities Strategy—Plan Bay Area

MTC is the federally recognized Metropolitan Planning Organization for the nine-county Bay Area. On July 18, 2013, Plan Bay Area was jointly approved by ABAG's Executive Board and by MTC.

The plan includes the region's Sustainable Communities Strategy, as required under SB 375, and the 2040 Regional Transportation Plan. The Sustainable Communities Strategy lays out how the region will meet GHG reduction targets set by CARB. CARB's current targets call for the region to reduce per-capita vehicular GHG emissions 10 percent by 2020 and 19 percent by 2035 from a 2005 baseline (CARB, 2018b).

A central GHG reduction strategy of Plan Bay Area is the concentration of future growth in Priority Development Areas and Transit Priority Areas. To be eligible for PDA designation, an area must be within an existing community, near existing or planned fixed transit or served by comparable bus service, and planned for more housing. The BAAQMD and the Bay Conservation and Development Commission designated downtown Lafayette as a PDA, as part of their regional planning initiative. The PDA designation does not demand growth; however, it may support the growth that the City is planning and experiencing. This designation will enable the City to establish guidelines and policies to foster and guide growth through technical assistance, planning grants, and capital grants. Planning areas 1 through 16 and 13 identified by the HEU with the Distributed Sites would be located within the PDA, while areas 7, 8 and 9 would not be. Under the HEU with Downtown-Only Alternative, all identified planning areas would be located within the PDA (City of Lafayette, 2013).

A TPA is an area within 0.5 miles of an existing or planned major transit stop such as a rail transit station, a ferry terminal served by transit, or the intersection of two or more major bus routes (MTC & ABAG, 2013). The half-mile surrounding the Lafayette BART station qualifies as a TPA.

On July 26, 2017, MTC adopted *Plan Bay Area 2040*, a focused update that builds upon the growth pattern and strategies developed in the original Plan Bay Area but with updated planning

assumptions that incorporate key economic, demographic, and financial trends since the original plan was adopted (MTC & ABAG, 2017).

On October 21, 2021, the MTC and the Executive Board of the ABAG jointly adopted Plan Bay Area 2050 and its related supplemental reports. Plan Bay Area 2050 connects the elements of housing, the economy, transportation and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG and partner organizations to take over the next five years to make headway on each of the 35 strategies (MTC & ABAG, 2021).

Local

Cities for Climate Protection

On July 23, 2007, the City Council joined the International Council for Local Environmental Initiatives back as a full member and participant in the Cities for climate Change Campaign (City of Lafayette, 2007). As a participant, the City pledged to take a leadership role in promoting public awareness about the causes and impacts of climate change.

The City committed to the following five milestones of the Cities for Climate Protection Campaign in an effort to reduce GHG and air pollution emissions within the community. The five milestones for climate mitigation are as follows:

1. Conduct a GHG emissions inventory and forecast to determine the source and quantity of GHG emissions in the jurisdiction;
2. Adopt a GHG emissions reduction target for the forecast year;
3. Develop an action plan with both existing and future actions which when implemented will meet the adopted GHG reduction target;
4. Implement the action plan; and
5. Monitor and report progress.

City of Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. There are no goals and policies in the General Plan that directly address GHG emissions and climate change; however, goals and policies that apply to air quality and energy conservation (summarized in Section 4.2, Air Quality and Section 4.5, Energy) would also help reduce GHG emissions.

City of Lafayette Environmental Action Plan

On November 13, 2006, the Lafayette City Council adopted the Environmental Strategy, which was then updated in 2011. The mission of the Strategy was to “...[develop] and [implement] environmental policies and programs that will enable the City and its residents to meet their present needs without sacrificing the ability of future generations to meet their needs.” It was developed as a guide to help the City think, act, and plan more sustainably by helping to understand the cause of environmental problems and developing criteria for evaluating the long-term impacts of the City’s decisions. To monitor the community’s progress in meeting its sustainability goals, the Environmental Task Force created a set of environmental indicators.

Given environmental trends and standards at the state and local levels, this Environmental Action Plan was developed by the Environmental Task Force to provide a more complete image of how the City can continue to reduce its environmental footprint and is intended to be a living document that will change in response to changing requirements, regulations, and circumstances. The Action Plan is a policy document that includes goals and associated recommended programs, enabling the City to maintain local control while implementing State mandates to lower GHG emissions and to monitor other environmental factors. The recommended programs are not mandates, but rather are recommended ways of achieving GHG emissions reductions within the community. The Action Plan is intended to primarily be used by the City for guidance when developing or updating documents, policies, or procedures or when developing annual Work Plans, but also includes a number of programs that are related to the work of community groups and organizations.

The most recent update of the Environmental Action Plan from 2015 includes actions, goals and programs the City needs to undertake in a variety of resource conservation areas such as solid waste, water, energy use, green construction, food and agriculture, green business, transportation, and open space, parks and landscaping to reach the State’s AB 32 GHG reduction goals. The 2015 Plan projected that when the business-as-usual forecast is adjusted for reduction from State legislation, Lafayette’s emissions would be 19.5% below baseline emissions and the City will have met its reduction goal by 2020 based on State regulations alone (City of Lafayette, 2017).

4.7.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to GHG emissions are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project could have a significant impact on the environment if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The CEQA Guidelines do not prescribe specific methods for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures.

Rather, the CEQA Guidelines emphasize the lead agency’s discretion to determine the appropriate methods and thresholds of significance consistent with various factors prescribed by CEQA Guideline 15064.4. The State of California has not adopted emission-based thresholds for GHG emissions under CEQA. The Governor’s Office of Planning and Research’s Technical Advisory, titled *Discussion Draft CEQA and Climate Change Advisory* (OPR, 2018), states that:

[N]either the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. Even in the absence of clearly defined thresholds for GHG emissions, such emissions must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

Furthermore, the advisory document indicates that “in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a ‘significant impact,’ individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.” Section 15064.7(c) of the CEQA Guidelines specifies that “when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.”

The BAAQMD in its current CEQA Guidelines, recommends the following thresholds of significance for evaluation of GHG emissions (BAAQMD, 2017b):

- For Plans:
 - Compliance with a qualified GHG Reduction Strategy; or
 - 6.6 MTCO_{2e} per service population per year (MTCO_{2e}/SP/year).
- For Projects other than stationary sources:
 - Mass emissions threshold of 1,100 MTCO_{2e}/year; or
 - Emission efficiency metric threshold of 4.6 MTCO_{2e} per service population per year (MTCO_{2e}/SP/year);⁴ or
 - Compliance with a qualified GHG Reduction Strategy.

The quantitative thresholds of 6.6 MTCO_{2e}/year/SP, 1,100 MTCO_{2e}/year, and 4.6 MTCO_{2e}/year/SP were recommended by the BAAQMD to achieve the AB 32 statewide GHG emission reduction target for 2020 of 1990 levels. Post 2020, the State’s 2020 GHG target has been superseded by the 2030 GHG target, established in SB 32, which requires that statewide GHG emissions be reduced to 40 percent below the 1990 level. The BAAQMD has not yet updated its GHG significance thresholds to address SB 32 or the State carbon neutrality goal for

⁴ MTCO_{2e}/year/SP is defined as a metric ton of CO₂ equivalent per year per service population (future residents and full-time workers).

2045, as stipulated in Executive Order B-55-18. A qualified GHG Reduction Strategy adopted by a local jurisdiction should include the following elements as described in the State CEQA Guidelines Section 15183.5(b)(1):

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan’s progress toward achieving the level and to require amendment if the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

While the City of Lafayette has adopted an Environmental Action Plan with most of these elements, it is not a qualified GHG Reduction Strategy because it has not undergone its own CEQA review, nor has it been updated to address the SB 32 goal for 2030. To be considered a qualified GHG Reduction Strategy, the Environmental Action Plan would have to be consistent with the measures and goals in the most recent CARB Scoping Plan (currently the 2017 Scoping Plan Update) to achieve the GHG reduction goals established at the state level.

Given absence of adopted guidance or established targets by the BAAQMD and the City with respect to SB 32, the GHG impacts of the HEU are evaluated based on the BAAQMD’s draft proposed significance thresholds for GHG emissions that are currently being considered as part of their CEQA Guidelines Update, to address the SB 32 GHG reduction target and the EO- B-15-18 carbon neutrality goal by 2045. On December 9, 2021, the BAAQMD publicly presented these draft proposed thresholds (BAAQMD, 2021).

The draft proposed plan-level GHG thresholds proposed by the BAAQMD are as follows:

- A. Meet State’s goals to achieve emissions 40 percent below 1990 levels by 2030, and carbon neutrality by 2045; OR
- B. Be consistent with a local GHG Reduction Strategy that meets the criteria under CEQA Guidelines section 15183.5(b).

The draft proposed project-level GHG thresholds proposed by the BAAQMD are as follows:

- A. Projects must include, at a minimum, the following project design elements:
 - 1. Buildings
 - a. No natural gas (residential and non-residential)

2. Transportation

- a. Achieve compliance with electric vehicle (EV) requirements in the most recently adopted version of CalGreen Tier 2
- b. Achieve the SB 743 target of 15 percent reduction in VMT per capita below the regional average;

OR

- B. Be consistent with a local GHG Reduction Strategy that meets the criteria under the CEQA Guidelines section 15183.5(b).

These draft proposed project-level thresholds proposed by the BAAQMD are similar to those adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD) in 2020 and are intended to primarily apply to a range of residential and commercial uses where the majority of GHG emissions generated are from building energy use and on-road traffic sources. Projects in other sectors analyzed in the 2017 Scoping Plan Update such as agriculture, industrial, transportation, infrastructure, stadiums, military bases, and hospitals have unique characteristics and may need evaluation on a case-by-case basis (Ramboll US Corporation, 2020).

Because the BAAQMD did not provide specific guidance to evaluate impacts pursuant to the draft proposed plan-level thresholds, project-level thresholds have been used for this analysis. Specifically, option (A) of the draft proposed project-level thresholds is used as the significance threshold in this EIR; option (B) is not applicable because the City's Environmental Action Plan is not a qualified GHG Reduction Strategy per CEQA Guidelines section 15183.5, as discussed above. Applying the BAAQMD's draft proposed project-level thresholds to the HEU in this EIR evaluates the capacity for all future projects proposed for development under the HEU to contribute their fair share GHG emission reductions to achieving the State's goals to achieve emissions 40 percent below 1990 levels by 2030, as stipulated in BAAQMD's draft proposed plan-level threshold (A). This is the same logic that the BAAQMD is employing to determine the significance of project-level GHG emissions. In other words, if all future projects proposed for development under the HEU consume no natural gas (1)(a), comply with EV requirements in CALGreen Tier 2 (2)(a), and achieve the SB 743 target of 15 percent reduction in VMT per capita below the regional average (2)(b), then collectively all projects would have less-than-significant impact on climate change and would be consistent with the statewide SB 32 target for 2030. Thus, the HEU itself would have less-than-significant impact on climate change.

Because the proposed project is a housing element update, for purposes of this EIR, a significant impact is identified if the HEU is not consistent with the following project-level draft GHG thresholds proposed by the BAAQMD:

1. No natural gas to all projects proposed for development under the HEU;
2. Compliance with EV requirements in the most recently adopted version of CALGreen Tier 2; and
3. Consistency with the SB 743 target of 15 percent reduction in VMT per capita below regional average. This amounts to 14.7 miles per resident, which is 85 percent of the 2020 baseline countywide average of 17.3 miles per resident.

Methods and Assumptions

GHG emissions and global climate change represent cumulative impacts from human activities and development projects locally, regionally, statewide, nationally, and worldwide. GHG emissions from all of these sources cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects around the world have contributed and will continue to contribute to global climate change and its associated environmental impacts. There are currently no established thresholds for assessing whether the GHG emissions of a project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA, 2008), GHG emissions impacts must also be evaluated on a project-level under CEQA. The methods for the evaluation of GHG impacts follows a qualitative consistency determination of the HEU with the BAAQMD's draft proposed project-level GHG thresholds as discussed above. This evaluation is considered in a cumulative context, and because the analysis of GHG emissions is only relevant in a cumulative context, a project-specific impact assessment is not required.

According to CEQA Appendix G criteria, a significant impact would occur if the HEU would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with applicable regulations, plans, and policies that have been adopted to reduce GHG emissions that contribute to global climate change. As discussed in the Regulatory Setting, several plans and policies are in place to help the City, the Bay Area and the State reduce GHG emissions consistent with the State's emission reduction targets for 2030 and 2050. The draft BAAQMD thresholds proposed by the BAAQMD also help analyze a project's consistency with the State's current GHG reduction goals for 2030 and beyond. Consistency with the draft GHG thresholds proposed by the BAAQMD discussed above would also ensure that the HEU is consistent with the BAAQMD's 2017 Clean Air Plan and CARB's 2017 Scoping Plan Update.

Impacts and Mitigation Measures

Impacts

Impact 4.7-1: Implementation of the HEU would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment. (*Less than Significant Impact, with Mitigation*)

GHG emissions from the implementation of the HEU would result in both direct and indirect emissions from construction and operational activities. Direct GHG emissions would be generated during construction activities associated with housing development and would include emissions from the combustion of fuel (e.g., gasoline and diesel) in construction equipment and vehicles. Upon completion of construction, developed housing units would generate direct GHG emissions from area sources (such as landscaping equipment); on-road motor vehicle trips; and natural gas combustion for space heating, water heating, and cooking. Indirect operational GHG

emissions would be generated from the increase in electricity use associated with building energy use along with water and wastewater treatment and conveyance.

HEU with Distributed Sites and Downtown-Only Alternative

Implementation of the HEU with both the Distributed Sites and Downtown-Only Alternative would result in the development of multifamily residential units whose construction and operation would generate GHG emissions, as detailed above. The BAAQMD's draft proposed GHG thresholds address the two main direct sources of GHG emissions in residential uses: building energy use and motor vehicle trips.

Compliance with No Natural Gas Requirement

Roughly a quarter of the state's GHG emissions come from buildings, the largest share of which (about half) come from burning natural gas (Energy+Environmental Economics, Inc. [E3], 2019). Combustion of natural gas and petroleum products for heating and cooking needs represent 80 percent of the direct fossil fuel CO₂ emissions from the residential and commercial sectors in 2019.

The current (2019) Title 24 Building Energy Efficiency Standards (Energy Code), which went into effect on January 1, 2020 require that all newly constructed buildings with three stories or fewer have solar panels. The standards are updated every three years. The 2022 Update to the Energy Code was adopted by the CEC in August 2021 and was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. The 2022 Energy Code, which goes into effect on January 1, 2023, encourages efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, and strengthen ventilation standards to improve indoor air quality (CEC, 2022). Buildings whose permit applications are applied for or after January 1, 2023, must comply with the 2022 Energy Code. Though the 2022 update does not explicitly ban natural gas in new construction, it requires the installation of solar and energy storage systems in most new commercial buildings and for single-family homes to be built "electric ready" to support electric vehicles and appliances. "Electric ready" homes must have an electric plug installed within 3 feet of any stoves, furnaces, dryers and other appliances that run on natural gas, and the home's electrical panel is required to include capacity for the future installation of electric appliances if not already installed during construction. In a resolution to update its Indoor Air Quality Program in 2020, CARB also voted to support all-electric building policies, based on research showing that indoor air pollution from stoves and other gas appliances can contribute to health problems, including asthma and heart disease (CARB, 2020).

Though the 2022 Energy Code stops short of explicitly banning natural gas in new construction, many cities across California have moved to adopt ordinances requiring all-electric buildings and banning natural gas in new construction as part of their efforts to meet the State's GHG reduction goals for 2030 and beyond. The City of Lafayette has not implemented an ordinance prohibiting natural gas in new construction. Further, the HEU does not include a requirement that all future projects proposed for development under the HEU be all-electric with no natural gas appliances or infrastructure. Therefore, development under both the Distributed Sites and Downtown-Only Alternative would provide natural gas infrastructure to the housing units and would therefore be inconsistent with the BAAQMD's draft proposed GHG thresholds.

Compliance with EV Requirements in CALGreen

The 2019 California Green Building Standards Code (“CALGreen”, Title 24, Part 11) requires that new construction and major alterations include “EV Capable” parking spaces which have electrical panel capacity, a dedicated branch circuit, and a raceway to the EV parking spot to support future installation of charging stations. All new construction and qualifying additions or alterations must comply with CALGreen. Mandatory 2019 CALGreen requirements applicable to residential uses are as follows:

- All new residential (single-family, townhomes & duplexes) construction must be EV capable. Each dwelling unit must have a listed raceway to accommodate a dedicated 208/40-volt branch circuit.
- Multifamily dwellings must provide at least 10 percent of the total parking spaces to be EV Capable.
- Accessory dwelling units without additional parking do not need to comply with EV charging requirements for new construction (e.g., guest houses).
- If guest parking is available, at least one “EV Capable” space must be for guest parking.

In addition to the mandatory requirements, the 2019 CALGreen encourages local jurisdictions to raise the sustainable goals by publishing two “voluntary” tiers of additional requirements, referred to as Tier 1 and Tier 2. Tier 1 adds additional requirements beyond the mandatory measures. Tier 2 further increases the requirements. The CALGreen tiers are only mandatory where local ordinances have specifically adopted them. Tier 2 EV requirements for residential uses include the provision of at least 20 percent of the total parking spaces as “EV Capable.”

In October 2021, the CEC Approved the 2022 CALGreen Building Standards Code. In addition to the mandatory requirements from the 2019 CALGreen listed above, the following mandatory 2022 CALGreen requirements are applicable to multifamily residential uses:

- 25 percent of parking spaces in multifamily dwellings are required to have low power level 2 receptacles.
- 5 percent of parking spaces in multifamily buildings with 20 or more units require higher power Level 2 (EVSE) chargers.

While the 2022 CALGreen Code does not change the EV Capable percentages required for voluntary tiers Tier 1 and Tier 2 from the 2019 standards, it requires Low Power Level 2 receptacles to be provided to 35 percent and 40 percent of parking spaces for Tier 1 and Tier 2, respectively. 10 percent and 15 percent of total parking spaces for multifamily buildings with 20 or more units are required to have EVSE (chargers) for Tier 1 and Tier 2, respectively (California Housing and Community Development, n.d).

The City of Lafayette has not adopted requirements beyond the mandatory CALGreen requirements. Further, the HEU does not include a requirement that all future projects proposed for development under the HEU include EV infrastructure consistent with CALGreen Tier 2 requirements. Therefore, housing units developed under both the Distributed Sites and

Downtown-Only Alternative would not comply with the BAAQMD’s draft threshold requiring compliance with EV requirements in the most recently adopted version of CALGreen Tier 2.

Consistency with SB 743 VMT Reduction Target

As detailed earlier, with the adoption of SB 743, the State of California changed the method of traffic analysis required through CEQA for publicly- and privately-initiated projects. SB 743 requires project reviews under CEQA to evaluate the transportation impacts of new developments in terms of VMT, rather than on-road congestion and automobile delay. It requires that the amount of driving and length of trips, as measured by VMT, be used to assess transportation impacts and the impacts be “mitigated” by options such as increasing transit, providing for active transportation such as walking and biking, and participating in mitigation banks.

The transportation analysis in Section 4.14 demonstrates that the VMT generated per capita within the Housing Element Planning Areas for 2040 conditions with the No Project case, the HEU with Distributed Sites, and the Downtown Only alternative are projected to be less than 85 percent of the 2020 baseline countywide average. The 2020 baseline Countywide average is estimated to be 17.3 miles per resident. Based on the Contra Costa Countywide Travel Demand Model, the HEU with Distributed Sites and Downtown-Only Alternative would result in 14.3 and 13.6 miles per resident, respectively. This would be less than 14.7, which is 85 percent of the 2020 countywide baseline.

Because the HEU would not comply with the no natural gas and CALGreen Tier 2 EV requirements proposed as the BAAQMD’s draft GHG thresholds, this would result in a **potentially significant impact** under both the Distributed Sites and Downtown-Only Alternative.

Mitigation Measures

Mitigation Measure 4.7-1: Reduce GHG emissions from building energy use and motor vehicle trips.

- a) All new multifamily development proposed as part of the HEU shall be designed to be 100 percent electric with no natural gas infrastructure for appliances, including water heaters, clothes washers and dryers, HVAC systems, and stoves.
- b) Subsequent multifamily development projects proposed as part of the HEU shall be designed to be comply with EV requirements in the most recently adopted version of CALGreen Tier 2 at the time of project-specific CEQA review.

Significance After Mitigation: With the implementation of Mitigation Measure 4.7-1, all future multifamily housing projects proposed for development under the HEU with both the Distributed Sites and Downtown Only Alternative would be consistent with the BAAQMD’s proposed draft GHG significance thresholds. Compliance with these thresholds would mean that these projects would not generate GHG emissions either directly or indirectly, that would have a significant impact on the environment. Therefore, at the program-level, this impact would be considered **less than significant with mitigation**.

Impact 4.7-2: Implementation of the HEU would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (*Less than Significant Impact, with Mitigation*)

HEU with Distributed Sites and Downtown-Only Alternative

The 2017 Scoping Plan Update adopted by CARB establishes the framework for achieving the 2030 statewide GHG reduction target of 40 percent below 1990 levels. The 2017 Scoping Plan Update details local actions that land use development projects and municipalities can implement to support the statewide goal. The BAAQMD’s proposed project-level GHG CEQA thresholds are designed to demonstrate consistency with CARB’s 2017 Scoping Plan Update for new projects and plans. As described under Impact 4.7-1, the HEU with both the Distributed Sites and Downtown-Only Alternative would be inconsistent with the BAAQMD’s draft proposed GHG thresholds. Therefore, implementation of the HEU would be inconsistent with the statewide emissions reduction goal for 2030 required by SB 32 and achieved through the 2017 Scoping Plan Update.

The 2017 Scoping Plan Update incorporates a broad array of regulations, policies, and state plans designed to reduce GHG emissions. Those that are applicable to the construction and operation of development proposed under the HEU are listed in **Table 4.7-3**. Actions, plans, and programs that are not under the control or influence of local jurisdictions, such as the Cap-and-Trade program, are not included in the table.

**TABLE 4.7-3
 CONSISTENCY WITH APPLICABLE GHG REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE**

Sector / Source	Category / Description	Consistency Analysis
Energy and Water		
California Renewables Portfolio Standard (RPS) and SB 100	SB 100 requires that the proportion of electricity from renewable sources be 60 percent renewable power by 2030 and 100 percent renewable power by 2045.	Consistent. Electricity supplied to development allowed under the HEU would be provided by Pacific Gas and Electric (PG&E) and Marin Clean Energy (MCE). PG&E and MCE are required to comply with SB 100 and the RPS.
California Renewables Portfolio Standard and SB 350	SB 350 requires that the proportion of electricity from renewable sources be 50 percent renewable power by 2030 (superseded by SB 100). It also requires the state to double the energy efficiency savings in existing final end uses of electricity and natural gas by retail customers through energy efficiency and conservation.	Consistent. Electricity to development under the HEU would be provided through PG&E and MCE. PG&E and MCE are required to comply with both the RPS and SB 350 and will meet these standards.
California Building Efficiency Standards (CCR, Title 24, Part 6)	Energy Efficiency Standards for Residential and Nonresidential Buildings	Consistent. Buildings constructed as part of the HEU would be designed to comply with the most recent version of Title 24 Building Energy Efficiency Standards.
California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen)	California’s Green Building Standards (CALGreen) Code includes energy and water efficiency requirements, as well as waste management and other design regulations that apply to residential and nonresidential buildings.	Consistent. Buildings constructed as part of the HEU would comply with mandatory CALGreen measures. In addition, Mitigation Measure 4.7-1b would go beyond mandatory CALGreen measures to require voluntary Tier 2 electric vehicle charging station requirements for all development allowed under the HEU.
Senate Bill X7-7	The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban retail water supplier shall develop water use targets to meet this goal.	Consistent. Water to development as part of the HEU would be supplied by the East Bay Municipal Utilities District, which is required to comply with SB X7-7 standards.

TABLE 4.7-3 (CONTINUED)
CONSISTENCY WITH APPLICABLE GHG REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE

Sector / Source	Category / Description	Consistency Analysis
Mobile Sources		
Advanced Clean Cars Program (ACC) and Mobile Source Strategy (MSS)	In 2012, CARB adopted the ACC program to reduce criteria pollutants and GHG emissions for model year vehicles 2015 through 2025. ACC requires the reduction of criteria pollutants and GHG emissions from light- and medium-duty vehicles. ACC also includes the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. The Mobile Source Strategy (2106) calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) on the road by 2025, and 4.2 million ZEVs by 2030.	Consistent. The standards would apply to all vehicles used by residents of housing developed by the HEU, and to construction workers traveling to and from the construction sites as required by CALGreen. In addition, Mitigation Measure 4.7-1a would go beyond mandatory CALGreen regulatory requirements for EV charging infrastructure to require voluntary Tier 2 electric vehicle charging station requirements for all development allowed under the HEU and would therefore accommodate future EV charging stations.
SB 375	SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. CARB's current targets call for the Bay Area to reduce per-capita vehicular GHG emissions 10 percent by 2020 and 19 percent by 2035 from a 2005 baseline.	Consistent. Development under the HEU would be consistent with MTC and ABAG Plan Bay Area 2040 goals and objectives under SB 375 to implement "smart growth." The proposed housing in an infill location with access to public transportation would reduce reliance on automobiles, thereby reducing VMT and associated GHG emissions. The VMT generated per capita within the Housing Element Planning Areas for 2040 conditions with the No Project case, the HEU with Distributed Sites, and the Downtown Only alternative are projected to be less than 85 percent of the 2020 baseline countywide average. The 2020 baseline Countywide average is estimated to be 17.3 miles per resident. Based on the Contra Costa Countywide Travel Demand Model, the HEU with Distributed Sites and Downton-Only Alternative would result in 14.3 and 13.6 miles per resident, respectively. This would be less than 14.7, which is 85 percent of the 2020 countywide baseline.
Solid Waste		
California Integrated Waste Management Act (IWMA) of 1989 and AB 341	IWMA requires all California cities to divert 50-percent of all solid waste from landfill disposal through source reduction, recycling, and composting activities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020. In 2011, the Lafayette City Council adopted the waste diversion goal of achieving a 75-percent waste diversion rate, as part of the Environmental Strategy.	Consistent. The Central Contra Costa Solid Waste Authority (CCCSWA) provides solid waste and residential recycling services for Contra Costa County and is responsible for recycling and solid waste management in Lafayette. The CCCSWA holds franchise agreements with Republic Services for the collection, transfer, and disposal of residential and commercial solid waste, and with Valley Waste Management for the collection and marketing of residential recycling, green waste, and food scraps. The CCCSWA's services yield waste diversion results consistent with citywide recycling targets. These services would be supplied to all future development under the HEU.

As shown above, though the HEU would implement actions identified in the 2017 Scoping Plan Update to reduce energy use, conserve water, reduce waste generation, promote EV use, and reduce vehicle travel consistent with statewide strategies and regulations, the HEU's inconsistency with the BAAQMD's draft proposed GHG significance thresholds would mean that GHG reductions achieved by the HEU would not be adequate to contribute the BAAQMD's share of GHG reductions required to meet the statewide GHG reduction goal for 2030 pursuant to SB 32 and the 2017 Scoping Plan Update. This would be a **potentially significant** impact.

Mitigation Measure: Implement Mitigation Measure 4.7-1.

Significance After Mitigation: With the implementation of Mitigation Measure 4.7-1, the HEU with both the Distributed Sites and Downtown-Only Alternative would be consistent with the with the BAAQMD's draft proposed GHG significance thresholds being considered by the BAAQMD to reduce statewide GHG emissions 40 percent below 1990 levels by 2030, consistent with the 2017 Scoping Plan Update's target. While subsequent projects proposed for development under the HEU would undergo further project-level CEQA review, at the program-level, this impact would be considered **less than significant with mitigation**.

Cumulative Impacts

Global GHG emissions are inherently a cumulative concern that is understood for CEQA purposes to be an existing significant and adverse condition. Accordingly, the significance of GHG emissions in this analysis is determined based on whether such emissions would have a cumulatively considerable impact on global climate change. Although the geographic scope of cumulative impacts related to GHG emissions is global, this analysis focuses on the HEU's direct and/or indirect generation of GHG emissions on the region and the state. CAPCOA considers GHG impacts to be exclusively cumulative impacts, in that no single project could, by itself, result in a substantial change in climate (CAPCOA, 2008). Therefore, the evaluation of cumulative GHG impacts presented in this section considers whether the HEU would make a considerable contribution to cumulative emissions of GHG. Implementation of the HEU with both the Distributed Sites and Downtown-Only Alternative would result in a less than significant impact with mitigation. Implementation of Mitigation Measure 4.7-1 would ensure consistency with the state's 2030 GHG reduction goals. Therefore, the HEU's incremental impact relative to GHG emissions in the cumulatively context would also be **less than significant with mitigation**.

4.7.5 References

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4.8 Hazards and Hazardous Materials

4.8.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects relative to hazards and hazardous materials. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to hazards and hazardous materials. Further below, existing plans and policies relevant to hazards and hazardous materials associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to hazards and hazardous materials that could result from implementation of the HEU in the context of existing conditions.

Issues related to wildland fires are discussed and evaluated in Section 4.17 of this EIR, *Wildland Fire*. This topic is therefore not evaluated here, and readers are referred to Section 4.17.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021, and a scoping meeting was held on August 16, 2021. No comments relating to hazards and hazardous materials were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- City of Lafayette. 2009. *City of Lafayette General Plan, Safety Element*. May, 2009.
- City of Lafayette. 2010. *Downtown Lafayette Specific Plan EIR, Volume I: Draft EIR*. January 26, 2010.
- City of Lafayette. 2018. *Emergency Operations Plan, Wildland Fire Evacuation Plan*. July, 2018.
- State Water Resources Control Board (SWRCB) and Department of Toxic Substances Control (DTSC), 2021, GeoTracker and EnviroStor websites, accessed on August 23, 2021, at: <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=lafayette>

4.8.2 Environmental Setting

Hazardous Materials Sites

Active and closed hazardous materials sites that have reported spills or releases are tracked on the State Water Resources Control Board (SWRCB) GeoTracker and Department of Toxic Substances Control (DTSC) EnviroStor websites, which can be viewed simultaneously (SWRCB/DTSC, 2021). **Table 4.8-1** lists the sites along with their current status of remediation that are located within the various HEU planning areas. Most of the sites are leaking underground storage tank (LUST) sites that had leaks of fuel and/or motor oil. Two sites are dry cleaners that leaked dry cleaning solvents (i.e., perchloroethene, or PCE). There are no federal Superfund sites, State Response sites, or school sites identified in the HEU area as being evaluated by the DTSC.

**TABLE 4.8-1
 HAZARDOUS MATERIALS SITES**

Site Name	Address	Site Type	Status
Alwand Service Station	3357 Mt. Diablo Blvd.	LUST & Permitted UST	Case Closed & Permitted UST
ARCO	3658 Mt. Diablo Blvd.	LUST	Case Closed
AT&T	3675 Mt. Diablo Blvd.	LUST	Case Closed
BP-Union 76	3500 Mt. Diablo Blvd.	LUST	Case Closed
Chevron	3632 Mt. Diablo Blvd.	LUST & permitted UST	Case Closed & Permitted UST
Chevron	3363 Mt. Diablo Blvd.	LUST	Case Closed
Chevron	1175 Pleasant Hill Rd.	LUST	Case Closed
Diamond K. Bldg. Supply	3671 Mt. Diablo Blvd.	LUST	Case Closed
Former Cleaners Direct	3506 Mt. Diablo Blvd.	DC – Cleanup Program Site	Open – Assessment & Interim Remedial Action
Former Exxon - Valero	3546 Mt. Diablo Blvd.	LUST & Permitted UST	Case Closed & Permitted UST
Former Gaston's Cleaners	965 Moraga Rd.	DC – Cleanup Program Site	Open - Inactive
Golden Gate Auto	3484 Golden Gate Way	LUST	Case Closed
Hamlin Dry Cleaners	3425 Golden Gate Way	DC – Cleanup Program Site	Open – Remediation – Land Use Restrictions
Lafayette Car Wash	3319 Mt. Diablo Blvd.	LUST	Case Closed
Lafayette Elementary School Expansion	952 Moraga Rd.	School	Certified
Lafayette Town Center	3588 Mt. Diablo Blvd.	LUST	Case Closed
Lemos Property	3344 Mt. Diablo Blvd.	LUST	Case Closed
Lennar Homes	3666 Mt. Diablo Blvd.	LUST & Permitted UST	Case Closed & Permitted UST
Lescure Company Inc.	3667A Mt. Diablo Blvd.	LUST	Case Closed
Mobil	960 Moraga Road	LUST	Case Closed
Pacific Bell	3610 Happy Valley Rd	LUST	Case Closed
Quik Stop	3458 Golden Gate Way	LUST	Case Closed
Scotty Rents	3380 Mt. Diablo Blvd.	LUST	Case Closed
Shell	3603 Mt. Diablo Blvd.	LUST	Case Closed
S&S Shell	3255 Stanley Blvd.	LUST	Case Closed
Shell Service Center	3356 Mt. Diablo Blvd.	Permitted UST	Permitted UST
Tancredy Property	3408-3410 Mt. Diablo Blvd.	Cleanup Program Site	Open – Eligible for Closure
Texaco	3599 Mt. Diablo Blvd.	LUST	Case Closed
Trans Am	3410 Mt. Diablo Blvd.	LUST	Case Closed
Unocal Station – Union 76	3523 Mt. Diablo Blvd.	LUST	Case Closed

NOTES:

LUST = Leaking underground storage tank
 DC = Dry cleaner

SOURCE: SWRCB/DTSC 2021

Sites that are listed as Permitted underground storage tanks (USTs) are sites with permits for operating USTs that do not indicate leaks or spills. The Lafayette Elementary School Expansion site with the “Certified” status means that the DTSC has reviewed information about hazardous materials at the school and has determined there are no hazardous materials issues for this school.

The status of most of the sites listed in Table 4.8-1 is Case Closed. This indicates that investigation and remediation (i.e., cleanup) has been completed to the satisfaction of the regulatory agency overseeing the site and that the site no longer poses a risk to people or the environment. Sites that have an Open status are discussed below.

Former Cleaners Direct

This site is a former dry cleaners facility located at 3506 Mount Diablo Boulevard in the Downtown Core (North) HEU planning area (see Figure 3-3 for the locations of the various HEU planning areas) that released dry cleaning solvents, specifically PCE, to the environment (AEI 2012). The dry cleaners operated from 1963 to 2007. The case status is Open – Inactive, meaning that the responsible party has not conducted investigation or remediation in some time, and the regulatory agency (in this case, the Regional Water Quality Control Board [RWQCB]) has not closed the case. The GeoTracker website indicates that investigation and remediation reports were submitted from 2007 through 2012. The last investigation report (AEI, 2012) stated that PCE had been detected in soil gas, soil, and groundwater samples, but that the extent of contamination is limited to the site. In addition, a soil vapor extraction system was operated from August 2009 through October 2011, and restarted in January of 2012. Since 2012, no documents have been posted on the GeoTracker website to indicate whether the system is still in operation. Since 2012, the GeoTracker website posts several documents about cost recovery oversight (i.e., the regulatory agency charges the responsible party for the cost of overseeing investigation and remediation of the site) but no further information regarding investigation and remediation, hence the inactive status.

Former Gaston’s Cleaners

This site is a former dry cleaners facility located at 965 Moraga Road in the Downtown Core (South) HEU planning area that released dry cleaning solvents (i.e., PCE) to the environment (Aqua Science Engineers, 1999). The dry cleaners operated from 1970 to 1994. The case status is Open – Inactive, meaning that the responsible party has not conducted investigation in some time, and the regulatory agency (in this case, the RWQCB) has not closed the case. The GeoTracker website indicates that investigation reports were submitted from 1994 through 1999. The last investigation report (Aqua Science Engineers, 1999) stated that PCE and its degradation byproducts had been detected in soil gas, soil, and groundwater samples, and that the RWQCB was considering case closure if the relatively low concentrations continue to decrease. Since 1999, no documents have been posted on the GeoTracker and it is unknown whether the case was closed. No further information regarding this site has been posted and the case status remains Open - Inactive.

Hamlin Dry Cleaners

This site is a former dry cleaners facility located at 3425 Golden Gate Way in the Downtown East End (South) planning area that released dry cleaning solvents (i.e., PCE) to the environment

(Pangea, 2021). The dry cleaners operated from 1956 to 1999. PCE and its degradation byproducts had been detected in soil gas, soil, and groundwater samples. PCE in groundwater extends offsite. The case status is Open – Remediation, meaning that the responsible party is continuing to conduct remediation of the site, which consists of soil vapor extraction.

Tancredy Property

This site is a former auto repair shop located at 3408-3410 Mount Diablo Boulevard in the Downtown East End (North) planning area that operated from 1960 to 2019 with a gasoline service station also in operation from 1960 to 2009 (AEI, 2021). The service station portion of the operations were closed in 2009; the RWQCB granted case closure at that time pending future redevelopment of the property. The site is being redeveloped for residential use, which prompted additional investigation that discovered low levels of PCE in soil near a previously removed waste oil UST. The affected soil area was excavated and approximately 150.7 tons of soil was removed and disposed of at an offsite licensed disposal facility permitted to accept the waste. Case closure has been requested of the RWQCB and case closure is pending.

Schools

Schools located within or adjacent to the various HEU planning areas are listed below in **Table 4.8-2**.

**TABLE 4.8-2
SCHOOLS**

School	Address
Old Firehouse Pre-School	984 Moraga Road
Contra Costa Jewish Day School	3800 Mount Diablo Boulevard
Lafayette Nursery School	979 1st Street
Joyful Beginnings Pre-School	955 Moraga Road
Stanley Middle School	3455 School Street
Lafayette Elementary	950 Moraga Road
The Childs Day School	1049 Stuart Street
Diablo Valley Montessori School	3390 Deer Hill Road

SOURCE: City of Lafayette 2010; Google Street Maps 2021

Airports

The nearest public use airport located nearest to the planning areas project is Buchanan Field Airport, located at 550 Sally Ride Drive in Concord, California, approximately 7 miles north of Lafayette’s downtown area (Buchanan Field, 2014). No portion of the City is located within the airport Runway Protection Zones or the Airport Airspace Plan Conical Surface for Buchanan Field Airport. There are no private airstrips in the City (City of Lafayette, 2010).

Emergency Response and Evacuation Plans

The City of Lafayette has an Emergency Operations Plan that would be implemented in the event of a disaster or emergency (City of Lafayette, 2011). State Route 24 (SR-24) is identified as a main arterial. In addition, the Lafayette Police Department at 3675 Mount Diablo Boulevard is identified as an emergency operations center. SR-24 passes east-west through the City; the police department is located in the Downtown West End (South) HEU planning area.

The City of Lafayette also has an Emergency Operations Plan/Wildland Fire Evacuation Plan, which would be implemented in the event of a wildland fire or other large emergency (City of Lafayette, 2018). The plan defines command and control based on the standardized Incident Command System (ICS), establishes communication protocols, identifies staging areas and evacuation routes, and defines evacuation triggers and emergency response to those triggers. The plan breaks up the City into 17 zones, and describes each zone within the context of emergency response and known hazards, and identifies special concerns within each zone. The plan identifies evacuation routes and collection areas within each zone, and notes which routes must remain unblocked and open to ensure clear routes of travel during an emergency. **Table 4.8-3** lists the roads that are designated as evacuation routes through the various HEU planning areas. Additional information about emergency evacuation can be found in Section 4.14 of this EIR, *Transportation*, as well as Section 4.17, *Wildfire*.

**TABLE 4.8-3
 DESIGNATED ROUTES FOR EMERGENCY EVACUATION IN THE HEU PLANNING AREAS**

Planning Area	Designated Routes
1 – Downtown West End (North)	Mount Diablo Boulevard, Dolores Drive, and Mountain View Drive
2 – Downtown West End (South)	None designated
3 – Downtown Core (North)	Mount Diablo Boulevard, Dolores Drive, Happy Valley Road, and Oak Hill Road
4 – Downtown Core (South)	Mount Diablo Boulevard, Mountain View Drive, and Moraga Road
5 – Downtown East End (North)	Mount Diablo Boulevard and School Street
6 – Downtown East End (South)	Happy Valley Road
7 – BART	Happy Valley Road and Deer Hill Road
8 – Deer Hill Corridor	Happy Valley Road and Deer Hill Road
9 – DeSilva Sites	Mount Diablo Boulevard
13 – Dewing/Brook/Rosedale	St. Marys Road, Brook Street, and Moraga Road

SOURCE: City of Lafayette 2018

The City is currently revisiting its Emergency Operations Plan/Wildfire Fire Evacuation Plan as it updates its General Plan Safety Element. Recent changes to State law (see Section 4.8.3, *Regulatory Setting*, below) require local jurisdictions to evaluate parcels with only one point of ingress/egress (SB 99) and to address evacuation routes related to hazards in updated Safety Elements (AB 747).

4.8.3 Regulatory Setting

Federal

The primary federal agencies with responsibility for hazardous materials management include the U.S. Environmental Protection Agency (USEPA), U.S. Department of Labor Occupational Safety and Health Administration (Fed/OSHA), and the U.S. Department of Transportation (USDOT). Federal laws, regulations, and responsible agencies are summarized in **Table 4.8-4**.

**TABLE 4.8-4
 FEDERAL LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Management	Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA))	Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.
Hazardous Waste Handling	Resource Conservation and Recovery Act of 1976 (RCRA)	Under RCRA, the USEPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from “cradle to grave.”
	Hazardous and Solid Waste Act	Amended RCRA in 1984, affirming and extending the “cradle to grave” system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.
Hazardous Materials Transportation	USDOT	USDOT has the regulatory responsibility for the safe transportation of hazardous materials. The USDOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	U.S. Postal Service (USPS)	USPS regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	Fed/OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR 1910).

State and local agencies often have either parallel or more stringent rules than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the State or local agency section.

State

The primary State agencies with responsibility for hazardous materials management in the region include the DTSC and the RWQCB within the California Environmental Protection Agency (Cal EPA), California Occupational Safety and Health Administration (Cal/OSHA), California Department of Health Services (CDHS), California Highway Patrol (CHP), and the California Department of Transportation (Caltrans). State laws, regulations, and responsible agencies are summarized in **Table 4.8-5**.

**TABLE 4.8-5
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible State Agency	Description
Hazardous Materials Management	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program); CUPA (Health and Safety Code Sections 25404 et seq)	In January 1996, Cal EPA adopted regulations, which implemented a Unified Program at the local level. The agency responsible for implementation of the Unified Program is called the Certified Unified Program Agency (CUPA), which for the City of Lafayette is the Contra Costa Health Services, Hazardous Materials Programs, Division of Health Services Department.
	California Fire Code	The California Fire Code regulates the storage and handling of hazardous materials, including the requirement for secondary containment, separation of incompatible materials, and preparation of spill response procedures.
Hazardous Waste Handling	California Hazardous Materials Release Response Plan and Inventory Law of 1985; CUPA	The California Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act) requires that businesses that store hazardous materials onsite prepare a Hazardous Materials Business Plan (HMBP) and submit it to the local CUPA.
	California Hazardous Waste Control Act; DTSC	Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq., DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code, Division 20, Chapter 6.8, Sections 25300 et seq., also known as the State Superfund law, providing for the investigation and remediation of hazardous substances pursuant to State law.
Hazardous Materials Transportation	Titles 13, 22, and 26 of the California Code of Regulations	Regulates the transportation of hazardous waste originating in and passing through the state, including requirements for shipping, containers, and labeling.
	CHP and Caltrans	These two state agencies are primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies.
Occupational Safety	Cal/OSHA	Cal/OSHA has primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the Code of Federal Regulations (CFR). Cal/OSHA standards are generally more stringent than federal regulations.
	Cal/OSHA regulations (Title 8 CCR)	Concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.
Construction Storm Water General Permit (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ)	RWQCB	Dischargers whose project disturbs one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the <i>NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities</i> (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). Construction activity subject to this permit includes clearing, grading, grubbing, and other disturbances to the ground such as excavation and

TABLE 4.8-5 (CONTINUED)
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible State Agency	Description
		stockpiling, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific Best Management Practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving offsite into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area.
Municipal Separate Storm Sewer System (MS4) Permit NPDES No. CAS612008 and Order No. R2-2015-0049	RWQCB	The MS4 permit requires permittees (in this case, Contra Costa Permittees, including the City of Lafayette) to reduce pollutants and runoff flows from new development and redevelopment using BMPs to the maximum extent practical. The MS4 permittees have their own development standards developed by the Contra Costa Clean Water Program documented in their Stormwater C.3 Guidebook (CCCWP 2017), which includes Low Impact Development (LID)/post-construction standards. The MS4 permit requires specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.
Underground Infrastructure	California Code of Regulations Section 4216-4216.9	Section 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

Assembly Bill 747

AB 747 was adopted in 2019, and requires safety elements to be reviewed and updated as necessary to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. The law authorizes a city or county that has adopted a local hazard mitigation plan, emergency operations plan, or other document that fulfills commensurate goals and objectives to use that information in the safety element to comply with this requirement by summarizing and incorporating by reference that other plan or document in the safety element.

Senate Bill 99

SB 99 was adopted in 2019, and requires a city or county, upon the next revision of the housing element on or after January 1, 2020, to review and update the safety element to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes.

Regional

County Hazardous Waste Task Force

Contra Costa County contains some heavy industrial development that may be associated with hazardous waste transport across the County, and in particular, Lafayette (City of Lafayette, 2010). Hazardous uses located in Lafayette include natural gas and petroleum product pipelines that run through or near the City. Some of these pipelines may cross unstable slopes and areas underlain by soft mud and peat. The hazard of petroleum fires is considered more dangerous than natural gas fires as they are more likely to spread to nearby property. In 1983, Contra Costa County formed the County Hazardous Waste Task Force to appropriately manage the transport and disposal of hazardous waste. The County Hazardous Waste Management Plan is a comprehensive analysis of all waste management from generation through disposal. The County's General Plan also includes policies to support its goal of protecting citizens from such hazards. Those most relevant to the conditions of the Plan Area strictly regulate the storage and transport of any hazardous materials that may occur in the area.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), codified in California Health and Safety Code Sections 25404 et seq., requires the administrative consolidation of six hazardous materials and waste programs under one agency, a Certified Unified Program Agency (CUPA). The following programs are consolidated under the unified program:

- Hazardous Materials Release Response Plans, and Inventory (also referred to as Hazardous Materials Business Plans)
- California Accidental Release Program
- Underground Storage Tanks
- Aboveground Petroleum Storage Spill Prevention Control and Countermeasures
- Hazardous Waste Generation and Onsite Treatment
- Uniform Fire Code Plans and Inventory Requirements

The State Secretary for Environmental Protection designated the Contra Costa Health Services, Hazardous Materials Programs (CCHSHMP), Division of Health Services Department as the local CUPA. The CUPA is charged with the responsibility of conducting compliance inspections of over hazardous materials facilities in Contra Costa County. These facilities and businesses handle hazardous materials, generate or treat a hazardous waste, and/or operate underground storage tanks. The CUPA uses education and enforcement to minimize the risk of chemical exposure to human health and the environment. The CUPA forwards important facility information to local fire prevention agencies that enables them to take appropriate protective action in the event of an emergency at regulated facilities. In order to legally store and use hazardous materials above the trigger quantities, users must apply for permits and demonstrate

satisfactory compliance with regulations. The quantities that trigger disclosure are based on the maximum quantity on site at any time:

- 55 gallons, 500 pounds, or 200 cubic feet for 30 days or more at any time in the course of a year
- Any amount of hazardous waste
- Category I or II pesticides
- Explosives
- Extremely hazardous substances above the threshold planning quantity

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette, which includes the current City of Lafayette Safety Element, which was adopted in 2002 and amended in 2009 (City of Lafayette, 2009). Goals and policies related to Hazards and Hazardous Materials are in Chapter VI, Safety, and are listed below.

Hazardous Materials

Goal S-5: Reduce the hazards of the storage, transportation, and disposal of hazardous materials.

Policy S-5.1: Storage of hazardous materials. Strictly enforce the regulations governing the storage of chemical, biological, and other hazardous materials as set forth in California Code of Regulations, Title 22, Division 4.5.

Policy S-5.2: Transport of Hazardous Materials: Develop, in cooperation with the County and neighboring cities, regulations prohibiting through-transport by truck of hazardous materials on the local street systems and require that this activity be limited to State highways.

Policy S-5.3: Transportation, Storage, and Disposal Facilities: Provide measures to protect the public from the hazards associated with the Transportation, Storage and Disposal (“TSD”) of hazardous wastes.

Emergency Preparedness

Goal S-8: Provide adequate response and support services in the event of a major emergency or natural disaster.

Policy S-8.1: Emergency Operations Plan. Periodically review the Emergency Operations Plan to assure that it meets current needs in the event of a major disaster.

Policy S-8.2: Cooperate with the County's Emergency Preparedness Plan. Cooperate with Contra Costa County's Emergency Preparedness Plan.

Policy S-8.3: Emergency Operations Center. Ensure that Lafayette has an adequate and well equipped Emergency Operations Center (EOC).

Policy S-8.4: Public Education. Make information available to residents on methods to reduce the dangers from natural hazards, fire, and crime, and encourage neighborhood groups to become involved in prevention and emergency response programs.

Policy S-8.5: Evacuation Routes. Identify and publicize evacuation routes to be used in emergencies.

Emergency Medical Service

Goal S-9: Maintain an effective medical emergency response system.

Policy S-9.1: Emergency Medical Service. Work to improve emergency medical response service in Lafayette.

City of Lafayette Encroachment Permit Requirements

Section 3-2 of the City's building regulations outlines requirements for encroachment permits when development projects encroach into public rights-of-way during construction. Examples of encroachment could include temporary use of public rights-of-way for staging, construction, or traffic control purposes. Projects with high volumes of truck traffic are also required to take out an encroachment permit to ensure that trucks do not create undue damage to public roadways. For larger projects, preparation and implementation of a construction traffic control/traffic management plan is also required to manage construction traffic in a manner that would ensure adequate traffic flow and to keep key routes open.

The requirements generally apply to all projects in the downtown area and in all residential areas of the City. Section 3-202 defines those areas requiring an encroachment permit during construction to include the Downtown area with boundaries as defined by the planning area established in Downtown Specific Plan and all public roadways with average daily traffic in excess of 5,000 vehicles, including but limited to (roadways marked with an asterisk pass through or adjoin one or more of the HEU planning areas):

- Acalanes Road, north of Hidden Valley Road
- Deer Hill Road*
- Glenside Drive, from Reliez Station Road extending south to St. Mary's Road
- Moraga Road*
- Mount Diablo Boulevard*
- Olympic Boulevard
- Reliez Station Road, south of Olympic Boulevard
- St. Mary's Road*
- Pleasant Hill Road

The requirements can be waived for projects in single family residential neighborhoods with adequately large properties on which materials can be stored and staged, and for those projects with limited truck trips as identified in the project scope.

4.8.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to hazards and hazardous materials are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project could have a significant impact on the environment if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Issues Not Discussed in Impacts

Issues related to wildland fire are discussed and evaluated in Section 4.17 of this EIR, *Wildland Fire*. This topic is therefore not evaluated here, and readers are referred to Section 4.17.

Due to the nature of the project, there would be no impact related to the following topic for the reasons described below:

- **Acutely Hazardous Waste:** Implementation of the HEU would involve development of residential housing in various areas of the City. This type of development does not include the emission or handling of acutely hazardous materials. Therefore, this significance criterion is not applicable to the proposed project and is not discussed further.
- **Airports Safety Hazards:** As discussed in Section 4.8.2, *Environmental Setting, Airports*, the proposed project site not located within two miles of an airport. The nearest airport is the Buchanan Airport, located about seven miles to the north. Therefore, this significance criterion is not applicable to the proposed project and is not discussed further.

Methodology and Assumptions

This environmental analysis of the potential impacts related to hazards and hazardous materials is based on a review of the proposed project, a review of literature and database research, and the City of Lafayette General Plan and Downtown Specific Plan.

The proposed project would be regulated by the various laws, regulations, and policies summarized above in Section 4.8.3, *Regulatory Setting*. Compliance by the proposed project with applicable federal, state, and local laws and regulations is assumed in this analysis and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the regulations is a condition of permit approval for any project that may be developed as part of the HEU's implementation.

A significant impact would occur if, after considering the features described in the Project Description and the required compliance with regulatory requirements, a significant impact would still occur. For those impacts considered to be significant, mitigation measures are proposed to reduce the identified impacts.

Impacts and Mitigation Measures

Impacts

Impact 4.8-1: Individual projects associated with the HEU's implementation would not create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials. (*Less than Significant Impact*)

HEU with Distributed Sites

Construction

Equipment and materials used during construction of housing in the City would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect construction workers, the public, and the environment.

Construction activities would be required to comply with numerous hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies. Contractors would be required to prepare and implement HMBPs that would require that hazardous materials used for construction would be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code would also require measures for the safe storage and handling of hazardous materials.

As discussed in Section 4.6, *Geology and Paleontology*, construction contractors would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) for construction activities according to the National Pollutant Discharge Elimination System (NPDES) General

Construction Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff.

In addition, the transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release.

Finally, in the event of a spill that releases hazardous materials at a construction site, a coordinated response would occur at the federal, state, and local levels, including the Contra Costa Health Services, Hazardous Materials Programs (CCHSHMP), which is the local hazardous materials response team. In the event of a hazardous materials spill, the CCHSHMP and police departments would be simultaneously notified and sent to the scene to respond and assess the situation.

The required compliance with the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials, and would render this impact **less than significant**.

Mitigation Measure: None required.

Operations

Once constructed, any residences constructed as a result of the HEU's implementation would use and store small quantities of chemicals typical in residences, such as household cleaning solutions, paints and thinners, and motor fuel (e.g., vehicles and lawn mowers). Few of the chemicals would be considered hazardous materials (e.g., bleach and household cleaners) and the anticipated volumes would be small (i.e., less than 5 gallons). Given that the quantities would be small, the routine use or an accidental spill of hazardous materials would render this impact **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

Construction and Operations

Similar to the HEU with Distributed Sites alternative analyzed above, the Downtown-Only Alternative residences would also use chemicals typical of construction activities and of residential use. The impacts would be similar with the impact being **less than significant**.

Mitigation Measure: None required.

Impact 4.8-2: Individual projects associated with the HEU's implementation would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (*Less than Significant Impact*)

HEU with Distributed Sites

Construction

As discussed in Section 4.8.2, *Environmental Setting*, there are eight schools located within or within 0.25 miles of the various HEU planning areas. Construction within the planning areas would include the handling of hazardous materials, as discussed above in Impact 4.8-1. The routes to the specific construction sites would depend on the locations but could pass near schools. The accidental release or spill of hazardous materials transported through the vicinity near a school could expose school children, school staff, and workers to hazardous materials.

As discussed above in Impact 4.8-1, there are numerous regulations covering the transportation, use, storage, and disposal of hazardous materials during construction activities. The required compliance with these regulations would ensure that nearby schools would not be exposed to hazardous materials.

Mitigation Measure: None required.

Operations

As discussed in Impact 4.8-1, once constructed, the residences would use and store small quantities of chemicals typical in residences, such as household cleaning solutions, paints and thinners, and motor fuel (e.g., cars and lawn mowers). Few of the chemicals would be considered hazardous materials (e.g., bleach) and the anticipated volumes would be small (i.e., less than 5 gallons). Given that the quantities would be small, the transport of hazardous materials near schools would render this impact **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

Construction

Similar to the HEU with Distributed Sites alternative analyzed above, the construction of residences as part of the Downtown-Only Alternative would also transport chemicals typical of construction activities and the transport routes could be near a school. As discussed above in Impact 4.8-1, there are numerous regulations covering the transportation, use, storage, and disposal of hazardous materials during construction activities. The required compliance with these regulations would ensure that nearby schools would not be exposed to hazardous materials.

Mitigation Measure: None required.

Operations

Similar to the HEU with Distributed Sites alternative analyzed above and as discussed in Impact 4.8-1, once constructed, the residences would use and store small quantities of chemicals typical in residences, such as household cleaning solutions, paints and thinners, and motor fuel

(e.g., cars and lawn mowers). Few of the chemicals would be considered hazardous materials (e.g., bleach) and the anticipated volumes would be small (i.e., less than 5 gallons). Given that the quantities would be small, the transport of hazardous materials near schools would render this impact **less than significant**.

Mitigation Measure: None required.

Impact 4.8-3: Individual projects associated with the HEU's implementation could be located on sites that are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. (*Less than Significant Impact, with Mitigation*)

HEU with Distributed Sites

Construction

As discussed in Section 4.8.2, *Environmental Setting, Hazardous Materials Sites*, there are four active hazardous materials sites within the HEU with Distributed Sites planning areas. Additional hazardous materials sites may be discovered in the future, particularly for properties with past industrial or commercial uses. However, residential properties are not anticipated to have used significant amounts of hazardous materials, if any. The construction of residences that could result as part of the HEU's implementation would include the excavation of soil, some of which may have chemical concentrations above regulatory action levels. The improper handling of contaminated materials could expose construction workers, the public, and the environment to hazardous materials and the impact could be **potentially significant**.

As discussed in Impact 4.8-1, there are numerous regulations covering the transportation, use, storage, and disposal of hazardous materials during construction activities. The required compliance with these regulations would reduce the exposure to hazardous materials. To evaluate industrial and commercial properties for potential issues with contaminated materials, project applicants would be required to implement **Mitigation Measures 4.8-3A: Phase I Assessment, 4.8-3B: Health and Safety Plan, and 4.8-3C: Soil and Groundwater Management Plan**, described below.

Mitigation Measures

Mitigation Measure 4.8-3A: Phase I Assessment.

Prior to the initiation of any construction requiring ground-disturbing activities on industrial and commercial properties, as well as listed active hazardous materials cleanup sites, project applicants shall complete a Phase I environmental site assessment for that property in accordance with American Society for Testing and Materials Standard E1527 for those active hazardous materials sites to ascertain their current status. Any recommended follow up sampling (i.e., Phase II activities) set forth in the Phase I assessment shall be implemented prior to construction. The results of Phase II studies, if necessary, shall be submitted to the local overseeing agency and any required remediation or further delineation of identified contamination shall be completed prior to commencement of construction.

Mitigation Measure 4.8-3B: Health and Safety Plan.

For those properties for which the Phase I assessment identifies hazardous materials issues, before the start of ground-disturbing activities, including grading, trenching, or excavation, or structure demolition, the project applicant for the specific work proposed shall require that the construction contractor(s) retain a qualified professional to prepare a site-specific health and safety plan (HASP) in accordance with federal Occupational Safety and Health Administration regulations (29 CFR 1910.120) and California Occupational Safety and Health Administration regulations (8 CCR Section 5192).

The HASP shall be implemented by the construction contractor to protect construction workers, the public, and the environment during all ground-disturbing and structure demolition activities. The HASP shall include designation of a site health and safety officer, a summary of the anticipated risks, a description of personal protective equipment and decontamination procedures, and procedures to follow if evidence of potential soil or groundwater contamination is encountered.

Mitigation Measure 4.8-3C: Soil and Groundwater Management Plan.

In support of the HASP described in Mitigation Measure 4.8-1B, the project applicant shall require that its contractor(s) develop and implement a Soil and Groundwater Management Plan (SGMP) for the management of soil and groundwater before any ground-disturbing activity. The SGMP shall describe the hazardous materials that may be encountered, the roles and responsibilities of on-site workers and supervisors, training for site workers focused on the recognition of and response to encountering hazardous materials, and protocols for the materials (soil and/or dewatering effluent) testing, handling, removing, transporting, and disposing of all excavated materials and dewatering effluent in a safe, appropriate, and lawful manner.

Significance after Mitigation: With compliance with the Mitigation Measures 4.8-3A, 4.8-3B, and 4.8-3C, hazardous materials encountered during construction would be effectively managed, and any potential impacts associated with being a site located on a listed hazardous materials site and/or a site that was previously used for commercial or industrial uses would be **less than significant with mitigation**.

Operations

Once constructed, contaminated materials would have been removed and/or treated, people and the environment would not be exposed to hazardous materials, and this impact would be **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

Construction

Similar to the HEU with Distributed Sites alternative, the planning areas for the Downtown-Only Alternative have four known active hazardous materials cleanup sites. Additional hazardous materials sites may be discovered in the future, particularly for properties with past industrial or commercial uses. However, residential properties are not anticipated to have used significant amounts of hazardous materials, if any. The construction of residences that could result as part of

the HEU's implementation would include the excavation of soil, some of which may have chemical concentrations above regulatory action levels. The improper handling of contaminated materials could expose construction workers, the public, and the environment to hazardous materials and the impact could be **potentially significant**.

As discussed in Impact 4.8-1, there are numerous regulations covering the transportation, use, storage, and disposal of hazardous materials during construction activities. The required compliance with these regulations would reduce the exposure to hazardous materials. To further ensure that contaminated materials are properly handled, the project applicant would be required to implement **Mitigation Measures 4.8-3A: Phase I Assessment, 4.8-3B: Health and Safety Plan, and 4.8-3C: Soil and Groundwater Management Plan**, described above under the HEU with Distributed Sites alternative.

Mitigation Measures 4.8-3A, 4.8-3B, and 4.8-3C: see above.

Significance after Mitigation: With compliance with the Mitigation Measures 4.8-3A, 4.8-3B, and 4.8-3C, hazardous materials encountered during construction would be effectively managed, and any potential impacts associated with being a site located on a listed hazardous materials site and/or a site that was previously used for commercial or industrial uses would be **less than significant with mitigation**.

Operations

Once constructed, contaminated materials would have been removed and/or treated, people and the environment would not be exposed to hazardous materials, and this impact would be **less than significant**.

Mitigation Measure: None required.

Impact 4.8-4: Implementation of the HEU would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (*Less than Significant Impact*)

Readers should note that the topic of emergency response and evacuation is also discussed in Section 4.17 of this EIR, *Wildfire*.

HEU with Distributed Sites and Downtown-Only Alternative

Construction

The construction of residences as part of residential development projects that could result from implementation of the HEU would include the transportation and movement of equipment, materials, and construction workers. If located along designated evacuation routes or in areas subjected to limited or constrained access, these construction activities could impair or interfere with adopted emergency response plans or emergency evacuation plans, and could be **potentially significant**.

As discussed in Section 4.8.3, *Regulatory Setting*, Section 3-2 of the City’s building regulations outlines requirements for encroachment permits when development projects encroach into public rights-of-way during construction. Examples of encroachment could include temporary use of public rights-of-way for staging, construction, or traffic control purposes. Projects with high volumes of truck traffic are also required to take out an encroachment permit to ensure that trucks do not create undue damage to public roadways. For larger projects, preparation and implementation of a construction traffic control/traffic management plan is also required to manage construction traffic in a manner that would ensure adequate traffic flow and to keep key routes open. The requirements generally apply to all projects in the downtown area and in all residential areas of the City. Section 3-202 defines those areas requiring an encroachment permit during construction to include the Downtown area with boundaries as defined by the planning area established in Downtown Specific Plan and all public roadways with average daily traffic in excess of 5,000 vehicles.

Further, the City’s Emergency Operations Plan/Wildland Fire Evacuation Plan identifies key routes within the City that must remain open for purposes of emergency response and evacuation. During the permit review process, the proposed project’s potential impacts to those routes would be identified and addressed through compliance with Section 3-2 of the City’s building regulations. In this manner, construction of residential projects that might arise as a result of the HEU’s implementation would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The impact would therefore be **less than significant**.

Mitigation Measure: None required.

Operations

Once constructed, the residential projects would not restrict or interfere with the flow of emergency vehicles or evacuation. While additional traffic volumes could be expected with the construction of more housing, the City would be required to periodically update its emergency response and evacuation plan(s) as required under AB 747 and the City’s General Plan. This periodic reevaluation would address these changed conditions, and would adjust the evacuation plans accordingly, thus rendering this impact **less than significant**.

Mitigation Measure: None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively significant impacts. Significant cumulative impacts related to hazards and hazardous materials could occur if the incremental impacts of the HEU combined with the incremental impacts of one or more of the cumulative projects and/or growth projections identified in Section 4.0.3, *Cumulative Impacts* would be significant and if the HEU’s contribution would be cumulatively considerable. The

locations of the listed projects are shown in **Figure 4.0-1** in Section 4.0 of this EIR, *Introduction to Environmental Analysis*.

As previously discussed, the project would have no impact with respect to being located within two miles of an airport or airstrip, nor would the development of residential housing involve the handling or disposal of acutely hazardous materials. Accordingly, the project could not contribute to cumulative impacts related to these topics and they are not discussed further.

The geographic area affected by the project and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. The geographic scope of analysis for cumulative hazardous materials impacts encompasses and is limited to the HEU planning areas and their immediately adjacent areas. This is because impacts relative to hazardous materials are generally site-specific and depend on the nature and extent of the hazardous materials release, and existing and future soil and groundwater conditions. For example, hazardous materials incidents tend to be limited to a smaller and more localized area surrounding the immediate spill location and extent of the release, and could only be cumulative if two or more hazardous materials releases spatially overlapped.

The timeframe during which the project could contribute to cumulative hazards and hazardous materials effects includes the construction and operations phases. For any residential developments that could be constructed as a result of the HEU's implementation, the operations phase is permanent. However, similar to the geographic limitations discussed above, it should be noted that impacts relative to hazardous materials are generally time-specific. Hazardous materials events could only be cumulative if two or more hazardous materials releases occurred at the same time, as well as overlapping at the same location.

Impact 4.8-C: Implementation of the proposed project, in combination with past, present, and reasonably foreseeable future development would not result in a cumulatively significant impact related to hazards and hazardous materials. (*Less than Significant Impact*)

Construction

Hazardous Materials

During the construction phase, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect construction workers, the public, and the environment.

Construction activities for the cumulative projects would be subject to the same regulatory requirements discussed for the project for compliance with existing hazardous materials regulations, including the management of hazardous materials and spill response. Cumulative projects that transport, use, store, or dispose of hazardous materials would be required to comply with the same regulations as the proposed project. Entities that use hazardous materials would be required to prepare and implement HMBPs that would describe procedures for the safe and legal

transportation, storage, use, and disposal of hazardous materials. Similar to any residential development projects that could be constructed as a result of the HEU's implementation, cumulative projects that disturb more than one acre of ground would be required to implement a SWPPP to control run on and runoff from their respective sites.

Cumulative projects that have had previous spills of hazardous materials would be required to remediate their respective sites to the same established regulatory standards as the potential projects developed as a result of the HEU. This would be the case regardless of the number, frequency, or size of the release(s). The responsible party associated with each spill would be required to remediate site conditions to the same established regulatory standards. The residual less-than-significant effects that would remain after remediation would not combine with the potential residual effects of cumulative projects to cause a potential significant cumulative impact because residual impacts would be highly site-specific and would be below regulatory standards.

Further, Mitigation Measures 4.8-3A, 4.8-3B, and 4.8-3C would be required of all projects that could arise from implementation of the HEU. These measures require evaluation and remediation of sites with known contamination issues and identification of sites with previous commercial and industrial uses that could contain residual contamination. For the above reasons, implementation of the HEU and the other cumulative projects would not cause or contribute to a significant impact, and the impacts would be **less than significant**.

Emergency Response and Evacuation

Construction for two or more projects that occur at the same time and use the same roads could interfere with an adopted emergency response plan or emergency evacuation plan. As discussed previously under Impact 4.8-4, the City has standard requirements in place to address potential impacts to emergency evacuation routes and traffic flow in general during the construction process. As with projects that could arise from the HEU's implementation, cumulative projects would be required to receive an encroachment permit and to prepare and implement similar traffic management plans to maintain traffic flow and prevent interference with emergency access. As such, as with development projects resulting from the HEU, any cumulative projects would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The impact would therefore be **less than significant**.

Mitigation Measure: None required.

Operation

Hazardous Materials

Once constructed, residential development resulting from the HEU's implementation and cumulative projects would use and store small quantities of chemicals typical in residences or office settings, such as household and office cleaning solutions, paints and thinners, and motor fuel (e.g., vehicles and lawn mowers). Few of the chemicals would be considered hazardous materials (e.g., bleach) and the anticipated volumes would be small (i.e., less than 5 gallons). These quantities would be small, and impacts associated with routine use or an accidental spill of hazardous materials would not be substantial. The impact would therefore be **less than significant**.

Emergency Response and Evacuation

With respect to emergency response and evacuation, once constructed, the residential projects would not restrict or interfere with the flow of emergency vehicles or evacuation, and would therefore not create a cumulatively considerable effect. While additional traffic volumes could be expected with the construction of more housing, the City would be required to periodically update its emergency response and evacuation plan(s) as required under AB 747. This periodic reevaluation would address these changed conditions, and would adjust the evacuation plans accordingly. Based upon these considerations, the cumulative effect of the HEU's implementation would be **less than significant**.

Mitigation Measure: None required.

4.8.5 References

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4.9 Hydrology and Water Quality

4.9.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects on water resources. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to surface and groundwater resources and quality, groundwater recharge, localized drainage, and flood hazards. Further below, existing plans and policies relevant to hydrology and water quality associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to hydrology and water quality that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021, and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relevant to hydrology and water quality were submitted during the scoping period.

The primary sources of information referenced in this section included the following:

- City of Lafayette General Plan (2002)
- City of Lafayette Downtown Specific Plan (2010)
- City of Lafayette Downtown Specific Plan EIR (2010)
- Water Quality Control Plan San Francisco Bay Region (2018)
- FEMA National Flood Hazard Layer (2009)

4.9.2 Environmental Setting

The project would be located within an area under the water quality jurisdiction of the San Francisco Bay Regional Water Quality Control Board.

Topography

The City of Lafayette is situated east of the Mount Diablo foothills at an elevation of roughly 650 feet above mean sea level. The study area is between Lafayette Ridge and the Briones Hills to the north and Las Trampas Ridge and Rheem Valley to the south. Site topography in the HEU planning areas (see **Figure 3-3** in Chapter 3 of this EIR, *Project Description*) is relatively moderate relative to the surrounding terrain ranging in elevation from about 280 to 400 feet above mean sea level.

Surface Waters

Surface waters in the study area include perennial¹ waterways such as Las Trampas Creek, ephemeral² waterways including Lafayette Creek, and the man-made Mokelumne Aqueduct south of and parallel to Highway 24. Creeks in the City include open perennial waterways, concrete-lined channelized waterways, draining through subsurface culverts below major roadways such as Mount Diablo Boulevard and Highway 24. The city's drainage network includes stormwater drainage infrastructure. The primary waterway flowing through downtown Lafayette is Lafayette Creek. Lafayette Creek drains north from Lafayette Reservoir via an underground channel and continues east as a natural surface creek south of Mount Diablo Boulevard for approximately 1.3 miles before crossing Moraga Road and continuing east as a concrete and earthen constructed waterway for approximately 0.4 miles before merging with Las Trampas Creek between 3rd Street and 4th Street. Las Trampas Creek runs east a short distance, and then drops south out of the study area. Happy Valley Creek enters the study area just east of the BART station, goes south through the Town Center and under Mount Diablo Boulevard. It daylights in the Shield Block, is culverted under La Fiesta Square, and joins Lafayette Creek near Moraga Road. Happy Valley Creek drains multiple tributaries that originate north of Highway 24, and crosses, merging with Lafayette Creek south of Mount Diablo Boulevard and west of Moraga Road.

Most of the creeks in Lafayette are in private ownership. The channelized section of Lafayette Creek between Moraga Road and Third Street is owned and managed by Contra Costa County Flood Control District. The District also holds an easement at the confluence of Lafayette and Las Trampas Creeks near the Gazebo. The City owns a small section of Lafayette Creek east of Village Center and at the confluence of the two creeks at the Gazebo (City of Lafayette, 2010). Development and other activities near the creeks are controlled by the City's creek setback requirements (described below in the regulatory setting).

Surface Water Quality

A review of the California 2018 Integrated Report Map shows that there are no surface streams in the study area on the Clean Water Act 303(d) list³ (RWQCB, 2018). Though not listed as impaired, Las Trampas Creek has been assessed for one or more pollutants including nitrate/nitrite, nitrogen ammonia, alkalinity as calcium carbonate, dissolved oxygen, specific conductivity, water temperature, unionized ammonia, and pH. Lafayette Reservoir is a Category 5 condition listed waterbody⁴, assessed for polychlorinated biphenyls (PCBs) and various pollutants with no Total Maximum Daily Loads (TMDLs) required (SWRCB, 2017).

¹ A perennial stream flows year-round.

² An ephemeral stream flows only flows in direct reaction to a rain event.

³ The term 303(d) list is short for the state's list of impaired and threatened waters (e.g., stream/river segments, lakes). The state identifies the pollutant causing the impairment, when known.

⁴ Category 5 condition refers to a water segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for the segment.

Groundwater Resources

The California Department of Water Resources (DWR) defines state groundwater basins based on geologic and hydrogeologic conditions. There are no defined groundwater basins in the study area. There are two groundwater sustainability agencies in the study area, East Bay Municipal Utilities District (East Bay MUD), and Contra Costa County. The City does not utilize groundwater as its primary water supply.

Water Supply

Water supply for the City of Lafayette is provided through East Bay MUD, through resources sourced from the Mokelumne River Watershed in the southern Sierras conveyed through the 385-mile water supply pipelines of the Mokelumne Aqueduct, which traverses the study area immediately south of Highway 24. East Bay MUD's water supply system consists of reservoirs, aqueducts, treatment and distribution facilities from the Mokelumne River Basin in the Sierra Nevada Mountains, to the East Bay Area (EBMUD, 2021a).

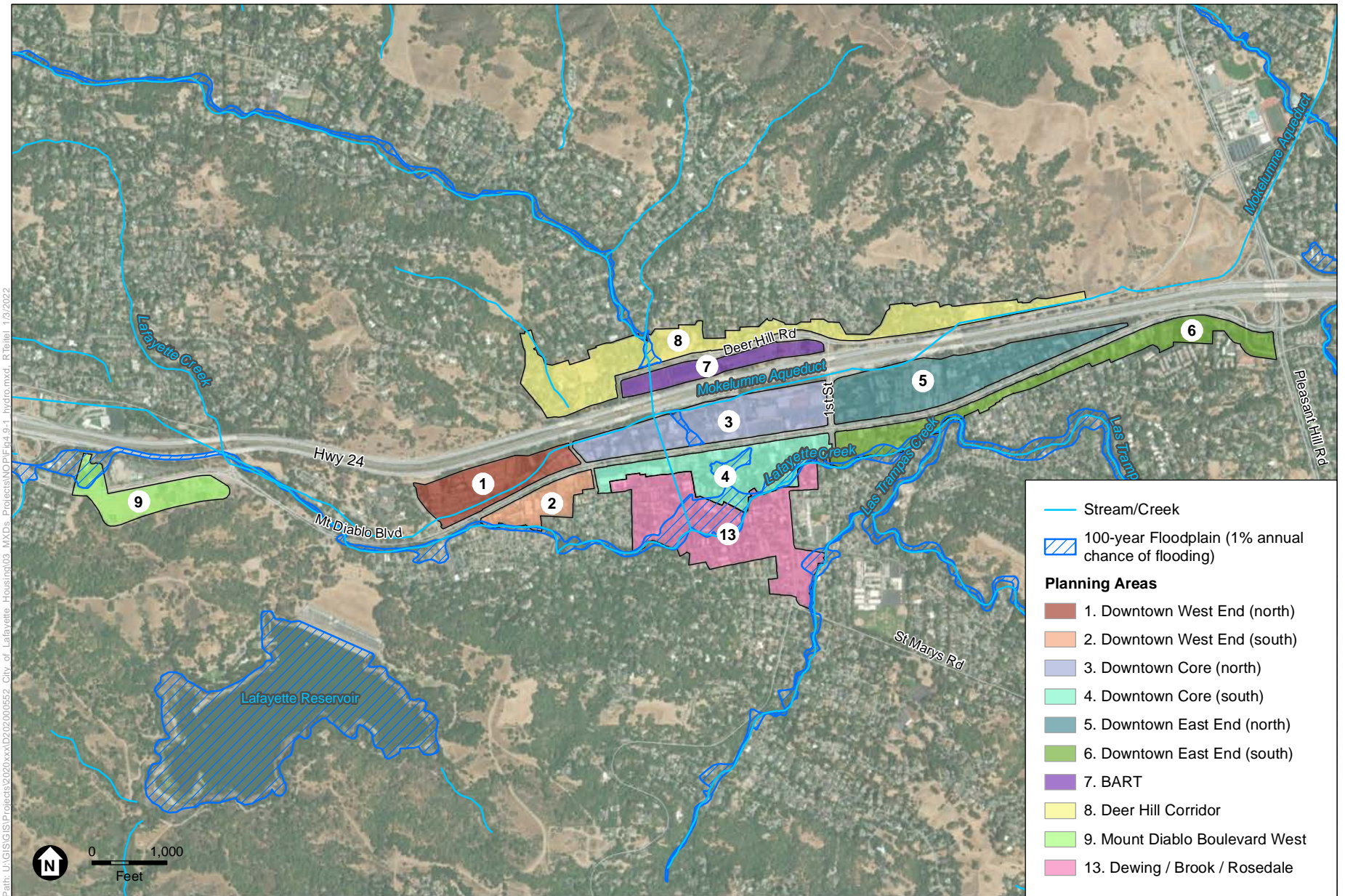
The Pardee Reservoir, located in the Sierra Nevada foothills approximately 30 miles northeast of Stockton, is the primary East Bay MUD source of water. However, in recent drought years East Bay MUD has diversified its regional water portfolio to include conservation programs, supplemental supplies, and notably a 9 million-gallon per day (MGD) recycled water program (EBMUD, 2021b). Additionally, EBMUD has implemented a Water Shortage Contingency Plan (WSCP) to respond to recent conditions that demonstrate that 2020 was the second most extreme drought on record. The WSCP provides a framework to help address water shortages that may occur and explores a range of scenarios, designed to test assumptions and explore changes, such as the impacts of climate change, changes to population, and integration of uncertainties. The WSCP establishes water shortage response actions including targeted demand reduction and water use restrictions, among other actions to protect water resources (EBMUD, 2020).

Flooding and Drainage

Flooding is inundation of normally dry land as a result of a rise in surface water levels or rapid accumulation of stormwater runoff during storm events. The Federal Emergency Management Agency (FEMA), through its Flood Insurance Rate Mapping (FIRM) program, designates areas where urban flooding could occur during 100-year and 500-year flood events (see **Figure 4.9-1**). A 100-year flood event has a one-percent probability of occurring in a single year. 100-year floods can occur in consecutive years or periodically throughout a decade. A 500-year flood event has a 0.2 percent probability of occurring in a single year. As can be seen in Figure 4.9-1, there are several locations within the HEU planning areas that lie within the 100-year floodplain.

Seiche

A seiche is a standing wave or an oscillation in an enclosed or partially enclosed body of water. The term originates from a Swiss French dialect meaning "to sway back and forth." Sources of seiche activity include seismic events such as earthquakes or fault slips. The key requirement for the formation of a seiche is that a body of water be at least partially bounded, allowing for a



SOURCE: City of Lafayette, 2021; FEMA, 2021

Lafayette Housing Element Update EIR Notice of Preparation

Figure 4.9-1
Flood Hazard Areas and Surface Hydrology

standing wave to form. The Lafayette Reservoir, located approximately 0.4 miles southwest of the Downtown West End (North) Planning Area (Planning Area 1), and a similar distance south of the DeSilva Sites Planning Area (Planning Area 9), is the only body of water in the City of sufficient size to produce a seiche. The Lafayette Reservoir Recreation Area is a protected conservation area with minimal development surrounding the reservoir.

4.9.3 Regulatory Setting

This section summarizes key federal, state, regional, and local policies and regulations relating to hydrology and water quality that are applicable to the proposed project.

Federal

Clean Water Act

The CWA, enacted by Congress in 1972 and amended several times since its inception, is the primary federal law regulating water quality in the United States and forms the basis for several state and local laws throughout the country. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA authorizes the U.S. Environmental Protection Agency (USEPA) to implement federal water pollution control programs such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the CWA is administered by the USEPA and U.S. Army Corps of Engineers (USACE). At the state and regional levels, the act is administered and enforced by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs). The relevant sections of the CWA are summarized below.

CWA Section 402: National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program under Section 402 of the CWA is one of the primary mechanisms for controlling water pollution through the regulation of sources that discharge pollutants into waters of the United States. USEPA has delegated authority of issuing NPDES permits in California to the SWRCB, which has nine RWQCBs. The NPDES permit program is discussed in detail below under State Regulations.

Federal Emergency Management Agency

Under Executive Order 11988, the Federal Emergency Management Agency (FEMA) is responsible for management of floodplain areas defined as the lowland and relatively flat areas adjoining inland and coastal waters subject to a 1 percent or greater chance of flooding in any given year (the 100-year floodplain). FEMA is a federal agency whose overall mission is to support citizens and first responders to ensure that the United States builds, sustains, and improves capabilities to prepare for, protect against, respond to, recover from, and mitigate all hazards. With regard to flooding, the FEMA provides information, guidance, and regulation associated with flood prevention, mitigation, and response. Under Executive Order 11988, FEMA requires that local governments covered by the federal flood insurance program pass and enforce

a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year floodplain. Through its Flood Insurance and Mitigation Administration, FEMA manages the National Flood Insurance Program, which includes flood insurance, floodplain management, and flood hazard mapping functions. FEMA determines flood elevations and floodplain boundaries and distributes the flood insurance rate maps used in the National Flood Insurance Program. These maps identify the locations of special flood hazard areas, including 100-year floodplains (i.e., areas that would have a 1 percent annual chance of flooding).

Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations. Those regulations enable FEMA to require municipalities participating in the National Flood Insurance Program to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains (FEMA 2009). **Figure 4.9-1** depicts the flood hazard zones in the project vicinity relative to the HEU Downtown Core and Distributed Sites alternatives.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Division 7 of the Water Code Sections 13000, et sec.) is the primary water quality control law in California. Porter-Cologne established the State Water Resources Control Board and divided the state into nine regional basins, each overseen by a RWQCB. The nine RWQCBs have the primary responsibility for the coordination and control of water quality within their respective jurisdictional boundaries. The Porter-Cologne Act requires the RWQCBs to establish water quality objectives while acknowledging that water quality may be changed to some degree without unreasonably affecting beneficial uses. Water quality objectives are limits or levels of water quality constituents or characteristics established for the purpose of protecting beneficial uses. Designated beneficial uses, together with the corresponding water quality objectives, also constitute water quality standards under the federal CWA. Therefore, the water quality objectives form the regulatory references for meeting state and federal requirements for water quality control. Designated beneficial uses for water bodies in the study area are described in the regional regulatory section (under Basin Plan discussion).

NPDES General Permit for Discharges of Stormwater Associated with Construction Activities (Order 2009-0009-DWQ)

NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ), (or Construction General Permit) is required for projects that would result in disturbance of one or more acres of soil during construction, or less than one acre but are part of a larger common plan of development or sale. The permit regulates storm water discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines. Individual residential development projects that could result from the HEU's implementation that would disturb one or more acres of soil would be subject to the Construction General Permit (SWRCB, 2010).

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific Best Management Practices (BMPs) designed to prevent sediment and other pollutants from contacting storm water and from moving off-site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program and a chemical monitoring program for non-visible pollutants.

SWPPPs would be required for residential development projects that could result from the HEU's implementation, and at a minimum would include:

- Description of construction materials, practices, and equipment storage maintenance;
- List of pollutants likely to contact storm water and site specific erosion and sedimentation control practices;
- List of provisions to eliminate or reduce discharge of materials to storm water;
- BMPs for fuel and equipment storage;
- Non-storm water management measures, such as installing specific discharge controls during activities such as paving operations and vehicle and equipment washing and fueling; and
- Commitment that equipment, materials, and workers would be available for rapid response to spills and/or emergencies. All corrective maintenance or BMPs would be performed as soon as possible, depending upon worker safety.

SWPPPs provide specific construction-related BMPs to prevent soil erosion and loss of topsoil. BMPs implemented could include, but would not be limited to: physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion or sedimentation from occurring during construction. Post-construction requirements necessitate that construction sites be restored to pre-project hydrological conditions to ensure that the physical and biological integrity of aquatic ecosystems are sustained in their existing condition.

In addition to storm water discharges, the Construction General Permit also covers other non-storm water discharges including irrigation of vegetative erosion control measures, water to control dust, uncontaminated groundwater from dewatering, and other discharges not subject to a separate general NPDES permit adopted by the RWQCB. The discharge of non-storm water is authorized under the following conditions:

- The discharge does not cause or contribute to a violation of any water quality standard;
- The discharge does not violate any other provision of the General Permit;
- The discharge is not prohibited by the applicable Basin Plan;

- The discharger has included and implemented specific BMPs required by the General Permit to prevent or reduce the contact of the non-storm water discharge with construction materials or equipment;
- The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;
- The discharge is monitored and meets the applicable numeric action levels; and
- The discharger reports the sampling information in the SWPPP Annual Report.

Regional

San Francisco Bay Water Quality Control Plan (Basin Plan)

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the master water quality control planning document used to designate beneficial uses and surface and ground water quality objectives. The Project site is located within the water quality control jurisdiction of Region 2, the San Francisco Bay Regional Water Quality Control Board (RWQCB). Region 2 is tasked with implementing the adopted Basin Plan for the San Francisco Bay Basin through planning, permitting, and enforcement of established water quality objectives. In accordance with State Policy for Water Quality Control, Region 2 employs a range of beneficial use designations for surface waters (including creeks, streams, lakes and reservoirs), groundwaters, marshes, and mudflats that serve as the basis for establishing water quality objectives, discharge conditions, and prohibitions. The Basin Plan, as updated with amendments adopted through May 4, 2017, has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdictional planning area (SF RWQCB, 2017). Designated beneficial uses for water bodies in the study area are provided in **Table 4.9-1**.

**TABLE 4.9-1
 DESIGNATED BENEFICIAL USES FOR WATER BODIES IN THE STUDY AREA**

Water Body	Designated Beneficial Uses
Lafayette Creek	COLD, WARM, WILD, REC-1, REC-2
Lafayette Reservoir	MUN, COMM, COLD, SPWN, WARM, REC-1*, REC-2
Las Trampas Creek	COLD, WARM, WILD, REC-1, REC-2

NOTES:

* EBMUD restricts access to this water body.

Existing and Potential Beneficial Uses Key:

MUN (Municipal and Domestic Supply); COMM (Commercial and Sport Fishing) REC-1 (Water Contact Recreation); REC-2 (Noncontact Water Recreation); WARM (Warm Freshwater Habitat); RARE (Preservation of Rare and Endangered Species); COLD (Cold Freshwater Habitat), WILD (Wildlife Habitat).

SOURCE: RWQCB, 2017

Contra Costa County Clean Water Program

The Contra Costa County Clean Water Program (CCCWP) supports member agencies in implementing stormwater quality activities in compliance with state and Federal water quality mandates. Lafayette along with all other incorporated cities and unincorporated areas in Contra

Costa County participate in the CCCWPP as permittees. Members of this program are regulated waste dischargers under an NPDES permit program Municipal Regional Stormwater NPDES Permit (Order No. R2-2015-0049) issued by the San Francisco Bay RWQCB, responsible for municipal storm drain systems and water courses that they own and operate. Municipal Storm Sewer Systems (MS4s) carry stormwater runoff from hard surfaces such as roofs and pavement directly to creeks, wetlands and the Bay/Delta.

Under the MRP, stormwater pollution prevention includes limiting trash and other pollutants from entering the stormdrain. Some examples of MRP mandated local activities include implementing BMPs when washing or renovating paved areas, practicing good housekeeping measures to limit pollution, requiring land development projects (public and private) to incorporate low impact development features and facilities to reduce runoff pollution over the life of a project.

Phase I - Municipal Regional Stormwater Permit (MRP)

The federal Clean Water Act (CWA) was amended in 1987 to address urban stormwater runoff pollution of the nation's waters. In 1990, US EPA promulgated rules establishing Phase 1 of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase 1 program for Municipal Separate Storm Sewer System (MS4s) requires operators that serve populations of 100,000 or greater to implement a stormwater management program as a means to control polluted discharges from these MS4s.

The Water Board issued county-wide municipal stormwater permits in the early 1990s to operators of MS4s serving populations over 100,000 (Phase 1). On November 19, 2015, the Water Board re-issued these county-wide municipal stormwater permits as one Municipal Regional Stormwater NPDES Permit (Order No. R2-2015-0049) to regulate stormwater discharges from municipalities and local agencies in Contra Costa County and numerous other counties in the San Francisco Bay Area (SFB RWCQB 2021).

Central Contra Costa Sanitary District NPDES Permit CA0037648

The Central Contra Costa Sanitary District (Central San) owns a wastewater treatment facility located in Martinez, that provides secondary wastewater treatment to the majority of the City of Lafayette. The treatment facility has a permitted flow capacity of 53.8 million gallons per day (MGD) average dry weather design flow and 250 MGD peak wet weather influent design flow. Discharge of treated effluent from this facility to Suisun Bay is permitted under (WDR Order No. R2-2017-009) NPDES Permit CA0037648 (RWQCB, 2017b).

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to preservation of natural topography, and water quality are listed below.

Open Space and Conservation Element

Goal OS-3: Maintain the semi-rural character and beauty of the city by preserving its open and uncluttered natural topographic features.

Policy OS-3.1: Protect natural features of the lands. The character and natural features of hills, steep slopes, riparian areas, woodlands, and open areas will be preserved in as natural a condition as feasible.

Policy OS-4.1: Riparian Vegetation. Preserve, protect, and restore riparian habitat, particularly the native, riparian woodland species and associated understory plants.

Program OS-4.1.1: Maintain creek setbacks required in the zoning code for all structures along the City's watercourses.

Goal OS-5 Preserve and protect creeks, streams, and other watercourses in their natural state.

Policy OS-5.1: Stream bank stability. Protect stream bank stability.

Goal OS-6: Improve water quality in watercourses.

Policy OS-6.1: Reduce Watercourse Pollution. Minimize pollutants in storm water runoff.

Goal OS-7 Protect and preserve soil as a natural resource.

Policy OS 7.1: Control Soil Erosion. Control soil erosion to prevent flooding and landslides, maintain water quality, and reduce public costs of flood control and watercourse maintenance.

Policy OS-7.2: Reduce Soil Contamination. Reduce soil contamination from chemicals through careful regulation of the storage, transportation and use of chemicals.

Safety Element

Policy S-3.1: Reduce Flood Hazards. Reduce flood risk by maintaining effective flood drainage systems and regulating construction.

Policy S-3.2: Flood Protection Standard. In the review of flood control for proposed new development, establish as a standard the flood recurrence intervals used by the Contra Costa County Flood Control District (e.g. the 100-year flood event). (*Reso. 2009-021, 2009*).

Policy S-3.3: Storm Drainage System. Maintain unobstructed water flow in the storm drainage system.

Policy S-3.5: Building Location. Consider potential flood hazards when siting a building. Intensity of development shall be the lowest in areas of high risk.

City of Lafayette Stormwater Management and Discharge Control

Municipal Code Chapter 5-4 establishes standards for stormwater management and discharge control and includes prohibitions, best management practices guidance, and requirements for stormwater control plans, subject to City review and approval (City of Lafayette, 2021).

Section 5-405 - Stormwater control plan required.

- a) In accordance with thresholds and effective dates in the city's NPDES Permit, every application for a development project, including but not limited to a rezoning, tentative map, parcel map, conditional use permit, variance, site development permit, design review, or building permit that is subject to the development runoff requirements in the city's NPDES permit shall be accompanied by a stormwater control plan that meets the criteria in the most recent version of the Contra Costa Clean Water Program Stormwater C.3. Guidebook.
- b) Implementation of an approved stormwater control plan and submittal of an approved stormwater control operation and maintenance plan by the applicant shall be a condition precedent to the issuance of a certificate of occupancy for a project subject to this section.
- c) All stormwater management facilities shall be designed in a manner to minimize the need for maintenance and reduce the chances of failure. Design guidelines are outlined in the Guidebook.
- d) All stormwater management facilities shall be maintained according to the Guidebook and the approved stormwater control operation and maintenance plan.

City of Lafayette Standards for Flood Hazard Protection

Article 4, Chapter 6-18 of the City of Lafayette Code of Ordinances establishes standards for flood hazard protection to limit the placement of fill and new construction within the areas of special flood hazards designated as the floodway. The following standards are applicable to the project (City of Lafayette, 2021).

Section 6-1834. Elevation and Floodproofing

Residential construction, in cases of new or complete reconstruction, shall have the lowest floor, including basement:

- 1) In an AO zone, elevated above the highest adjacent grade to a height exceeding the depth number specified in feet on the FIRM by at least two feet, or elevated at least four feet above the highest adjacent grade if no depth number is specified.
- 2) In an A zone, elevated at least two feet above the base flood elevation, as determined by the community; the base flood elevation shall be determined by one of the methods in Section 6-1823(b).
- 3) In all other zones, elevated at least two feet above the base flood elevation.

Section 6-1837. Standards for Subdivisions

- a) All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base flood.
- b) All subdivision plans will provide the elevation of proposed structure(s) and pad(s). If the site is filled above the base flood elevation, the lowest floor and pad elevations shall be certified by a registered professional engineer or surveyor and shall be provided to the city engineer.
- c) All subdivision proposals shall be consistent with the need to minimize flood damage.
- d) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

- e) All subdivision proposals shall provide adequate drainage to reduce exposure to flood hazards.

Section 6-1839. Floodways

Located within areas of special flood hazard established in Section 6-1812 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply.

- a) Encroachment, including fill, new construction, substantial improvements, and other new development is prohibited, unless certification by a registered professional engineer is provided demonstrating that the encroachment will not result in any increase in (the base) flood elevation during the occurrence of the base flood discharge.
- b) No manufactured home may be placed in a floodway.
- c) If Section 6-1839(a) is satisfied, all new construction, substantial improvements, and other proposed new development shall comply with all applicable flood hazard reduction provisions of this article. (Ord. 512 § 1 (Appx. A (part)), 2000).

6-1841 - Structure Creek Setback Requirements

As defined by Section 6-312 and Section 6-355, buildings and structures shall be set back from an unimproved creek channel as follows:

- 1) Channel Depth of Zero through 21 Feet. If the side slopes of the channel are steeper than 2:1 (horizontal: vertical), the width of the structure setback is determined by a line measured from the toe of the slope a distance of twice the channel depth plus the appropriate top-of-bank setback as follows:

**TABLE 4.9-2
 CITY OF LAFAYETTE CREEK SETBACK REQUIREMENTS**

Channel Depth	Top of Bank Setback
(feet)	Minimum Width (feet)
0-6	12 each side
6-12	15 each side
12-18	18 each side
18-21	21 each side

NOTES:

^a Table footnote text

SOURCE: City of Lafayette, 2021

If the side slopes of the channel are flatter than 2:1 (horizontal: vertical) the structure setback is the appropriate setback indicated in the table above, measured from the top of the bank.

- 2) Channel Depth Exceeding 21 Feet. If the depth of a channel exceeds 21 feet, the width of the structure setback is determined by measuring from the toe of the slope a distance of three times the channel depth.

- 3) If a parcel is subject to subdivision easements or setback requirements under Contra Costa County Ordinance Code Sections 914-14.002 through 14.014 which are inconsistent with Section 6-1841(a), those subdivision requirements control.
 - a. No permanent structure other than fences and drainage and erosion protection improvements may be constructed within the setback area. Landscaping (including trees and shrubs) is permitted within the setback area.

4.9.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to hydrology and water quality are based on Appendix G of the *CEQA Guidelines*. Implementation of the HEU could have a significant impact on hydrology and water quality if it would:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - i. result in substantial erosion or siltation on- or off-site,
 - ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite,
 - iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or
 - iv. impede or redirect flood flows.
- d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
- e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Issues Not Discussed in Impacts

There is no risk for release of pollutants associated with tsunamis or other coastal hazards because the City of Lafayette is located more than 10 miles inland from the Pacific coast. Therefore, such hazards are not discussed in this impact section.

Methodology and Assumptions

Impacts on hydrology and water quality are evaluated using the CEQA Appendix G criteria listed above. Impacts are evaluated based on information included in the City of Lafayette General Plan, the Water Quality Control Plan for the San Francisco Bay Basin, and Contra Costa County

Clean Water Program stormwater guidance, and Lafayette Municipal Code pertaining to stormwater and development standards near creeks and in floodways, as identified in the local regulatory setting of this section.

Residential development projects that could result from the HEU's implementation would be regulated by the various laws, regulations, and policies summarized above in Section 4.9.3, *Regulatory Setting*. Compliance with applicable federal, state, and local laws and regulations is assumed in this analysis and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the regulations is a condition of permit approval.

After considering the implementation of the HEU as described in Chapter 3, *Project Description*, and compliance with the required regulatory requirements, the environmental analysis below identifies if the defined significance thresholds would be exceeded and, therefore, a significant impact would occur. For those impacts considered to be significant, mitigation measures are proposed to the extent feasible to reduce the identified impacts.

Impacts and Mitigation Measures

Impacts

Impact 4.9-1: Implementation of the HEU would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. (*Less than Significant Impact*)

Development projects proposed under the Distributed Sites or Downtown-Only Alternative scenarios would have a significant impact if such development would violate water quality standards and waste discharge requirements (WDR) *Order No. R2-2017-009*, pursuant to NPDES *Permit CA0037648*, issued to Central San and in effect in the City of Lafayette. A violation could occur if the development would substantially increase pollutant loading levels in the sanitary sewer system, either through the direct introduction of contaminants generated by industrial land uses, or indirectly through stormwater pollution.

HEU with Distributed Sites and Downtown-Only Alternative

Construction

Construction of the housing units that could derive from the HEU's implementation would involve ground disturbing activities such as trenching and excavation, removal of trees and other vegetation, and grading. As soil disturbing activities occur across a landscape, the potential for erosion and sedimentation increases. Disturbed soils are typically more susceptible to erosion from rain and wind, which in the absence of preventative measures, can lead to mobilization of sediments and silt through runoff. Erosion can escalate under storm events where slopes are steep.

To accomplish such construction, heavy equipment such as bulldozers, graders, earth movers, heavy trucks, trenching equipment and other machinery. Such machinery could contribute pollutants to stormwater runoff in the form of fuels, oil, lubricants, antifreeze or hydraulic fluid.

Additionally, sediment, silt, or construction debris, if mobilized during construction could violate water quality standards or otherwise be transported to receiving waters such as Las Trampas, Lafayette Creek, or their tributaries. Degradation of water quality could affect beneficial uses of these water bodies (see Table 4.9-1) which (in the absence of runoff controls) could result in exceedances of water quality standards.

However, as described in the regulatory setting, construction projects that disturb one or more acres of ground disturbance, or less than one acre but would be part of a larger plan of development or sale, would be required to obtain coverage under the NPDES Construction General Permit. Preparation of a SWPPP, along with implementation during construction, is required to comply with the NPDES Construction General Permit. Title 5, Chapter 5-4 of the Lafayette Municipal Code contains established measures to prevent and reduce stormwater pollution such as development runoff requirements including performance standards to address construction and post-construction impacts to water quality. Consistent with General Plan Policy OS-6.1, these standards are needed to minimize pollutants in storm water runoff, and protect watercourses.

With adherence to these standards and NPDES Construction General Permit requirements along with implementation of measures described in the SWPPP, development under either the HEU with Distributed Sites and Downtown-Only Alternative would not generate water quality violations and the impact would be **less than significant**.

Operation

Once constructed, development proposed under either the HEU with Distributed Sites or the Downtown Only Alternative scenario would be subject to municipal stormwater requirements (Order No. R2-2015-0049) which regulates stormwater discharges from the City of Lafayette.

Wastewater treatment in the City is provided by the Central Contra Costa Sanitary District, which holds a NPDES permit with associated waste discharge requirements. In compliance with the terms of the waste discharge requirements outlined in its NPDES permit, Central San implements and enforces a source control and pretreatment program to intercept pollutants prior to discharges of effluent into Suisun Bay (Central San, 2017). It is anticipated that most of the development that could occur as part of the HEU's implementation would be residential, with limited commercial elements included. For example, restaurants in the City are required to comply with the fats, oils, and grease interception program (described in Element 7 of the Central San Sewer System Management Plan) and refrain from discharging such substances into the sewer system. Compliance with these local and regional regulations would help to limit direct and indirect contamination of waterways and minimize water quality and WDR violations. It is not anticipated that industrial facilities would be constructed as part of either scenario. Such industry would be subject to industrial WRDs and would have to apply for a separate permit for those facilities. Regardless, compliance with the regulations cited would ensure that operational water quality impacts associated with the HEU's implementation would be **less than significant**.

Mitigation Measure: None required.

Impact 4.9-2: Implementation of the HEU would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. (*Less than Significant Impact*)

HEU with Distributed Sites and Downtown-Only Alternative

A significant impact would occur if it would result in a net reduction in the underground aquifer volume or lower the groundwater table. As noted, the City of Lafayette is not located in a defined groundwater basin as identified by the Department of Water Resources. Lafayette is in the EBMUD service area, which receives most of its water supply from surface waters imported from the Mokelumne Watershed. In recent years in response to drought conditions and changes in instream flow requirements affecting the Mokelumne River (and other surface waters), EBMUD has had to diversify its water supply portfolio to meet demand during current and projected dry conditions in the region.

The projects constructed under the HEU Distributed Sites and Downtown-Only alternatives would not be in a defined groundwater basin. However, given that the City is not dependent on groundwater as its main water supply, and that the City is not in a defined basin, this change would not substantially interfere with sustainable management of groundwater resources. Impacts would be **less than significant** with no mitigation required.

Mitigation Measure: None required.

Impact 4.9-3: Implementation of the HEU would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would :
i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
or iv) impede or redirect flood flows. (*Less than Significant Impact*)

HEU with Distributed Sites and Downtown-Only Alternative

As discussed under Impact 4.9-1, construction of the residential developments that could derive from the HEU's implementation project would entail the use of heavy equipment and would include greater than on-acre of ground disturbing activities for the Downtown Core and Distributed Sites. Therefore, a Construction General Permit would be required under either scenario. Construction would entail alteration of the landscape and placement of impervious surfaces. In the absence of measures to capture runoff, impacts associated with erosion and siltation of local waterways could occur. Similarly, runoff could enter city stormdrains and result in capacity exceedances.

In addition to the Construction General Permit and its associated NPDES requirements, the projects constructed under the HEU Downtown-Only and Distributed Sites alternatives would be subject to the stormwater regulations of the MRP as the City of Lafayette and Contra Costa

County are permittees of the MRP. As part of the review process for municipal development which creates or replaces 10,000 square feet of impervious surface area, a stormwater control plan would be required to be prepared. Compliance with provision C.3 of the MRP must be demonstrated at the time of application for a development project including rezoning, tentative map, parcel map, conditional use permit, variance, site development review, design review, development agreement or building permit (CCCWP, 2017). Source control of pollution, site design, and stormwater treatment measures are required for new and redevelopment. In addition to providing treatment and source control, projects recreating or replacing an acre or more of impervious area (unless exempted) must also provide flow controls (or hydromodification management measures) so that post project runoff does not exceed estimated pre-project rates and durations. Regulated projects for which building or grading permits are issued (after January 1, 2016) must include Low Impact Development (LID) design measures (such as pervious paving or bioretention areas) for stormwater capture and pretreatment.

Lafayette Municipal Code Chapter 5-4 contains additional regulatory requirements for stormwater management and discharge control. Project development proposed under either alternative would be required to demonstrate that stormwater capacity exceedances would not occur by completing and implementing a stormwater management and control plan for the projects complete with hydromodification area calculations and LID measures, as applicable. The stormwater management plans submitted for projects under either alternative would be subject to City engineering review and approval.

As depicted in Figure 4.9-1, Surface Streams and Flood Zones, portions of both the proposed Downtown Core and Distributed Sites overlap with FEMA mapped special flood hazard areas associated mainly with local waterways such as Las Trampas Creek. Pursuant to City code, (Article 5 of Chapter 6-18 Flood Damage Prevention), buildings and structures would be required to conform to setback requirements from an unimproved creek channel or Contra Costa County Ordinance Code (Sections 914-14.002 through 14.014) if the parcel is subject to subdivision easements or County setback requirements.

Implementation and maintenance of hydromodification management and LID design measures such as bio swales and revegetation would continue to prevent silt, sediment, and other stormwater contaminants from entering the municipal stormdrains. Under Lafayette Municipal Code (Chapter 5-405), implementation of an approved stormwater control plan and submittal of an approved stormwater control operation and maintenance plan by an applicant is a condition precedent to the issuance of a certificate of occupancy. The developer or project applicant would be required to enter into and operations and maintenance agreement with the city, which would formalize the applicant's responsibility for annual inspections, adherence to performance standards, monitoring, and reporting.

As depicted on Figure 4.9-1, several of the distributed sites are proposed at least partially in a 100-year flood zone. Although there is not overlapping an area for the 100-year floodzone for DT Core Planning Areas 1, 2, 5, 6, and 7, Planning Areas 3 and 4 partially intersect the Lafayette Creek 100-year floodplain near Mount Diablo Boulevard. Creek setback requirements consistent with city codes would apply to proposed project structures. As noted above, development

proposed under the Distributed Sites alternative would be required to demonstrate that stormwater capacity exceedances would not occur by completing and implementing a stormwater management and control plan for the projects complete with hydromodification area calculations and LID measures, as applicable. Stormwater control plans would be subject to City review and approval.

The identified Downtown area as described in Chapter 3, *Project Description*, lies astride Mount Diablo Boulevard and includes the core planning areas 1 through 6 (Figure 4.9-1). Specifically, the 100-year floodplain partially intersects at lower elevations of planning areas 3 and 4, and 8 and at the 100-year floodplain of Happy Valley Creek. Development near waterways such as Happy Valley and Lafayette Creeks would be subject to setback requirements (Table 4.9-2) and other municipal standards.

Placement of impervious surfaces within flood zones for either the Downtown-Only Alternative or the HEU with Distributed Sites has the potential to impede or redirect flood flows and this would be considered a significant impact. Residential construction proposed in flood zones would be required to conform to standards for elevation and flood proofing (as described in the Regulatory Setting) such that the base floor of the proposed development would be required to be elevated (to the specified elevation depending on the flood zone designation) to a grade sufficiently above the base flood elevation. Compliance with City standards and applicable creek setback limitations would minimize potential flood impacts. Elevation of the structures located in the flood zone would allow for flood waters to pass beneath the structures and into the municipal storm drain network. Therefore, adherence to regulatory requirements would limit the potential to impede or redirect flood flows.

Development under either alternative would be required to conform to stormwater management and control standards and would have to demonstrate that such development would not result in capacity exceedances as part of the projects' stormwater management plans, as required and subject to City review and approval. These regulatory controls along with implementation of measures described in the SWPPP would limit runoff.

Based upon each of the considerations outlined above, the impact of the HEU's implementation on stormwater runoff, erosion, and storm drainage and flooding would be **less than significant**.

Mitigation Measure: None required.

Impact 4.9-4: Implementation of the HEU would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (*Less than Significant Impact*)

HEU with Distributed Sites and Downtown-Only Alternative

As discussed under Impact 4.9-1, the City of Lafayette has well defined policies and standards to protect water quality during construction and operation of projects proposed under either the Distributed Sites or the Downtown Only Alternative scenario. With adherence to regulatory

standards, the projects would not conflict with beneficial uses or obstruct implementation of the Basin Plan.

As noted in this section, the project is not located in a defined groundwater basin. However, EWBUD provides water from other watersheds and groundwater basins to the City of Lafayette. This section, therefore, considers if the project's use of this water would conflict with sustainable groundwater management. As described in the setting section, EBMUD has implemented a water shortage contingency plan, which contains mandates for water conservation and specific use limits that the project would be subject to in dry years (or years of prolonged drought). These regulatory controls are intended to ensure that EBMUD manages its supplies consistent with its sustainable groundwater management planning process. Therefore, the project would not conflict with sustainable groundwater management. Impacts under either the Distributed Sites or the Downtown Only Alternative would be **less than significant**.

Mitigation Measure: None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to hydrology and water quality could occur if the incremental impacts of the HEU combined with the incremental impacts of the cumulative development described in Section 4.0.3, *Cumulative Impacts* in Section 4.0 of this EIR, *Introduction to Environmental Analysis*.

The geographic area for a consideration of cumulative effects is defined as the Lafayette city limits. As described in Section 4.0 (**Table 4.0-1**), there are numerous other housing developments recently constructed, proposed to be constructed, or under design review approval consideration with the City. Such development or redevelopment would be subject to regional and local stormwater management guidelines and requirements. Projects involving the creation or replacement of 10,000 SF of impervious surface area would be subject to hydromodification management controls and LID design standards and would be required to demonstrate in their stormwater control management plans that run off from such disturbance is adequately controlled. Therefore, when considered in the cumulative context, hydrology and water quality impacts would not be cumulatively considerable. Cumulative impacts would be **less than significant**.

4.9.5 References

- California State Water Resources Control Board (SWRCB), 2017. Final 2014 and 2016 Integrated Report (CWA Section 303(d) List / 305(b) Report). Available online: https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/category5_report.shtml. Accessed September 29, 2021.
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4.10 Land Use and Planning

4.10.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects related to land use and planning. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to land use and planning. Further below, existing plans and policies relevant to land use and planning associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential effects related to land use and planning that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this Draft EIR. No comments relating to land use and planning were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- City of Lafayette General Plan (2002).
- City of Lafayette Downtown Specific Plan EIR (2010).

4.10.2 Environmental Setting

City of Lafayette

The City of Lafayette is located in the San Francisco Bay Area in the East Bay Region, approximately 22 miles east of downtown San Francisco. The City was incorporated in 1968 and encompasses approximately 15 square miles or 9,600 acres. According to the 2020 U.S. Census American Communities Survey (ACS), the City had an estimated population of approximately 26,638 residents¹ in 2020. The 2000 U.S. Census found there were 23,893 residents of Lafayette, and 23,883 residents in 2010. Overall, this indicates that population growth was relatively flat between 2000 and 2010, but has increased by about 11 percent since 2010. The City boundaries and regional location are shown in Figure 3-1 in Chapter 3, *Project Description*.

The City's predominant land use is residential, and it includes approximately 10,000 residential dwelling units and an active downtown with a small-town character. The City has a Bay Area Rapid Transit (BART) station, and is a 25-minute BART ride from San Francisco. The City also maintains parks within the City limits and is home to the 1,054-acre Lafayette Reservoir Recreational Area. The City also borders the 6,255-acre Briones Regional Park.

¹ U.S. Census, 2020. Quick Facts. Lafayette, California. Available online at <https://www.census.gov/quickfacts/fact/dashboard/lafayettecitycalifornia,contracostacentrecdpcalifornia,US/HSG010219#HSG010219>. Accessed on July 16, 2021

State Route 24 (SR-24) is a major regional freeway that passes through the middle of the City in an east-west direction. SR-24 through Lafayette is generally configured as an eight-lane freeway, with four travel lanes in each direction and BART's Yellow Line (Antioch-SFO/Millbrae) occupying the freeway's median.

The City's downtown and principal commercial area lies south of SR-24, and generally lies alongside Mount Diablo Boulevard, which is an east-west roadway that roughly parallels SR-24. Areas lying north of SR-24 are predominately occupied by residential uses, though the extensive parking area for the Lafayette BART Station also lies north of the freeway.

HEU Study Areas

As detailed in Chapter 3, *Project Description*, the HEU would include goals, policies, and programs that would apply Citywide, as well as an inventory of multifamily housing sites in and adjacent to downtown. City planners have identified several subareas in the City where multifamily housing sites would be located with implementation of the HEU. These areas are numbered 1 through 9 and 13 in **Figure 3-3**, which can be found in Chapter 3 of this EIR. Land uses within these subareas are described below.

Downtown (Areas 1 through 6)

The Downtown subareas generally lie astride Mount Diablo Boulevard and are comprised of that portion of the City that is a part of the City of Lafayette Downtown Specific Plan and several peripheral areas. The City's principal commercial uses are located in this area, with some residential uses scattered within. Generally, the portion of Mount Diablo Boulevard that runs through the Downtown Core subareas is characterized by a walkable, pedestrian-friendly streetscape, whereas the Downtown West End and Downtown East End subareas are characterized by a more auto-oriented streetscape. Buildings along Mount Diablo Boulevard range from single-story with commercial uses to four-story with residential uses. The Downtown Core subareas contain newer, more intensively built buildings with a mix of uses, and the Downtown West End and Downtown East End subareas contain older office developments and low-lying one-story commercial buildings.

BART Properties and Adjoining Parcels (Area 7)

This subarea is located north of SR-24 and includes extensive parking areas for the Lafayette BART Station and several adjoining parcels lying east of the parking lots. The two BART-owned parking lots are bisected in a north-south direction by Oak Hill Road. Three additional parcels are located to the east of the BART parking lots and two of these are owned by Caltrans and are currently vacant. The easternmost parcel is currently occupied by a parking lot used by Whole Foods employees that is noncontiguous from the larger BART parking areas to the west.

Deer Hill Road Corridor (Area 8)

This subarea includes a series of parcels generally lying north of SR-24 and Deer Hill Road, along with a number of additional parcels lying further to the west. This area is predominantly

developed with residential uses. One- and two-story single-family homes are interspersed among areas of open space, stands of mature trees, and hilly topography.

DeSilva Sites (Area 9)

This subarea is located near the western end of Mount Diablo Boulevard and comprises several parcels lying west and south of Mount Diablo Boulevard, adjacent to and across from the Oakwood Athletic Club. This subarea consists primarily of open space with the exception of three two-story multi-family residential buildings clustered within the northwestern portion of the subarea, immediately south of SR-24.

Dewing/Brook/Rosedale (Area 13)

This subarea is located south of Downtown and is almost entirely occupied by residential uses of varying densities. Building types in this area are diverse, ranging from single-family residential buildings to two-story apartment buildings.

4.10.3 Regulatory Setting

Federal

No federal plans, policies, regulations, or laws related to land use and planning are applicable to the proposed implementation of the HEU.

State

Housing Elements

State law requires that housing elements be updated every eight years (California Government Code Section 65588). The housing element must identify residential sites adequate to accommodate a variety of housing types for all income levels and to meet the needs of special population groups, such as the elderly, persons with disabilities, large families, farmworkers, families with female heads of households, and families and persons in the need for emergency shelter (California Government Code Section 65583).

Assembly Bill 2923

California Assembly Bill (AB) 2923 from 2018 requires the City to up-zone BART-owned properties around its station to accommodate residential development at densities of at least 75 dwelling units per acre (du/ac) by July 2022, or accommodate the same development potential in another location for the purposes of meeting the Regional Housing Need Allocation (RHNA). If the BART sites are not rezoned, BART's transit-oriented development requirements would still apply; but the City could not use the sites to accommodate any units from the RHNA allocation, which would therefore have to be distributed elsewhere.

Regional

Association of Bay Area Governments Regional Housing Needs Allocation

On December 16, 2021, the Association of Bay Area Governments (ABAG) adopted its Final Regional Housing Needs Assessment (RHNA), assigning the City of Lafayette an allocation of 2,114 units, distributed among four income categories: very-low income, low income, moderate income and above moderate income. This allocation represents the City's share of the region-wide housing need of 441,176 units.

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range plan for the physical development of the City of Lafayette and contains land use designations, goals, and policies as described below (City of Lafayette, 2002).

Land Use Designations

The Land Use Element of the Lafayette General Plan contains the City's official Land Use Map, which shows the General Plan land use designations for all of the land in the City. Figure 3-2 in Chapter 3, *Project Description*, shows the distribution of existing General Plan land use designations in the City. General Plan land use designations that are present within the HEU subareas are described below.

- **Low Density Single Family Residential** designates areas suitable for single-family dwellings at densities up to 2.0 dwelling units per acre.
- **Medium Density Single Family Residential** designates areas suitable for single-family dwellings at densities up to 6.0 dwelling units per acre.
- **Low Density Multifamily Residential** designates areas suitable for single-family, duplex and multifamily dwellings at densities up to 17 dwelling units per acre.
- **High Density Multifamily Residential** designates areas suitable for residential development at a density up to 35 dwelling units per acre.
- **Downtown Core** designates areas intended to accommodate a mix of uses in a pedestrian-friendly environment. The height limit is 35 feet, and additional height, not to exceed 45 feet, may be permitted in certain designated areas. The maximum density for multi-family residential uses is 35 dwelling units per acre.
- **West End Commercial** designates areas intended to accommodate primarily office and other uses that complement the adjacent Downtown Core area. The height limit is 35 feet and the maximum density for multi-family residential uses is 35 dwelling units per acre.
- **Open Space** applies to areas of land which are essentially unimproved and used for the preservation of natural resources and habitats, agriculture, passive outdoor recreation, visual amenities such as view corridors and scenic vistas, or the maintenance of public health and safety. Development is limited to 400 square feet per parcel. Only structures that support the use, such as shelters and storage sheds, are allowed.

- **Parkland** applies to existing and proposed active and passive parks. Allowed structures are shelters, restrooms, storage sheds, and other ancillary structures needed to accommodate a public use or to provide for the maintenance of the land and recreational facilities. The maximum floor area ratio (FAR) shall not exceed 0.01.
- **Public Utilities** includes public utility facilities, transformer stations, transportation facilities, water treatment plants and related easements.
- **Community Facilities and Civic Uses** includes public buildings and facilities including public libraries, City offices, fire and police stations, schools, religious institutions, and community recreation facilities.

The City's zoning ordinance (discussed below) is required to maintain consistency with General Plan land use designations.

Applicable General Plan Goals and Policies

The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies of the General Plan Land Use Element that are relevant to the HEU are listed below.

Goal LU-1: Protect the character and patterns of development of residential neighborhoods.

Policy LU-1.1: Scale. Development shall be compatible with the scale and pattern of existing neighborhoods.

Policy LU-1.2: Design. Development should respect the architectural character of the neighborhood.

Goal LU-3: Encourage well-designed residential development.

Policy LU-3.1: Design. Development should be characterized by good functional design.

Goal LU-7: Encourage Downtown development which is attractive and enhances Lafayette's community identity and small town character.

Policy LU-7.1: Design. Ensure that site planning, architecture, color, materials, and landscaping contribute to the community identity and small town character.

Goal LU-14: Protect the single-family residential neighborhoods north of Highway 24 from commercial and multi-family development.

Policy LU-14.1: Continue to maintain the freeway as the dividing line separating the Downtown from the semi-rural, single-family residential areas to the north.

Lafayette Municipal Code

The Lafayette zoning regulations are contained in Title 6, Planning and Land Use, of the City's Municipal Code. Zoning districts within the HEU Study Areas are described below.

Downtown (Areas 1 through 6)

This subarea contains a number of existing zoning designations, many of which are designated to accommodate multi-family housing in conjunction with commercial uses. Most of the Downtown

area’s zoning designations, for instance, allow residential dwelling units on upper floors above commercial uses. **Table 4.10-1** describes the various zoning designations within the Downtown area, along with allowed residential uses within them.

**TABLE 4.10-1
 DOWNTOWN SUBAREA ZONING DESIGNATIONS**

Zoning Designation	Uses Permitted¹
C	General Commercial District: general commercial uses with floor areas less than 7,500 square feet; restaurants; residential dwelling units; 35-foot height restriction
C-1	General Commercial District 1: general commercial uses with floor areas less than 7,500 square feet; 35 foot/2.5-story height restriction, except where residential uses would occupy the third floor
MRA	Multi-family Residential District A: duplexes; multi-family buildings; building height restrictions vary by lot size but generally no greater than 35 feet
P-1	Planned Unity District: integrated development with flexible standards; permitted residential densities in accordance with General Plan designation
RB	Retail Business District: retail and personal services establishments; residential dwelling units on upper floors along Mount Diablo Boulevard (between Mountain View Drive and First Street on the north side and between Mountain View Drive and Moraga Road on the south side), and on all floors elsewhere in the district; 35-foot height restriction
SRB	Special Retail Business District: retail and personal services with floor areas less than 2,000 square feet; general food sales; fast-food establishments (no drive-thru); residential dwelling units on upper floors along Mount Diablo Boulevard and on all floors elsewhere in the district

NOTES:

¹ Not all permitted uses and restrictions are listed; other uses may be allowed with permit

SOURCE: City of Lafayette Zoning Map, 2013.

BART Properties and Adjoining Parcels (Area 7)

This subarea is located north of SR-24 and is comprised of the parking lots for the Lafayette BART Station and several adjoining parcels lying east of the parking lots. The two BART-owned parking lot parcels are bisected in a north-south direction by Oak Hill Road. These parcels are currently zoned R-10. The R-10 zoning designation provides for single-family residences on lots with a minimum lot size of 10,000 square feet, with accessory dwelling units. Three additional parcels are located to the east of the BART parking lots. Two are currently vacant, and carry no zoning designation. The easternmost parcel is currently occupied by parking for Whole Foods employees and is noncontiguous from the larger BART parking areas to the west. This eastern parcel is currently zoned R-10.

Deer Hill Road Corridor (Area 8)

This subarea includes a series of parcels generally lying north of SR-24 and Deer Hill Road, along with a number of additional parcels lying further to the west. This area is almost wholly developed with residential uses, but with some vacant lots interspersed. This subarea contains several existing zoning designations, many of which are designated to accommodate varying densities of residential housing. **Table 4.10-2** describes the various zoning designations within the subarea, along with allowed residential uses within them.

**TABLE 4.10-2
DEER HILL ROAD CORRIDOR SUBAREA ZONING DESIGNATIONS**

Zoning Designation	Uses Permitted ¹
P-1	Planned Unity District: integrated development with flexible standards; permitted residential densities in accordance with General Plan designation
D-1	Two-family Residential District: detached two-family dwellings (duplexes) on lots that are 10,000 square feet in size or larger.
R-10	Single-family Residential District 10: single-family residences on lots greater than 10,000 square feet; second units allowed with a use permit; height generally restricted to 35 feet/2.5 stories.
R-20	Single-family Residential District 20: single-family residences on lots greater than 20,000 square feet; second units allowed with a use permit; height generally restricted to 35 feet/2.5 stories.

NOTES:

¹ Not all permitted uses and restrictions are listed; other uses may be allowed with permit

SOURCE: City of Lafayette Zoning Map, 2013.

DeSilva Sites (Area 9)

This subarea is located near the western end of Mount Diablo Boulevard, and is comprised of the several parcels lying north and south of Mount Diablo Boulevard adjacent to and across from the Oakwood Athletic Club. The parcels west of the Athletic Club are zoned MRA (a multi-family designation) and LR-10 (a single-family residential designation with a minimum lot size of 10 acres), with the MRA-designated parcel currently occupied with multi-family residential housing. The parcels lying south of Mount Diablo Boulevard across from the Athletic Club are currently vacant and are zoned LR-10.

Dewing/Brook/Rosedale (Area 13)

This subarea is located south of Downtown and is almost wholly comprised of existing residential uses at varying densities. **Table 4.10-3** describes the various zoning designations within the subarea, along with allowed residential uses within them.

**TABLE 4.10-3
DEWING/BROOK/ROSEDALE SUBAREA ZONING DESIGNATIONS**

Zoning Designation	Uses Permitted ¹
MRA	Multi-family Residential District A: duplexes; multi-family buildings; building height restrictions vary by lot size but generally no greater than 35 feet
MRO	Multi-family Residential/Professional Office District: duplexes; multi-family buildings; 3-story/35 foot height restriction
MRT	Multi-family Residential Townhouse District: townhouses; permitted residential densities in accordance with General Plan designation; 25-foot height restriction
P-1	Planned Unity District: integrated development with flexible standards; permitted residential densities in accordance with General Plan designation
R-10	Single-family Residential District 10: single-family residences on lots greater than 10,000 square feet; second units allowed with a use permit; height generally restricted to 35 feet/2.5 stories.

NOTES:

¹ Not all permitted uses and restrictions are listed; other uses may be allowed with permit

SOURCE: City of Lafayette Zoning Map, 2013.

Objective Design Standards

As discussed in Section 4.1, Aesthetics, recent changes in State law including the Housing Accountability Act codified in Government Code Section 65589.5, the City’s design review of proposed housing development projects (and mixed-use projects where at least two thirds of the square footage is designated for residential use) is limited to the application of “objective, quantifiable, written development standards, conditions, and policies appropriate to, and consistent with” meeting the City’s RHNA requirement. Objective standards and conditions and policies must be applied “to facilitate and accommodate development at the density permitted on the site and proposed by the development” (65589.5(f)). If proposed housing development projects comply with all objective general plan, zoning, and subdivision standards, the City can only deny the project or reduce its density if it finds that there would be a “specific adverse impact” upon public health or safety that can’t be mitigated in any other way. The finding of a specific adverse impacts must also be based on “objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete” (65589.5(j)).

In response to this change in State law, and to clarify the standards that would apply, the City adopted objective standards applicable to Downtown development in May 2019. Those standards address outdoor space, creeks and landscaping, parking and circulation, height and scale, and building design, and can be viewed on the website at: <https://www.lovelafayette.org/home/showpublisheddocument/6634/637660060226370000>.

4.10.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to land use and planning are based on Appendix G of the *CEQA Guidelines*. Implementation of the HEU could have a significant impact on the environment if it would:

- Physically divide an established community.
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Methodology and Assumptions

The analysis of potential impacts related to land use and planning in this Draft EIR evaluates the potential for the HEU to result in substantial adverse effects related to land use and planning, including physical division of an established community and the potential for implementation of the HEU to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The focus of the analysis is on the planning areas that would accommodate multifamily housing rather than the balance of the City, where any

residential development will consist of ADUs and single family homes that would conform with existing zoning and General Plan policies.²

In the planning areas, the HEU would include rezoning of sites to allow higher residential densities than are currently allowed, and in some instances may also require corresponding amendments to General Plan land use designations and General Plan policies. Because these zoning and policy changes are part of the project being analyzed, the analysis does not consider inconsistency with existing plan policies or codes to necessarily be indicative of significant environmental impacts. Adverse physical effects on the environment that could result from implementation of the HEU, including the changes to zoning and General Plan land use designations addressed in this chapter, are evaluated and disclosed in technical sections throughout this Draft EIR.

The analysis of potential impacts related to land use and planning evaluates the HEU with Distributed Sites approach and the Downtown-Only Alternative at an equal level of detail.

Impacts and Mitigation Measures

Impacts

Impact 4.10-1: Implementation of the HEU would not physically divide an established community. (*Less than Significant Impact*)

HEU with Distributed Sites

The HEU with Distributed Sites approach would accommodate growth by including sites for multifamily housing throughout the Downtown (including Core, and the East and West Ends), on the BART sites, the Deer Hill Road corridor, the neighborhoods adjacent to and immediately south of the Downtown Core, and the DeSilva sites (collectively, Areas 1 through 9, and 13 on Figure 3-3.)

Sites included in the City's existing Housing Element that have not been redeveloped with new housing would be retained, and allowable densities on these sites could be increased from 35 to 50 dwelling units per acre. New multifamily housing sites would also be identified in Downtown and planned for similar densities. Aside from the BART site, which would allow 75 units per acre consistent with AB 2923, no sites would allow densities higher than 50 units per acre. Sites in the Deer Hill Corridor (Area 8) and the DeSilva Sites (Area 9) would be limited to 20 units per acre, which is the default density applicable to the City under State law (PRC 65583.2), and the Dewing/Brook/Rosedale area (Area 13) would remain at its existing density of 35 units per acre. Development on two sites in this area that were included in the previous housing element's sites inventory would allow "by right" approval of projects that are at least 20 percent affordable. Planning areas included in the Distributed Sites Alternative are shown in Figure 3-3 and summarized in Table 3-4 in Chapter 3, *Project Description*.

² Implementation of SB 9, which was adopted by the Legislature in 2021, may lead to the creation of additional parcels and structures, however property owner interest and likely outcomes of this new law are unknown and therefore have not been analyzed except to the extent they are reflected in cumulative development projections discussed in Section 4.0, *Introduction to the Environmental Analysis*. Please see the City's website for more information about SB 9 and the City's implementing ordinance, Ordinance 681, adopted December 13, 2021.

While implementation of the HEU under the Distributed Sites approach would result in the development of new housing at higher densities than currently exist in many areas, these changes would not alter the physical layout of the City such that movement within or across the sites or the City would be obstructed. The HEU also does not propose any roadways, such as freeways, that would divide the City or isolate individual neighborhoods within it. Consequently, implementation of the HEU under the Distributed Sites approach would have a **less-than-significant impact** related to the division of an established community.

Downtown-Only Alternative

The Downtown-Only Alternative would accommodate all of the HEU's growth within the existing limits of the Downtown area (Areas 1 through 6 in Figure 3-3). To do this, sites included in the City's existing Housing Element that have not been developed would be retained, additional sites would be added, and allowable densities would increase from 35 units per acre to approximately 115 units per acre. Consistent with State law (PRC 65583.2), any sites from the City's existing Housing Element that are carried forward without rezoning to allow additional density would be required to permit "by right" development of projects that are at least 20 percent affordable. Also, if more sites in the Downtown are added to the inventory than currently assumed, the maximum density needed to accommodate the units could be reduced from 115 units per acre. The planning areas encompassed by the Downtown Only Alternative are shown in Figure 3-5, and summarized in Table 3-5 in Chapter 3, *Project Description*. As shown in Table 3-5, approximately half of the total of units would be accommodated on sites at the east end of Downtown (Areas 5 and 6), with the remainder spread throughout Areas 1 through 4. All of the sites would be located south of the freeway, and the BART site would not be rezoned. Instead, requirements of AB 2923 would be met by the increased allowable densities on downtown sites.

While implementation of the HEU under the Downtown-Only Alternative would result in the development of new housing at substantially higher densities than currently exist in downtown (and at higher densities than in the HEU with Distributed Sites), these changes would not alter the physical layout of the sites such that movement within or across the sites or the City would be obstructed. The HEU also does not propose any roadways, such as freeways, that would divide the City or isolate individual neighborhoods within it. Consequently, implementation of the HEU under the Downtown-Only Alternative would have a **less-than-significant impact** related to the division of an established community.

Mitigation Measure: None required.

Impact 4.10-2: Implementation of the HEU would not cause a significant environmental impact due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (*Less than Significant Impact*)

HEU with Distributed Sites

As noted earlier, the HEU would include rezoning of sites to allow higher residential densities than are currently allowed, and in some instances may also require corresponding amendments to

General Plan policies and land use designations. Thus the project would alter applicable policies and regulations regarding residential densities. In addition, the City would alter other provisions of the municipal code and General Plan if required to ensure internal consistency. Implementation of the HEU with Distributed Sites would have a significant environmental impact if it would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation *adopted for the purpose of avoiding or mitigating an environmental effect*. Physical environmental impacts resulting from implementation of the HEU are discussed in the applicable environmental resource sections in this Draft EIR. This section differs from impact discussions in that only compatibility and consistency issues are discussed, as opposed to environmental impacts and mitigation measures.

The HEU with Distributed Sites approach would accommodate growth by including sites for multifamily housing throughout the Downtown (including Core, and the East and West Ends), on the BART sites, the Deer Hill Road corridor, the neighborhoods adjacent to and immediately south of the Downtown Core, and the DeSilva sites (collectively, Areas 1 through 9, and 13 on Figure 3-3.) Goals and policies of the General Plan Land Use Element that are relevant to the HEU were listed previously in Section 4.10.3. These goals and policies are listed again below in **Table 4.10-4**, along with a discussion of the HEU in relation to those policies.

**TABLE 4.10-4
 LAFAYETTE GENERAL PLAN POLICY DISCUSSION
 HEU WITH DISTRIBUTED SITES**

Applicable General Plan Goal/Policy	Discussion
<p>Goal LU-1: Protect the character and patterns of development of residential neighborhoods.</p>	
<ul style="list-style-type: none"> • Policy LU-1.1: Scale. Development shall be compatible with the scale and pattern of existing neighborhoods. 	<p>The intensity of development under the HEU with Distributed Sites approach would vary depending on the specific planning area. In the Downtown planning areas (Planning Areas 1 through 6), the allowed density would increase from 35 dwelling units per acre to 50. This could somewhat alter the scale and pattern of the area. Planning Area 13 would remain at its current 35 du/acre allowed density, so no change would occur in that planning area from what is currently allowed. Planning Areas 7, 8, and 9 (BART, Deer Hill Corridor, and DeSilva Sites, respectively), would see increases in allowed densities that would change those areas in a manner that could alter the scale and pattern of those existing neighborhoods. The BART sites would be upzoned from 4 du/ac to 75 du/acre, which would allow for multi-story buildings in an area where there currently are none. While less intensive than the BART sites, the proposed upzoning in the Deer Hill Corridor and DeSilva sites from low-density single-family residential zoning to 20 du/acre zoning would also represent a change from what is in those areas currently.</p> <p>As part of the HEU's adoption, existing land use designations and zoning provisions that do not conform to the densities identified in the HEU would be amended to reflect the new condition. The HEU would also explain the City's RHNA requirements and include policies necessary to advance the City's housing program. With adoption of the HEU and conforming changes to land use designations and zoning, the project would be consistent with the General Plan, as amended.</p>

TABLE 4.10-4 (CONTINUED)
LAFAYETTE GENERAL PLAN POLICY DISCUSSION
HEU WITH DISTRIBUTED SITES

Applicable General Plan Goal/Policy	Discussion
Goal LU-1 (cont.)	
<ul style="list-style-type: none"> Policy LU-1.2: Design. Development should respect the architectural character of the neighborhood. 	Development of new housing sites that could result with implementation of the HEU would be subject to compliance with City policies and standards to the extent those standards are objective as required by recent changes in State law. Nonetheless, higher density developments could change the architectural character of the planning areas. The HEU would also explain the City's RHNA requirements and include policies necessary to advance the City's housing program. With adoption of the HEU and conforming changes to land use designations and zoning, the project would be consistent with the General Plan, as amended.
Goal LU-3: Encourage well-designed residential development.	
<ul style="list-style-type: none"> Policy LU-3.1: Design. Development should be characterized by good functional design. 	Development of new housing sites that could result with implementation of the HEU under the Distributed Sites approach would be subject to compliance with City policies and standards, to the extent those standards are objective as required by recent changes in State law. These policies and standards would ensure that development is characterized by good functional design.
Goal LU-7: Encourage Downtown development which is attractive and enhances Lafayette's community identity and small town character.	
<ul style="list-style-type: none"> Policy LU-7.1: Design. Ensure that site planning, architecture, color, materials, and landscaping contribute to the community identity and small town character. 	Under the HEU with Distributed Sites approach, the allowed density would increase from 35 dwelling units per acre to 50 du/acre in the Downtown planning areas (Planning Areas 1 through 6). This change could somewhat alter the character of the area. The HEU would explain the City's RHNA requirements and include policies necessary to advance the City's housing program. With adoption of the HEU and conforming changes to land use designations and zoning, the project would be consistent with the General Plan, as amended.
Goal LU-14: Protect the single-family residential neighborhoods north of Highway 24 from commercial and multi-family development.	
<ul style="list-style-type: none"> Policy LU-14.1: Continue to maintain the freeway as the dividing line separating the Downtown from the semi-rural, single-family residential areas to the north. 	Under the HEU with Distributed Sites approach, planning areas north of the freeway (BART and the Deer Hill Corridor) would see an increase in allowed densities that would vary from the single-family zoning that is currently present. The BART sites would be upzoned from 4 du/ac to 75 du/acre. While less intensive than the BART sites, allowable densities in the Deer Hill Corridor would increase from 2.0 dwelling units per acre within the Low Density Residential land use designation and 6.0 dwelling units per acre within the Medium Density Residential land use designation to up to 20 dwelling units per acre. This would also represent a change from what is in that area currently. However, as part of the HEU's adoption, existing land use designations and zoning that do not conform to the densities identified in the HEU would be amended to reflect the new condition. The HEU would also explain the City's RHNA requirements and include policies necessary to advance the City's housing program. With adoption of the HEU and conforming changes to land use designations and zoning, the project would be consistent with the General Plan, as amended.

As demonstrated in the discussion in Table 4.10-4, implementation of the HEU under the Distributed Sites approach would result in changes to the existing zoning in several areas of the City, and those changes would result in the allowance of higher density residential development than that which is currently allowed. However, as part of the HEU's adoption, existing land use designations and zoning that do not conform to the densities identified in the HEU would be amended to reflect the new condition. Also, the HEU would explain the City's RHNA requirements and include policies necessary to advance the City's housing program notwithstanding potentially competing policies in the Land Use Element. With adoption of the HEU and conforming changes to land use designations and zoning, the project would therefore be consistent with the General Plan, as amended, and the impact would be **less than significant**.

Downtown-Only Alternative

As described above, the Downtown-Only Alternative would accommodate almost all of the HEU's growth within the existing limits of the Downtown (subareas 1 through 6), and would rezone sites to higher densities than currently exist. Corresponding changes may also be needed to land use designations in the General Plan. As was discussed above for the HEU with Distributed Sites, implementation of the Downtown-Only Alternative would have a significant environmental impact if it would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation *adopted for the purpose of avoiding or mitigating an environmental effect*. Physical environmental impacts resulting from implementation of the HEU are discussed in the applicable environmental resource sections in this Draft EIR. This section differs from impact discussions in that only compatibility and consistency issues are discussed, as opposed to environmental impacts and mitigation measures.

Goals and policies of the General Plan Land Use Element that are relevant to the HEU were listed previously in Section 4.10.3. These goals and policies are listed again below in **Table 4.10-5**, along with a discussion of the HEU in relation to those policies.

As demonstrated in the discussion in Table 4.10-4, implementation of the Downtown-Only Alternative would result in changes to the existing zoning in several areas of the City, and those changes would result in the allowance of higher density residential development than that which is currently allowed. However, as part of the HEU's adoption, existing land use designations and zoning that do not conform to the densities identified in the HEU would be amended to reflect the new condition. Also, the HEU would explain the City's RHNA requirements and include policies necessary to advance the City's housing program notwithstanding potentially competing policies in the Land Use Element. With adoption of the HEU and conforming changes to land use designations and zoning, the project would therefore be consistent with the General Plan, as amended, and the impact would be **less than significant**.

Mitigation Measure: None required.

**TABLE 4.10-5
 LAFAYETTE GENERAL PLAN POLICY DISCUSSION
 DOWNTOWN-ONLY ALTERNATIVE**

Applicable General Plan Goal/Policy	Discussion
<p>Goal LU-1: Protect the character and patterns of development of residential neighborhoods.</p>	
<ul style="list-style-type: none"> Policy LU-1.1: Scale. Development shall be compatible with the scale and pattern of existing neighborhoods. 	<p>Under this alternative, allowed development densities within the Downtown area of the City would increase from the current 35 du/acre to 115 du/acre. This would result in an increase in allowed densities that would change the scale and pattern of these areas in a manner that would vary substantially from what is currently allowed.</p> <p>However, as part of the HEU's adoption, existing land use designations and zoning that do not conform to the densities identified in the HEU would be amended to reflect the new condition. The HEU would also explain the City's RHNA requirements and include policies necessary to advance the City's housing program. With adoption of the HEU and conforming changes to land use designations and zoning, the project would be consistent with the General Plan, as amended.</p>
<ul style="list-style-type: none"> Policy LU-1.2: Design. Development should respect the architectural character of the neighborhood. 	<p>Development of new housing sites that could result with implementation of the HEU would be subject to compliance with City policies and standards, to the extent those standards are objective as required by recent changes in State law. Nonetheless, higher density developments would change the architectural character of the planning areas. However, as part of the HEU's adoption, existing land use designations and zoning that do not conform to the densities identified in the HEU would be amended to reflect the new condition. The HEU would also explain the City's RHNA requirements and include policies necessary to advance the City's housing program. With adoption of the HEU and conforming changes to land use designations and zoning, the project would be consistent with the General Plan, as amended.</p>
<p>Goal LU-3: Encourage well-designed residential development.</p>	
<ul style="list-style-type: none"> Policy LU-3.1: Design. Development should be characterized by good functional design. 	<p>Development of new housing sites that could result with implementation of the Downtown-Only Alternative would be subject to compliance with City policies and standards, to the extent those standards are objective as required by recent changes in State law. These policies and standards would ensure that development is characterized by good functional design.</p>
<p>Goal LU-7: Encourage Downtown development which is attractive and enhances Lafayette's community identity and small town character.</p>	
<ul style="list-style-type: none"> Policy LU-7.1: Design. Ensure that site planning, architecture, color, materials, and landscaping contribute to the community identity and small town character. 	<p>Under the Downtown-Only Alternative, the increase in the allowed density to 115 du/acre in the various Downtown planning areas would vary from what is allowed currently (35 du/acre). The multi-story buildings that would be required to provide housing at that level of density would be change the existing character of the Downtown area to one that is more urban and city-like. As such, the style and character would differ from what is currently allowed. While development of the new housing would be subject to compliance with City policies and objective standards, the general character of the area transition to a more dense and urban feel rather than the small town character that is currently present.</p> <p>However, as part of the HEU's adoption, existing land use designations and zoning that do not conform to the densities identified in the HEU would be amended to reflect the new condition. The HEU would also explain the City's RHNA requirements and include policies necessary to advance the City's housing program. With adoption of the HEU and conforming changes to land use designations and zoning, the project would be consistent with the General Plan, as amended.</p>

TABLE 4.10-5 (CONTINUED)
LAFAYETTE GENERAL PLAN POLICY DISCUSSION
DOWNTOWN-ONLY ALTERNATIVE

Applicable General Plan Goal/Policy	Discussion
<p>Goal LU-14: Protect the single-family residential neighborhoods north of Highway 24 from commercial and multi-family development.</p>	
<ul style="list-style-type: none"> • Policy LU-14.1: Continue to maintain the freeway as the dividing line separating the Downtown from the semi-rural, single-family residential areas to the north. 	<p>The Downtown-Only Alternative would not upzone or otherwise change allowed densities north of the SR-24. Any future development would conform to the low density zoning that is currently present.</p>

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to land use and planning could occur if the incremental impacts of the HEU combined with the impacts of cumulative development identified in Section 4.0.3, *Cumulative Impacts*.

Impact 4.10-3: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not physically divide an established community. (Less than Significant Impact)

While implementation of the HEU under either the Distributed Sites approach or the Downtown-Only Alternative would result in the development of new multi-family housing, these changes, or changes that would occur as a result of cumulative development, would not alter the physical layout of the City such that movement within or across the City would be obstructed. For instance, neither the HEU nor cumulative projects would include physical obstructions (e.g., freeways or other impenetrable linear features) that would divide the City or isolate individual neighborhoods within it. Consequently, implementation of the HEU under either the Distributed Sites approach or Downtown-Only Alternative would have a less-than-significant impact related to the division of an established community. Consequently, the cumulative impact would be **less than significant**.

Mitigation Measure: None required.

Impact 4.10-4: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant Impact)

As discussed under Impact 4.10-2, implementation of the HEU under either the Distributed Sites approach or the Downtown-Only Alternative would not result in a significant impact with respect

to consistency with the General Plan because the HEU would include zoning and plan amendments needed to ensure consistency. As such, implementation of the HEU would not contribute to a cumulative effect due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Consequently, the cumulative impact would be **less than significant**.

Mitigation Measure: None required.

4.10.5 References

City of Lafayette. *City of Lafayette General Plan*. 2002. Available online:
<https://www.lovelafayette.org/city-hall/city-departments/planning-building/general-master-specific-plans/general-plan>. Accessed July 20, 2021.

City of Lafayette. *City of Lafayette Housing Element, 2014-2022*. Available online:
<https://www.lovelafayette.org/Home/ShowDocument?id=1929>. Accessed July 20, 2021.

4.11 Noise and Vibration

4.11.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects on noise. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to noise. Further below, existing plans and policies relevant to noise associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to noise that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16th, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relating to noise or vibration were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- City of Lafayette General Plan (2002).
- California General Plan Guidelines (Governor's Office of Planning and Research, 2017).

Technical Background and Noise Terminology

Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. Therefore, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to

the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- **L_{eq}**: the energy-equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- **L_{max}**: the instantaneous maximum noise level for a specified period of time.
- **L_{dn}**: is a 24-hour day and night A-weighted noise exposure level, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises.
- **CNEL**: similar to L_{dn}, the Community Noise Equivalent Level (CNEL) adds a 5-dB “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dB penalty between the hours of 10:00 p.m. and 7:00 a.m.

As a general rule, in areas where the noise environment is dominated by traffic, the L_{eq} during the peak-hour is generally within one to two decibels of the L_{dn} at that location.

Effects of Noise on People

When a new noise is introduced to an environment, human reaction can be predicted by comparing the new noise to the ambient noise level, which is the existing noise level comprised of all sources of noise in a given location. In general, the more a new noise exceeds the ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dB cannot be perceived;
- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference;
- A change in level of at least 5-dB is required before any noticeable change in human response would be expected; and

- A 10-dB change is subjectively heard as approximately a doubling in loudness and can cause an adverse response.

The perceived increases in noise levels shown above are applicable to both mobile and stationary noise sources. These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dB for hard sites and 7.5 dB for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dB (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dB for hard sites and 4.5 dB for soft sites for each doubling of distance from the reference measurement.

Noise levels may also be reduced by intervening structures, such as a row of buildings, a solid wall, or a berm located between the receptor and the noise source.

Fundamentals of Vibration

As described in the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA, 2018), ground borne vibration can be a serious concern for nearby neighbors, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, ground borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground borne vibration are trains, buses and heavy trucks on rough roads, and construction activities such as blasting, sheet pile-driving, and operation of heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal, which is measured in inches per second (in/sec). The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (V_{db}) is commonly used to express RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground borne vibration generated by man-made activities attenuates rapidly with distance from the source

of the vibration. Sensitive receptors for vibration assessment include structures (especially older masonry structures), people who spend a lot of time indoors (especially residents, students, the elderly and sick), and vibration sensitive equipment such as hospital analytical equipment and equipment used in computer chip manufacturing.

The effects of ground borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin.

4.11.2 Environmental Setting

Existing Noise-Sensitive Land Uses

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, and can cause physiological and psychological stress and hearing loss. Given these effects, some land uses are considered more sensitive to noise levels than others due to the duration and nature of time people spend at these uses. In general, residences are considered most sensitive to noise as people spend extended periods of time in them, including the nighttime hours. Therefore, noise impacts to rest and relaxation, sleep, and communication are highest at residential uses. Schools, hotels, hospitals, nursing homes, and recreational uses are also considered to be more sensitive to noise as activities at these land uses involve rest and recovery, relaxation and concentration, and increased noise levels tend to disrupt such activities. Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate, are also sensitive to noise but due to the limited time people spend at these uses, impacts are usually tolerable. Commercial and industrial uses are considered the least noise-sensitive.

Existing Noise Environment

The noise environment in and around the city is influenced by vehicular traffic, such as along State Route 24 (SR-24) and local roadways such as Moraga Road, First Street, Pleasant Hill Road, and Mount Diablo Boulevard. Other noise sources in the vicinity include the Bay Area Rapid Transit (BART) system that runs within the median of SR-24 and high-altitude jet aircrafts in areas where traffic noise is not significant. Average noise levels during the day and night range from 82dBA in rear yards of homes adjacent to SR-24 to 49 dBA in locations shielded or far away from the highway. The map of traffic noise contours contained in the City's General Plan indicates that traffic noise within the vast majority of Lafayette is between 55 and 70 dBA Ldn.

Traffic noise modeling was conducted using existing traffic volumes for roadways throughout the HEU area. Results of this traffic modeling are presented in **Table 4.11-1** and are representative of transportation noise levels generated by roadways other than SR-24 which dominates the noise

environment within approximately 800 feet of the highway, based on the map of traffic noise contours contained in the General Plan.

**TABLE 4.11-1
 EXISTING CNEL TRAFFIC NOISE LEVELS ALONG STREETS IN THE VICINITY OF THE HOUSING ELEMENT UPDATE**

Roadway Segment	Existing (2020) Traffic Noise Level (CNEL)
1st Street North of Mt. Diablo Boulevard	66
1st Street South of Mt. Diablo Boulevard	58
2nd Street South of Mt. Diablo Boulevard	58
Brown Avenue North of Mt. Diablo Boulevard	59
Deer Hill Road west of Oak Hill Road	67
Deer Hill Road east of Sierra Vista Way	66
Dewing Avenue south of Mt. Diablo Blvd.	58
Dolores Drive north of Mount Diablo Boulevard	57
Happy Valley Road north of SR24	63
Happy Valley Road south of SR24	62
Lafayette Circle south of Mount Diablo Boulevard	57
Moraga Road north of Brook Street	66
Mountain View Drive south of Mount Diablo Boulevard	57
Mount Diablo Boulevard west of El Nido Ranch Road	65
Mount Diablo Boulevard east of Risa Road	66
Mount Diablo Boulevard west of Oak Hill Road	64
Mount Diablo Boulevard east of Carol Lane	68
Oak Hill Road north of SR24	55
Oak Hill Road south of SR24	63
Pleasant Hill Road north of SR 24	70
Pleasant Hill Road south of SR 24	69
Risa Road north of Mount Diablo Boulevard	57
Sierra Vista Way north of Deer Hill Road	55

NOTES:

¹ Noise levels were determined using methodology described in FHWA's Traffic Noise Model Technical Manual.

SOURCE: ESA, 2022 (Appendix D)

Existing monitored noise levels within the City were researched using existing environmental documents available on the City of Lafayette's website. These noise levels are compiled in **Table 4-11-2**, below.

**TABLE 4.11-2
 MONITORED NOISE ENVIRONMENTS WITHIN THE CITY OF LAFAYETTE**

Noise Monitoring Location	Day-Night Noise level (DNL)	Daytime hourly average Leq
NOI-1. 3483 Golden Gate Way	63	59
NOI-2. Deer Hill Road at Pleasant Hill Road	69	65
NOI-3. Pleasant Hill Road south of 3255 Stanley Boulevard	N/A	70
NOI-4 170 feet from SR-24 centerline Mosswood Recreation Center Webster Street adjacent to I-580	77	73

NOTE: Noise monitoring data compiled from CEQA documents within the city of Lafayette available: <https://www.lovelafayette.org/city-hall/city-departments/planning-building/ceqa>. All data was measured after 2016.

N/A = data not available

4.11.3 Regulatory Setting

Federal

Noise Control Act

In 1972, the Noise Control Act was established to address the concerns of noise as a growing danger to the health and welfare of the Nation's population, particularly in urban areas. In 1974, in response to the Noise Control Act, the U.S. Environmental Protection Agency (EPA) published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.¹ **Table 4.11-3** summarizes U.S. EPA findings for residential land uses.

**TABLE 4.11-3
 SOUND LEVELS THAT PROTECT PUBLIC HEALTH (DBA)**

Category	Measure of Exposure	Indoor			Outdoor		
		Activity Interference	Hearing Loss	To Protect Against Both Effects	Activity Interference	Hearing Loss	To Protect Against Both Effects
Residential with Outside Space	L _{dn}	45	70	45	55	70	55
Residential with No Outside Space	L _{dn}	45	70	45	-	-	-

NOTES: Sound levels are yearly average equivalent in decibels; the exposure period which results in hearing loss at the identified level is a period of forty years.

SOURCE: U.S. Environmental Protection Agency, Information of Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an adequate Margin of Safety, 1974.

¹ U.S. Environmental Protection Agency (U.S. EPA), 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an adequate margin of Safety. March 1974.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) aims to ensure worker safety and health in the United States by working with employers and employees to create better working environments. With regard to noise exposure and workers, OSHA regulations set forth accepted criteria to protect the hearing of workers exposed to occupational noise. Noise exposure regulations are listed in 29 Code of Federal Regulations (CFR) Section 1910.95. Section 1910.95(c)(1) states that an employer shall administer a hearing conservation program whenever noise exposure levels equal or exceed an 8-hour time-weighted average sound level of 85 dBA.

Federal Aviation Administration

The Federal Aviation Administration (FAA) has published guidelines for land use compatibility in 14 CFR Part 150. For aviation noise analyses, the FAA has determined that the 24-hour cumulative exposure of individuals to noise resulting from aviation activities must be established in terms of L_{dn} as FAA's primary metric. However, the FAA recognizes CNEL as an alternative metric for assessing aircraft (e.g., helicopters) noise exposure in California.

Based on FAA standards, a significant noise impact would occur if analysis shows that the project would cause noise sensitive areas to experience an increase in the aircraft noise level of 1.5 dB CNEL or more when aircraft levels are 65 dBA CNEL or higher. In addition, a significant noise impact would occur if noise sensitive land uses would be newly exposed to levels of 65 dBA CNEL or higher as a result of a project. For example, a 1.5 dB increase at an aircraft noise level of 63.5 dBA CNEL that brings the aircraft noise level to 65 dBA CNEL would be considered a significant impact.

According to Chapter 65 of Title 42 of the United States Code, and Articles 3 and 3.5 of Chapter 4 of Division 9 of the Public Utilities Code of the State of California, local enforcement of noise regulations and land use regulations related to noise control of airports (e.g., helistops) are preempted by the FAA.

State

Title 24

Title 24 of the California Code of Regulations codifies Sound Transmission Control requirements, which establishes uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings. Specifically, Title 24 states that interior noise levels attributable to exterior sources shall not exceed 45 dBA CNEL in any habitable room of new dwellings.

Department of Industrial Relations

The Division of Occupational Safety and Health (DOSH) protect workers and the public from safety hazards through its California Divisions of Occupational Safety and Health (Cal/OSHA) program. The Cal/OSHA Program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers

about workplace safety and health issues. DOSH enforces noise standards in the workplace in conjunction with OSHA through the CAL/OSHA program.

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to noise are listed below.

Goal N-1: Ensure that all new development is consistent with the standards for noise.

Policy N-1.1: General Noise Levels: The maximum allowable noise levels are established in this Chapter.

Policy N-1.2: Reduce Noise Impacts: Avoid or reduce noise impacts first through site planning and project design. Barriers and structural changes may be used as mitigation techniques only when planning and design prove insufficient.

Program N-1.2.1: Use the City's Noise Ordinance in environmental review of all development proposals and incorporate project design measures to reduce noise to allowable limits. (Formerly S-11.2.10)

Program N-1.2.2: Evaluate mitigation measures for projects that would cause a “substantial increase” in noise as defined by the following criteria or would generate unusual noise which could cause significant adverse community response:

- a) Cause the Ldn in existing residential areas to increase by 3 dB or more;
- b) Cause the Ldn in existing residential areas to increase by 2 dB or more if the Ldn would exceed 70 dB; or
- c) Cause the Ldn resulting exclusively from project-generated traffic to exceed an Ldn of 60 dBA at any existing residence.

A 3 dB increase would result if traffic increased by 100% over existing levels. It is recognized that there are locations where the outdoor criteria of an Ldn of 55 dB cannot be reasonably and feasibly achieved. These situations will be evaluated on a case-by-case basis to determine the appropriate level of mitigation.

Policy N-1.3: Noise and Land Use Compatibility Standards: Ensure that all new noise sensitive development proposals be reviewed with respect to Figure 1: Noise and Land Use Compatibility Standards. Noise exposure shall be determined through actual onsite noise measurements.

Policy N-1.4: Residential and Noise Sensitive Land Use Standards: Require a standard of 40 - 45 Ldn (depending on location) for indoor noise level for all new residential development including hotels and motels, and a standard of 55 Ldn for outdoor noise,

except near the freeway. These limits shall be reduced by 5 dB for senior housing and residential care facilities.

Program N-1.4.1: Use the standards in Policy N-1.2.2 to determine the need for noise studies and require new developments to provide noise attenuation features as a condition of approving new projects.

Program N-1.4.2: Require an acoustical study for all new residential projects with a future L_{dn} noise exposure of 55 L_{dn} or greater. The study shall describe how the project will comply with the Noise and Land Use Compatibility Standards.

Policy N-1.5: Interior Noise Standards Applied to Remodel Projects: Interior noise standards shall be applied to residential remodel projects where the remodeling is valued at 50 percent of the assessed value or greater.

Program N-1.5.1: Review all building permit applications for compliance with the applicable interior noise standards and require, as necessary, the appropriate noise mitigating features.

Goal N-2: Work to reduce noise to acceptable levels where it now exceeds those standards.

Policy N-2.1: Reduce Outdoor Noise in Existing Residential Areas: Reduce outdoor noise in existing residential areas where economically and aesthetically feasible.

Program N-2.1.1: Consider sound barrier walls, grading and landscaping, and change in traffic patterns as potential measures

Policy N-2.2: Mitigate Noise Impacts: Mitigate noise impacts to the maximum feasible extent.

Program N-2.2.1: Require acoustical studies and mitigation measures for new developments and roadway improvements which affect noise sensitive uses such as schools, hospitals, libraries and convalescent homes.

Program N-2.2.2: Require acoustical studies of any project that would potentially generate non-transportation noise levels in a residential area such that noise levels would exceed the planning standards set forth in Program N-1.2.2.

Program N-2.2.3: Work with Caltrans to ensure that adequate noise studies are prepared and alternative noise mitigation measures are considered when state and federal funds are available.

Program N-2.2.7: Recommend acoustical studies for all projects that would be exposed to noise levels in excess of those deemed normally acceptable, as defined in Figure 1.

Lafayette Municipal Code

The Lafayette Municipal Code includes regulations associated with noise. Within Title 5 Health and Sanitation specifically, Chapter 5-2 details a noise policy that is meant to protect the peace and well-being of Lafayette residents from excessive and unnecessary noise. **Table 4.11-4** summarizes the maximum permissible noise levels by receiving land use.

**TABLE 4.11-4
 OUTDOOR NOISE LIMITS**

Receiving Land Use Category	Time Period	Noise Level Limit (Standard—dBA)
Single-family Residential	10 p.m.—7 a.m.	45
	7 a.m.—10 p.m.	50
Multifamily residential schools, libraries, public spaces	10 p.m.—7 a.m.	50
	7 a.m.—10 p.m.	55
Commercial	10 p.m.—7 a.m.	55
	7 a.m.—10 p.m.	60

SOURCE: City of Lafayette, 2020.

Additionally, Section 5-207 Prohibited Acts (h) Air Conditioning and Air Handling Equipment of the Municipal Code establishes maximum noise levels from air handling equipment at the nearest neighboring residential properties, windows and patios. Specifically, such equipment is prohibited from generating a noise level in excess of 45 dBA at any point on a neighboring residential property line, or 40 dBA at the center of neighboring patio or outside the neighboring living area window nearest the equipment location.

Section 5-208 Special Provisions (d) Construction and Maintenance, specifically addresses noise from construction activities within the City, wherein it is stated:

Notwithstanding any other provision of this chapter, between the hours of eight a.m. and eight p.m. on weekdays and between the hours of ten a.m. and six p.m. on Sundays and holidays, construction, alteration and repair activities which are authorized by a valid city permit; and maintenance activities such as lawn mowing, rotovating, tree trimming and painting, which require no city permit (but not including the operation of stationary, installed equipment, such as swimming pool and air-conditioning motors and devices), shall be allowed if they meet at least one of the following noise limitations:

1. No individual piece of equipment shall produce a noise level exceeding 83 dBA at a distance of 50 feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to 25 feet from the equipment as possible; or
2. The noise level at the nearest affected property shall not exceed 80 dBA.

4.11.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to noise and vibration are based on Appendix G of the *CEQA Guidelines*. Implementation of the HEU would have a significant impact on the environment if it would:

- Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

- Generate excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private air strip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the region surrounding the Project Site to excessive noise levels.

Issues Not Discussed in Impacts

- ***Expose people or structures to or generate excessive groundborne noise levels.*** The second criterion above relates to groundborne vibration and groundborne noise levels, but only the issue of groundborne vibration is relevant to the HEU. Groundborne noise occurs when vibrations transmitted through the ground result in secondary radiation of noise. Groundborne noise is generally associated with underground railway operations and with construction activities such as blasting, neither of which are likely to result from implementation of the proposed HEU. Future planned development within the City would not involve equipment that would produce groundborne vibration; therefore, no impacts related to the exposure of people or structures to, or the generation of, excessive groundborne noise levels would occur in connection with project operations. The potential for construction activities to result in groundborne vibration is addressed below in Impact 4.11-3.
- ***Projects located within the vicinity of a private air strip or an airport land use plan.*** The HEU planning area is not within the vicinity of a private airstrip or an airport land use plan area. The nearest airport to the City of Lafayette is Buchanan Field, approximately 5.75 miles to the northeast. The 55 dBA noise contours for airport operations terminates at Willow Pass Road, approximately 4.8 miles northeast of the City (CCC, 2000). Therefore, the subsequent lease, development, and improvement projects (subsequent projects) that could occur under the Housing Element would not result in the long-term exposure of people residing or working in the area to excessive airport-related noise levels.

Methodology and Assumptions

Information for this assessment of impacts relative to noise and vibration is based on a review of City and County Plans, including the City of Lafayette General Plan, and existing and future traffic volumes provided by Fehr & Peers.

Roadside noise levels were calculated for the same roadways analyzed in Section 4.14, *Transportation*. The street segments selected for analysis are those expected to be most directly impacted by the proposed HEU, which, for the purpose of this analysis, are roadways analyzed in the Transportation analysis. These streets are forecast to experience the greatest percentage increase in traffic generated by development under the HEU. The noise levels were calculated using the FHWA traffic noise prediction equations and traffic volumes provided by the transportation consultant (Fehr & Peers, 2021).

CEQA generally requires the consideration of both the Existing Plus Project condition and Cumulative Plus Project condition when evaluating whether a project would expose existing sensitive receptors to traffic noise that would result in a substantial increase over existing conditions. The analysis in Impact 3.10-5 presents the traffic noise increases along roadways

within the City under the HEU in comparison to both the Existing and cumulative (2040) and Cumulative without the HEU conditions.

The California Supreme Court's *CBIA v. BAAQMD* decision² has indicated that the impact of existing environmental conditions on a project's future users or residents are generally not required to be considered in a CEQA evaluation, except when the project may exacerbate existing hazards or existing conditions. CEQA analysis is therefore concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents. Thus, with existing traffic noise on proposed sensitive land uses, the City is not required under CEQA to consider the effects of locating new receptors into an area where such noise levels already exist. Therefore, traffic noise exposure on existing future sensitive receptors within the City are not assessed in this Draft EIR. It should be noted, however, that *CBIA v. BAAQMD* decision does not preclude jurisdictions like the City from considering these types of impacts during its own planning and development review processes.

Impacts and Mitigation Measures

Impacts

Impact 4.11-1: Construction activities associated with implementation of the HEU would not result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant Impact*)

Under the HEU, the primary source of temporary noise within the City would be from demolition and construction. Construction activities within the City would involve both off-road construction equipment (e.g., excavators, dozers, cranes, etc.) and transport of workers and equipment to and from construction sites. **Table 4.11-5** shows typical noise levels produced by the types of off-road equipment that would likely be used during future construction areas within the City.

Construction noise is a major source of temporary noise within the City and would continue to be so regardless of whether or not the HEU is adopted. Noise levels near individual construction sites under the proposed HEU would not be substantially different from what they would be under the existing Housing Element. Since specific future projects within the City are unknown at this time, it is conservatively assumed that the construction areas associated with these future projects could be located within 50 feet of sensitive land uses. To quantify construction-related noise exposure at the nearest sensitive land uses, it is assumed that the two loudest pieces of construction equipment would operate within 50 feet of a sensitive receptor.

² *California Building Industry Association v. Bay Area Air Quality Management District*, S213478. (A135335, A136212; 218 Cal.App.4th 1171; Alameda County Superior Court; RG10548693. Filed December 17, 2015.)

**TABLE 4.11-5
 REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS (50 FEET FROM SOURCE)**

Type of Equipment	L _{max} , dBA	Hourly L _{eq} , dBA/Percent Use ¹
Backhoe	80	76/40
Jackhammer	85	78/20
Roller	85	78/20
Compactor	80	73/20
Paver	85	82/50
Crane	85	77/16
Grader	85	81/40
Concrete Mixer Truck	85	81/40
Loader	80	76/40
Air Compressor	80	76/40
Excavator	85	81/40

NOTES:

¹ Percent used during the given time period (usually an hour – hourly L_{eq}) were obtained from the FHWA Roadway Construction Noise Model User’s Guide.

SOURCE: FHWA, 2006.

HEU with Distributed Sites

Under the HEU with Distributed Sites, sensitive receptors located within 50 feet of an excavator or other construction equipment producing similar levels of noise could be exposed to a noise level of 82 dBA L_{eq}. However, Section 5-208 Special Provisions (d) Construction and Maintenance specifically exempts construction noise between the hours of eight a.m. and eight p.m. on weekdays and between the hours of ten a.m. and six p.m. on Sundays and holidays provided that no individual piece of equipment shall produce a noise level exceeding 83 dBA at a distance of 50 feet. Therefore, under the HEU with Distributed Sites, likely construction equipment operations would operate within the constraints of Municipal Code Section 5-208(d) and impacts associated with future construction activities conflicting with local noise standards would be **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

Similarly, under the Downtown Only Alternative, sensitive receptors located within 50 feet of an excavator or other construction equipment producing similar levels of noise could be exposed to a noise level of 82 dBA L_{eq}. However, as with the HEU with Distributed Sites, likely construction equipment operations under the Downtown-Only Alternative would operate within the constraints of Municipal Code Section 5-208(d) and impacts associated with future construction activities conflicting with local noise standards would be **less than significant**.

Mitigation Measure: None required.

Impact 4.11-2: Stationary noise sources from development within the HEU area would not result in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant Impact*)

The proposed HEU would have a minimal potential to result in new noise-producing stationary sources to developed areas of the City. Air conditioning units would be expected to increase noise exposure at existing nearby noise-sensitive uses or affect proposed noise-sensitive uses in the vicinity.

HEU with Distributed Sites

At the present time, the type, size, and the location of any air handling equipment that may be associated with housing developed under the HEU with Distributed Sites is unknown. However, Section 5-207 Prohibited Acts (h) Air Conditioning and Air Handling Equipment of the Lafayette Municipal Code establishes maximum noise levels at the nearest neighboring residential properties, windows and patios. Specifically, such equipment is prohibited from generating a noise level in excess of 45 dBA at any point on a neighboring residential property line, or 40 dBA at the center of neighboring patio or outside the neighboring living area window nearest the equipment location. In addition, General Plan Program N-2.2.2 requires preparation of acoustical studies for any project that would potentially generate non-transportation noise levels in a residential area such that noise levels would exceed the planning standards set forth in Program N-1.2.2. Based on these requirements, the impact would be **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

Similarly, housing developed under the Downtown Only Alternative would also result in air conditioning units that may be expected to increase noise exposure at existing nearby noise-sensitive uses or affect proposed noise-sensitive uses in the vicinity. Because such equipment is prohibited from generating a noise level in excess of 45 dBA at any point on a neighboring residential property line, or 40 dBA at the center of neighboring patio or outside the neighboring living area window nearest the equipment location and because General Plan Program N-2.2.2 requires preparation of acoustical studies for any project that would potentially generate non-transportation noise levels in a residential area such that noise levels would exceed the planning standards set forth in Program N-1.2, the impact with respect to the project resulting in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of local noise standards would be **less than significant**.

Mitigation Measure: None required.

Impact 4.11-3: Implementation of the HEU would not result in exposure of persons to or generation of excessive groundborne vibration levels. (*Less than Significant Impact*)

Future construction activities could occur under the proposed HEU which could have the potential to expose sensitive land uses within the City to groundborne vibration.

HEU with Distributed Sites

Construction activities would occur in a variety of locations throughout the City under the HEU with Distributed Sites, which may require activities or use of off-road equipment known to generate some degree of vibration. Activities that would potentially generate excessive vibration, such as blasting or impact pile driving would not be expected to occur from housing development under the HE with Distributed Sites, as such activities would typically be associated with high-rise development that is not envisioned. Receptors sensitive to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and the sick), and equipment (e.g., magnetic resonance imaging equipment, high resolution lithographic, optical and electron microscopes). Regarding the potential effects of groundborne vibration to people, except for long-term occupational exposure, vibration levels rarely affect human health.

Since specific future projects within the City are unknown at this time, it is conservatively assumed that the construction areas associated with these future projects could be located within 50 feet of sensitive land uses.

The primary vibration-generating activities associated with the proposed project would occur during grading, placement of underground utilities, and construction of foundations. **Table 4.11-6** shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with housing development construction would be the use of drill rigs for foundation peers, if required.

**TABLE 4.11-6
 VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT**

Equipment	PPV (in/sec) ^a	
	At 25 Feet (Reference)	At 50 feet
Large Bulldozer	0.089	0.35
Auger Drill Rig	0.089	0.35
Loaded Trucks	0.076	0.30
Jackhammer	0.035	0.14

NOTES:

- ^a Vibration amplitudes for construction equipment assume normal propagation conditions and were calculated using the following formula: $PPV (equip) = PPV (ref) \times (25/D)^{1.1}$ where:
- PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
 - PPV (ref) = the reference vibration level in in/sec from pp. 31–33 and Table 18 of the Caltrans Vibration Guidance Manual, as well as Table 12-2 of the FTA’s Noise and Vibration Guidance Manual
 - D = the distance from the equipment to the receiver

SOURCES: Caltrans, *Transportation and Construction Vibration Guidance Manual*, April 2020, pp. 29–34, <http://www.dot.ca.gov/hq/env/noise/publications.htm>, accessed on December 21, 2021; FTA, *Transit Noise and Vibration Impact Assessment Manual*, September 2018, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed December 21, 2021.

According to the Caltrans' *Transportation and Construction Vibration Guidance Manual*, the building damage threshold for historic and some older buildings is 0.25 PPV (in/sec).³ As indicated in Table 4.11-6, construction activities at distances of 25 feet or further from the nearest existing buildings would be well below the threshold of 0.25 PPV to avoid structural damage to historic and older buildings. For these reasons, project-related construction and operational groundborne vibration impacts would be **less than significant**.

Downtown-Only Alternative

Similarly, housing developed under the Downtown Only Alternative also may require activities or use of off-road equipment known to generate some degree of vibration. As indicated in Table 4.11-6, construction activities at distances of 25 feet or further from the nearest existing buildings would be well below the threshold of 0.25 PPV for historic and older buildings. Therefore, under the Downtown Only Alternative, the impact with respect to the project resulting in exposure of persons to or generation of excessive groundborne vibration would be **less than significant**.

Mitigation Measure: None required.

Impact 4.11-4: Transportation activities under the HEU would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. (*Less than Significant Impact*)

Vehicular traffic noise increases associated with the proposed HEU were estimated using algorithms found in the FHWA's *Traffic Noise Model Technical Manual* and the estimated 2040 traffic volumes provided in this Draft EIR's traffic analysis for the No Project, HEU with Distributed Sites, and the Downtown-Only Alternative.

HEU with Distributed Sites

The results of the vehicular traffic noise modeling effort for the HEU with Distributed Sites is summarized in **Table 4.11-7**.

According to Caltrans, a 3 dB increase in noise is considered barely perceptible to the average human.⁴ Additionally, Program N-1.2.2 of the General Plan identifies a substantial increase in traffic noise to occur if a project were to result in (a) the L_{dn} in existing residential areas to increase by 3 dB or more; (b) cause the L_{dn} in existing residential areas to increase by 2 dB or more if the L_{dn} would exceed 70 dB; or (c) cause the L_{dn} resulting exclusively from project-generated traffic to exceed an L_{dn} of 60 dBA at any existing residence. Because the HEU does not propose new roadways or neighborhoods, criterion (c) above is not applicable to the proposed analysis of HEU roadway noise impacts.

³ California Department of Transportation (Caltrans), 2020. *Transportation and Construction Vibration Guidance manual*. April 2020.

⁴ California Department of Transportation (Caltrans), 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.

**TABLE 4.11-7
EXISTING AND PROJECTED LDN TRAFFIC NOISE LEVELS ALONG STREETS
2040 HOUSING ELEMENT UPDATE – DISTRIBUTED SCENARIO**

Roadway Segment	Traffic Noise Level, LDN ¹						
	Existing Condition (2020) ¹	2040 No HEU Condition ¹	2040 Plus HEU Distributed Sites Condition ¹	2040 Plus HEU Distributed Sites minus Existing Condition	2040 Plus HEU Distributed Sites minus 2040 No HEU Condition	Significant Increase (Yes or No) ²	HEU Distributed Sites Contribution Considerable (Yes or No) ³
1st Street North of Mt. Diablo Boulevard	66	66	66	0	0	No	No
1st Street South of Mt. Diablo Boulevard	58	58	58	0	0	No	No
2nd Street South of Mt. Diablo Boulevard	58	59	59	1	0	No	No
Brown Avenue North of Mt. Diablo Boulevard	59	60	60	1	0	No	No
Deer Hill Road west of Oak Hill Road	67	68	68	1	0	No	No
Deer Hill Road east of Sierra Vista Way	66	66	67	1	1	No	No
Dewing Avenue south of Mt. Diablo Blvd.	58	59	59	1	0	No	No
Dolores Drive north of Mount Diablo Boulevard	57	58	59	2	1	No	No
Happy Valley Road north of SR24	63	63	64	1	0	No	No
Happy Valley Road south of SR24	62	63	64	2	1	No	No
Lafayette Circle south of Mount Diablo Boulevard	57	57	57	0	0	No	No
Moraga Road north of Brook Street	66	67	67	1	0	No	No
Mountain View Drive south of Mount Diablo Boulevard	57	58	58	1	0	No	No
Mount Diablo Boulevard west of El Nido Ranch Road	65	66	67	2	1	No	No
Mount Diablo Boulevard east of Risa Road	66	67	68	2	1	No	No
Mount Diablo Boulevard west of Oak Hill Road	64	64	64	0	0	No	No
Mount Diablo Boulevard east of Carol Lane	68	68	68	0	0	No	No
Oak Hill Road north of SR24	55	55	57	2	2	No	No
Oak Hill Road south of SR24	63	63	63	0	0	No	No
Pleasant Hill Road north of SR 24	70	71	71	1	0	No	No
Pleasant Hill Road south of SR 24	69	69	69	0	0	No	No
Risa Road north of Mount Diablo Boulevard	57	57	57	0	0	No	No
Sierra Vista Way north of Deer Hill Road	55	57	57	2	0	No	No

NOTES:

- ¹ Noise levels were determine using methodology described in FHWA's Traffic Noise Model Technical Manual.
- ² Existing sensitive receptors exposed to a traffic noise increase greater than 3 dB between Existing and 2040 Plus HEU conditions is considered a significant impact.
- ³ The 2040 HEU contribution to any traffic noise increase is considered considerable if existing sensitive receptors are exposed a traffic noise increase between 2040 No HEU and 2040 Plus HEU conditions is greater than 3 dB.

SOURCE: ESA, 2022 (Appendix D)

As shown in Table 4.11-7, none of the sensitive land uses along roadway segments analyzed would be exposed to an increase in traffic noise that would exceed 2 dB. The only roadway segment where noise levels would exceed 70 dBA is Pleasant Hill Road north of SR-24. Because noise along this segment would only increase by 1 dB, the increase would not be considered substantial based on General Plan Program N-1.2.2. Additionally, this increase on Pleasant Hill Road would occur under the 2040 No HEU scenario and is therefore not attributable to the proposed HEU with Distributed Sites. Therefore, the increase in vehicular traffic along local roadways would not result in the exposure of adjacent existing sensitive land uses to vehicular traffic noise and the impact would be **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

The results of the vehicular traffic noise modeling effort for the Downtown-Only Alternative is summarized in **Table 4.11-8**. As shown in the table, none of the sensitive land uses along roadway segments analyzed would be exposed to an increase in traffic noise that would exceed 2 dB. The only roadway segment where noise levels would exceed 70 dBA is Pleasant Hill Road north of SR24. Because noise along this segment would only increase by 1 dB, the increase would not be considered substantial based on General Plan Program N-1.2.2. Additionally, this increase on Pleasant Hill Road would occur under the 2040 No HEU scenario and is therefore not attributable to the Downtown-Only Alternative. Therefore, the increase in vehicular traffic along local roadways would not result in the exposure of adjacent existing sensitive land uses to vehicular traffic noise and the impact would be **less than significant**.

Mitigation Measure: None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to noise and vibration could occur if the incremental impacts of the HEU combined with the incremental impacts of cumulative development described in Section 4.0.3, *Cumulative Impacts*.

Impact 4.11-5: Construction activities associated with implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant Impact*)

Development that could occur with implementation of the HEU (under both the HEU with Distributed Sites and the Downtown-Only Alternative) and the cumulative projects listed in Table 4.0-1 and shown in Figure 4.0-1 (see Section 4.0 of this EIR), if constructed contemporaneously, could result in construction noise levels higher than those of development of the HEU alone at some receptor locations. Four of the 11 foreseeable projects are already under

**TABLE 4.11-8
EXISTING AND PROJECTED LDN TRAFFIC NOISE LEVELS ALONG STREETS
2040 HOUSING ELEMENT UPDATE – DOWNTOWN-ONLY SCENARIO**

Roadway Segment	Traffic Noise Level, LDN ¹						
	Existing Condition (2020) ¹	2040 No HEU Condition ¹	2040 Plus HEU Downtown Only Condition ¹	2040 Plus HEU Downtown Only minus Existing Condition	2040 Plus HEU Downtown Only minus 2040 No HEU Condition	Significant Increase (Yes or No) ²	HEU Downtown Only Contribution Considerable (Yes or No) ³
1st Street North of Mt. Diablo Boulevard	66	66	66	0	0	No	No
1st Street South of Mt. Diablo Boulevard	58	58	58	0	0	No	No
2nd Street South of Mt. Diablo Boulevard	58	59	59	1	0	No	No
Brown Avenue North of Mt. Diablo Boulevard	59	60	60	1	0	No	No
Deer Hill Road west of Oak Hill Road	67	67	68	1	1	No	No
Deer Hill Road east of Sierra Vista Way	66	66	67	1	1	No	No
Dewing Avenue south of Mt. Diablo Blvd.	58	59	59	1	0	No	No
Dolores Drive north of Mount Diablo Boulevard	58	58	60	2	2	No	No
Happy Valley Road north of SR24	63	63	63	0	0	No	No
Happy Valley Road south of SR24	62	63	63	1	0	No	No
Lafayette Circle south of Mount Diablo Boulevard	57	57	57	0	0	No	No
Moraga Road north of Brook Street	66	67	67	1	0	No	No
Mountain View Drive south of Mount Diablo Boulevard	57	58	58	1	0	No	No
Mount Diablo Boulevard west of El Nido Ranch Road	65	66	66	2	0	No	No
Mount Diablo Boulevard east of Risa Road	66	67	67	1	0	No	No
Mount Diablo Boulevard west of Oak Hill Road	64	64	64	0	0	No	No
Mount Diablo Boulevard east of Carol Lane	68	68	68	0	0	No	No
Oak Hill Road north of SR24	55	55	55	0	0	No	No
Oak Hill Road south of SR24	63	63	63	0	0	No	No
Pleasant Hill Road north of SR 24	70	71	71	1	0	No	No
Pleasant Hill Road south of SR 24	69	69	69	0	0	No	No
Risa Road north of Mount Diablo Boulevard	57	57	58	1	1	No	No
Sierra Vista Way north of Deer Hill Road	55	57	57	2	0	No	No

NOTES:

- ¹ Noise levels were determine using methodology described in FHWA's Traffic Noise Model Technical Manual.
- ² Existing sensitive receptors exposed to a traffic noise increase greater than 3 dB between Existing and 2040 Plus HEU conditions is considered a significant impact.
- ³ The 2040 HEU contribution to any traffic noise increase is considered considerable if existing sensitive receptors are exposed a traffic noise increase between 2040 No HEU and 2040 Plus HEU conditions is greater than 3 dB.

SOURCE: ESA, 2022 (Appendix D)

construction and, therefore, construction of these projects would not combine with construction activities associated with development under the HEU.

As discussed in Impact 4.11-1, above, sensitive receptors located within 50 feet of an excavator or other construction equipment producing similar levels of noise could be exposed to a noise level of 82 dBA L_{eq} . Section 5-208 Special Provisions (d) Construction and Maintenance specifically exempts construction noise between the hours of eight a.m. and eight p.m. on weekdays and between the hours of ten a.m. and six p.m. on Sundays and holidays provided that no individual piece of equipment shall produce a noise level exceeding 83 dBA at a distance of 50 feet. Therefore, while the potential exists for construction projects under the HEU and other foreseeable development to occur simultaneously and in proximity to one another, construction equipment operations would operate within the constraints of Municipal Code Section 5-208(d) and impacts associated with future construction activities conflicting with local noise standards would be **less than significant**.

Mitigation Measure: None required.

Impact 4.11-6: Stationary noise sources from development within the HEU area, when combined with other past, present, or reasonably foreseeable projects, would not result in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant Impact*)

Development that could occur with implementation of the HEU (under both the Distributed Sites approach and the Downtown-Only Alternative) and the cumulative development described in Section 4.0 of this EIR, could result in stationary source noise levels higher than those of development of the HEU alone at some receptor locations.

As discussed in Impact 4.11-2, above, air conditioning units installed as part of development resulting from implementation of the HEU could be expected to increase noise exposure at existing nearby noise-sensitive uses or affect proposed noise-sensitive uses in the vicinity.

At the present time, the type, size, and the location of any air handling equipment may be associated with housing developed under the HEU is unknown. As discussed in Impact 4.11-2, Section 5-207 Prohibited Acts (h) of the Lafayette Municipal Code establishes maximum noise levels at the nearest neighboring residential properties, windows and patios and General Plan Program N-2.2.2 requires preparation of acoustical studies for any project that would potentially generate non-transportation noise levels in a residential area such that noise levels would exceed the planning standards set forth in Program N-1.2.2. Because these requirements would apply to all past, present, or reasonably foreseeable projects as well as from development with the proposed HEU, the cumulative impact with respect to stationary noise sources potentially resulting in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance would be **less than significant**.

Impact 4.11-7: Construction activities associated with implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would not result in exposure of persons to or generation of excessive ground borne vibration levels. (*Less than Significant Impact*)

Development that could occur with implementation of the HEU (under both the HEU with Distributed Sites and the Downtown-Only Alternative) and the cumulative development described in Section 4.0 of this EIR could be constructed contemporaneously.

With regard to the potential for a cumulative vibration-related damage impact to occur, because vibration impacts are based on instantaneous PPV levels, worst-case groundborne vibration levels from construction are generally determined by whichever individual piece of equipment generates the highest vibration levels. Unlike the analysis for average noise levels, in which noise levels of multiple pieces of equipment can be combined to generate a maximum combined noise level, instantaneous peak vibration levels do not combine in this way. Vibration from multiple construction sites, even if they are located close to one another, would not combine to raise the maximum PPV. For this reason, the cumulative impact of construction vibration from multiple construction projects located near one another would generally not combine to further increase vibration levels. In essence, vibration effects are highly localized.

Vibration impacts resulting from construction of subsequent projects under the HEU would not combine with vibration effects from cumulative projects in the vicinity. Therefore, cumulative groundborne vibration impacts related to potential damage effects and interference with vibration-sensitive equipment would be **less than significant**.

Impact 4.11-8: Transportation activities under the HEU, when combined with other past, present, or reasonably foreseeable projects, would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. (*Less than Significant Impact*)

Development that could occur with implementation of the HEU (under both the HEU with Distributed Sites and the Downtown-Only Alternative) and the cumulative development described in Section 4.0 of this EIR, could result in increased roadside noise levels generated by an increase in roadway traffic.

As discussed in Impact 4.11-4, above, none of the sensitive land uses along roadway segments analyzed in Table 4.11-7 (for the HEU with Distributed Sites) of Table 4.11-8 (for the Downtown-Only Alternative) would be exposed to an increase in traffic noise that would not be considered substantial based on thresholds established in General Plan Program N-1.2.2. Because the roadway volumes assumed in the analysis for Impact 4.11-4 were developed for year 2040 by the transportation consultant, the resultant noise levels in these tables are inclusive of traffic generated by the past, present, or reasonably foreseeable projects shown in Figure 4.0-1. Therefore, the analysis presented in Impact 4.11-4 represent a cumulative traffic noise analysis and the cumulative increase in roadside noise levels would be **less than significant**.

Mitigation Measure: None required.

4.11.5 References

- Caltrans, *Transportation and Construction Vibration Guidance Manual*, April 2020, Table 19, p. 38, <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>, accessed January 20, 2022.
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- Federal Transit Administration. Transit Noise and Vibration impact Assessment Manual. FTA Report No. 0123. September 2018. Available online: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed January 31, 2022.
- Governor’s Office of Planning and Research, *State of California 2017 General Plan Guidelines*, 2017, p. 136, http://www.opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf, accessed January 20, 2022.
- U.S. EPA, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, March 1974.
- U.S. Department of Transportation, Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed January 20, 2022.

4.12 Population and Housing

4.12.1 Introduction

This section evaluates the potential of the proposed Housing Element Update (HEU) to result in substantial adverse effects related to population and housing. The physical environmental effects associated with the project, many of which also pertain to issues of population growth and residential land use compatibility (e.g., noise, transportation, air quality) are evaluated in other sections of this EIR.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relating to population and housing were received during the NOP comment period.

Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to population and housing. Further below, existing plans and policies relevant to population and housing associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to population and housing that could result from implementation of the HEU.

The primary sources of information referenced in this section included the following:

- City of Lafayette General Plan (2002);
- City of Lafayette Downtown Specific Plan (2012) and the Specific Plan’s Draft EIR (2010);
- Association of Bay Area Governments/Metropolitan Transportation Commission Plan Bay Area 2040 and 2050;
- ABAG 2023-2031 Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031 (ABAG, 2021);
- The U.S. Census Bureau’s American Fact Finder (U.S. Census); and
- California Department of Finance (DOF) Population and Housing.

4.12.2 Environmental Setting

Existing and Baseline Conditions

Population

The City of Lafayette was incorporated in 1968 and encompasses approximately 15 square miles or 9,600 acres. According to the 2020 U.S. Census American Communities Survey (ACS), the City had an estimated population of approximately 26,638 residents¹ in 2020. The 2000 U.S. Census

¹ U.S. Census, 2020. Quick Facts. Lafayette, California. Available online at <https://www.census.gov/quickfacts/fact/dashboard/lafayettecitycalifornia,contracostacentrecdpcalifornia,US/HSG010219#HSG010219>. Accessed on July 16, 2021

found there were 23,893 residents of Lafayette, and 23,883 residents in 2010. Overall, this indicates that population growth was relatively flat between 2000 and 2010, but has increased by about 11 percent since 2010.

The California Department of Finance (DOF) estimated that the population of Contra Costa County was 1,149,853 in 2020², and 1,153,854 in 2021, an increase of about 0.35 percent during this one-year period.³

Contra Costa County, the ninth most populous county in California, has undergone significant growth since 2000 and is expected to continue to see growth in the future. DOF projects the population of the County will be 1,252,822 by 2031 and 1,283,681 by 2035.⁴

Housing

The U.S. Census Bureau American Community Survey estimates that there were 10,114 housing units in Lafayette in 2019⁵, of which 71.4 percent were owner-occupied.⁶ This represented an increase of approximately 463 housing units over a nine-year period from 2010 to 2019. The 2020 Census and 2021 ACS data are not yet available from the Census Bureau.

**TABLE 4.12-1
 CITY OF LAFAYETTE POPULATION AND HOUSEHOLDS**

Lafayette	2010	2020	2010—2020 Growth (%)
Total Population	23,893	26,638	+ 11.5
Total Housing Units ^a	9,651	10,114 ^b	+ 4.8

NOTES:

^a Housing units" are all housing (occupied and unoccupied housing units).

^b Number of housing units for 2020 uses 2019 data, the most recent available.

SOURCES: US Census. American Community Survey.

California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark. <https://www.dof.ca.gov/forecasting/demographics/estimates/e-5/>. Accessed July 16, 2021.

² California Department of Finance, 2021 E-1 Cities, Counties, and the State Population Estimates with Annual Percent Change. Available online at <https://www.dof.ca.gov/forecasting/demographics/estimates/e-1/>. Accessed July 16, 2021.

³ California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark. <https://www.dof.ca.gov/forecasting/demographics/estimates/e-5/>. Accessed July 16, 2021.

⁴ California Department of Finance, 2021 P-2A Total Population for California and Counties Available online at <https://www.dof.ca.gov/Forecasting/Demographics/projections/>. Accessed July 16, 2021.

⁵ U.S. Census, 2021. 2019 American Community Survey, Table DP04 Selected Housing Characteristics, Contra Costa County, California; United States. Available online at <https://data.census.gov/cedsci/profile?g=1600000US0639122>. Accessed July 17, 2021.

⁶ U.S. Census, 2021. Quick Facts, Lafayette, California. Available online at <https://www.census.gov/quickfacts/fact/dashboard/lafayettecitycalifornia,contracostacentrecdpcalifornia,US/HSG010219#HSG010219>. Accessed on July 16, 2021.

In 2010, the DOF estimated that there were 357,364 housing units in Contra Costa County and 396,099 housing units in 2020.⁷

The U.S. Census ACS (2021) estimates a total of 418,696 housing units in the County of which 399,792 are occupied with 261,531 owner-occupied housing units; in other words the County had an owner-occupied housing rate of 65.4 percent.⁸

**TABLE 4.12-2
 CONTRA COSTA COUNTY POPULATION AND HOUSEHOLDS**

	2010	2015	2020	2010-2020 Growth (%)
Contra Costa County				
Population	1,052,613	1,118,070	1,160,099	+10.2
Households ^{a 1}	357,364	383,561	396,099	+11.3

NOTES:

^a "Households" are occupied housing units.

SOURCE: California Department of Finance, 2021. P4 State and County Projected Households, Household Population, and Persons Per Household 2020-2030. Available: <https://www.dof.ca.gov/Forecasting/Demographics/projections/>. Accessed July 17, 2021.

4.12.3 Regulatory Setting

Federal

Fair Housing Act

The federal Fair Housing Act (42 U.S.C. 3601 et seq.), enacted in 1968, prohibits discrimination by direct providers of housing, such as landlords and real estate companies as well as other entities, such as municipalities, banks or other lending institutions and homeowners insurance companies whose discriminatory practices make housing unavailable to persons because of race or color, religion, sex, national origin, familial status, or disability.

State

California Housing Element Requirements

California law (Government Code Section 65580, et seq.) requires cities and counties to include a Housing Element as a part of their General Plans to address housing conditions and needs in the community. Housing Elements are prepared approximately every eight years, following timetables set forth in the law. The Housing Element must identify and analyze existing and projected housing needs and “make adequate provision for the existing and projected needs of all

⁷ California Department of Finance, 2021. P4 State and County Projected Households, Household Population, and Persons Per Household 2020-2030. Available: <https://www.dof.ca.gov/Forecasting/Demographics/projections/>. Accessed July 17, 2021.

⁸ U.S. Census, 2021. 2019 American Community Survey, Table DP04 Selected Housing Characteristics, Contra Costa County, California; United States. Available online at <https://data.census.gov/cedsci/profile?g=1600000US0639122>. Accessed July 17, 2021.

economic segments of the community,” among other requirements. The City adopted its current Housing Element in 2015.

State law mandates that all cities and counties zone land appropriately to accommodate the increasing needs of regional population growth. Regional housing needs are determined by the California Department of Housing and Community Development (HCD).

Regional

Association of Bay Area Governments Area Governments and RHNA

The Association of Bay Area Governments (ABAG) is the comprehensive regional planning agency and council of governments for the nine-county San Francisco Bay Area Region. Its members include the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma counties and 101 cities and towns of the San Francisco Bay region.

ABAG determines the distribution of affordable housing in the region through its Regional Housing Needs Allocation process. For the period from 2023 to 2031, HCD has identified a need of more than 441,000 housing units in the Bay Area — more than double the amount from the last eight-year cycle (187,000 units between 2015 and 2023). Housing needs are distributed for very low income, low income, moderate income, and above moderate households.⁹

As discussed in Chapter 3, *Project Description*, jurisdictions in the Bay Area are currently updating their housing elements for the 6th Cycle, representing the eight year planning period from 2023 to 2031. ABAG adopted the Final Regional Housing Needs (RHNA) Plan for the region in December, 2021 (ABAG, 2021) and Lafayette’s RHNA is 2,114 units, distributed among four income categories. The housing allocation for Lafayette’s for Regional Housing Needs Allocation (RHNA) by income group is enumerated in **Table 4.12-3**. The City’s HEU must plan for housing that meets this RHNA, plus an appropriate buffer.

**TABLE 4.12-3
 6TH CYCLE (2023-2031) ABAG HOUSING ALLOCATIONS FOR CITY OF LAFAYETTE**

Income Category	Citywide Total Housing Units	Portion of Total Allocation
Very Low	599	28.3 %
Lower	344	16.3 %
Moderate	326	15.4%
Above Moderate	845	40.0 %
Total	2,114	100%

SOURCE: ABAG. 2021. Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031. Available at: https://abag.ca.gov/sites/default/files/documents/2021-12/proposed%20Final_RHNA_Allocation_Report_2023-2031.pdf. Accessed December 22, 2021.

⁹ Bay Area Council of Governments. 2021. ABAG_2023-2031_Draft_RHNA_Plan.pdf (ca.gov) *Regional Needs Housing Plan 2023-2031*.

Plan Bay Area 2040 and Plan Bay Area 2050

Plan Bay Area 2040 is a joint regional planning document prepared jointly by ABAG and the Metropolitan Transportation Commission (MTC) that utilizes a multipronged strategy to address housing affordability, transportation requirements, the region’s widening income disparities and economic hardships faced by low- and middle-income workers, and the Bay Area’s vulnerabilities to natural disasters such as earthquakes and floods. Three principal issues form the core of the Action Plan:

- **Housing:** Lower the share of income spent on housing and transportation costs, lessen displacement risk, and increase the availability of housing affordable to low- and moderate-income households.
- **Economic Development:** Improve transportation access to jobs, increase middle wage job creation, and maintain the region’s infrastructure.
- **Resilience:** Enhance climate protection and adaptation efforts, strengthen open space protections, create healthy and safe communities, and protect communities against natural hazards.

As discussed previously, based on the RHNA allocations for housing units from ABAG, each jurisdiction must update their housing element to show the proposed allocations of housing. While the RHNA focuses on the eight-year cycle, Plan Bay Area 2040 focuses also on the longer-term vision for growth through 2040.

In October, 2021, ABAG and MTC adopted an updated plan; Plan Bay Area 2050 (ABAG & MTC, 2021).¹⁰ While the plan has been adopted, it will take up to three years for the plan’s growth forecast to be integrated into MTC’s transportation model, after which updates to each county’s transportation model will take place. For these reasons, and for purposes of this EIR, Plan Bay Area 2040 is the regional plan that forms the basis for population, housing and employment projections in this EIR.

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. The City’s General Plan goals and policies applicable population and housing are presented below:

Land Use Element

Goal LU-1: Protect the character and patterns of development of residential neighborhoods.

¹⁰ Association of Bay Area Governments & Metropolitan Transportation Commission (ABAG & MTC). 2021. Plan Bay Area 2050. Adopted October 21, 2021. Available at: https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf. Accessed December 22, 2021.

Policy LU-1.1: Scale. Development shall be compatible with the scale and pattern of existing neighborhoods.

Policy LU-1.2: Design. Development should respect the architectural character of the neighborhood.

Policy LU-1.3: Privacy. Development shall respect the privacy of neighbors.

Policy LU-1.4: Property Maintenance and Nuisance. Require that properties are well maintained and nuisances are abated.

Goal LU-2: Ensure that development respects the natural environment of Lafayette. Preserve the scenic quality of ridgelines, hills, creek areas, and trees.

Policy LU-2.1: Density of Hillside Development. Land use densities should not adversely affect the significant natural features of hill areas.

Policy LU-2.2: Cluster Development. Preserve important visual and functional open space by requiring development to be clustered on the most buildable portions of lots, minimizing grading for building sites and roads.

Goal LU-3: Encourage well-designed residential development.

Policy LU-3.1: Design. Development should be characterized by good functional design.

Goal LU-4: Ensure that the semi-rural character of the community is protected by appropriate infrastructure design.

Policy LU-4.1: Infrastructure Design. Public and private infrastructure should reinforce the semi-rural qualities of residential neighborhoods.

Goal LU-5: Preserve and enhance the open space, scenic viewsheds, and semi-rural qualities around the residential entryways to Lafayette.

Policy LU-5.1: Residential Entryways. Residential entryways to the City should be distinctive and attractive features of the City's landscape.

Goal LU-6: Assure that the Land Use Map and other General Plan standards are applied consistent with applicable laws including the California and U.S. Constitutions.

Policy LU-6.1: Appropriate Density. Assure that areas formerly designated at a greater maximum number of dwelling units per acre that are now designated "Rural Residential" by the General Plan have the opportunity to seek a density consistent with the California and U.S. Constitutions.

Goal LU-14: Protect the single-family residential neighborhoods north of Hwy 24 from commercial and multi-family development.

Policy LU-14.1: Continue to maintain the freeway as the dividing line separating the Downtown from the semi-rural, single-family residential areas to the north.

Growth Management Element

Goal H-29: Facilitate and encourage the development of diverse housing types and additional affordable housing units to accommodate a diversity of Lafayette citizens in terms of age and

socio-economic background and to meet regional housing needs to be specified in the Housing Element.

Policy H-2.1: Mixed Use. Encourage the rehabilitation and development of residential uses in commercial areas where the viability of the commercial activities would not be adversely affected.

Program H-2.1.1: Housing Rehabilitation in Non-Residential Areas. Continue to permit housing rehabilitation in commercial zoning districts.

Policy H-2.7: Infill Housing. Encourage private housing development on existing infill sites in order to efficiently utilize existing infrastructure.

Housing Element

The City's current Housing Element, adopted March 2015, includes the following housing-related goals policies, which may be updated and supplemented as part of the HEU:

Goal H-1: Conserve and improve the existing housing supply to provide adequate, safe, and decent housing for all residents, with emphasis on maintaining the semirural character of the City.

Policy H-1.1: Housing Rehabilitation. Pursue available funding for the preservation, rehabilitation and weatherization of viable older housing to preserve neighborhood character and retain a supply of housing units for all income categories.

Policy H-1.2: Conversion of Residential Units. Discourage the conversion of older residential units to other uses.

Policy H-1.4:¹¹ Condominium Conversions. Continue to limit conversion of existing rental housing units to market rate condominiums. Conversion to limited equity cooperatives and other innovative housing proposals that are affordable to low and moderate-income households are permitted.

Policy H-1.5" Energy Conservation, Sustainability and Climate Change. Promote available energy conservation programs, and develop new programs to address sustainability and climate change issues.

Policy H-1.6: Expansion of Homes in Existing Neighborhoods. Review the Zoning Ordinance to ensure that it adequately requires the remodel or expansion of homes to be in keeping with the character of the surrounding neighborhood.

Policy H-1.7: Capital Improvements. Ensure that existing neighborhoods' capital improvement needs are addressed

Policy H-1.8: Retention of Existing Lower-Income Units. Seek to retain existing subsidized very low-, low- and moderate-income housing units, especially those that will be available for conversion to market rate housing. Retention of such units should have high priority for available funds.

¹¹ Note that Policy H-1.3 is not listed in the current housing element.

Goal H-2: Facilitate and encourage the development of diverse housing types and additional affordable housing units to accommodate a diversity of Lafayette citizens in terms of age and socio-economic background and to meet regional housing needs as quantified in this chapter.

Policy H-2.1: Mixed Use. Encourage the rehabilitation and development of residential uses in commercial areas where the viability of the commercial activities would not be adversely affected.

Policy H-2.2: Limited Equity Cooperatives and Sweat Equity Projects. Support limited equity residential cooperatives and other nonprofit enterprises such as sweat-equity projects designed to provide affordable housing, consistent with the City's zoning regulations.

Policy H-2.3: Large Scale Commercial and Office Projects. Consider impacts on housing demand in the environmental review process of large-scale commercial and office projects.

Policy H-2.4: Regional Housing Needs. Provide for additional housing by encouraging the construction of multifamily housing in areas where there is appropriate zoning for this use.

Policy H-2.5: Second Dwelling Units. Continue to support the construction of second dwelling units, pursuant to the City's Second Unit Ordinance.

Policy H-2.6: Manufactured Housing. Allow placement of manufactured housing units on permanent foundations in existing developments.

Policy H-2.7: Infill Housing. Encourage private housing development on existing infill sites in order to efficiently utilize existing infrastructure.

Policy H-2.8: Employee Housing. The City will continue to comply with provisions of State law regarding employee housing, including but not limited to allowing any employee housing providing accommodations for six or fewer employees to be treated as a single-family structure with a residential land use designation.

Goal H-3: Expand affordable housing opportunities for persons with special housing needs such as the elderly, developmentally disabled, households with very low to moderate incomes, and first time home buyers.

Policy H-3.1: Available Funding Sources. Utilize County, State and federal programs and funding sources that provide housing opportunities for lower-income households.

Policy H-3.2: Senior Housing. Provide opportunities for senior housing.

Policy H-3.2.1: House Sharing. Support house-sharing programs for seniors.

Policy H-3.3: Housing for the Disabled. Continue to facilitate housing for disabled persons.

Policy H-3.4: Density Bonus. Provide a density bonus to projects that provide a required percentage of total units affordable to very-low and low-income households and for units meeting the special housing needs identified in this Element

Policy H-3.5: Large Families. Recognize the need for providing multifamily housing for large families. Encourage developers of housing to include larger units (2+ bedrooms) in their proposed projects for families

Policy H-3.6: Emergency Shelters. Allow emergency shelters within the City as a permitted use in the C-1 (General Commercial) Zoning District.

Policy H-3.7: Inter-Agency Cooperation. Work with private, County, and State agencies to provide emergency housing for the homeless.

Goal H-4: Promote housing opportunities for all persons regardless of race, age, gender, sexual orientation, marital status or national origin.

Policy H-4.1: Equal Housing Opportunity. Continue to facilitate non-discrimination in housing in Lafayette.

Policy H-4.2: Landlord-Tenant Disputes. Continue to refer landlord-tenant disputes to housing counseling organizations such as the Housing Alliance

Goal H-5: Adopt and implement a Housing Element that is in compliance with State Law

Policy H-5.1: City Leadership. Provide active leadership in implementing the policies and programs contained in the Housing Element.

Policy H-5.2: Public Participation. Encourage and support public participation in the formulation and review of the City's housing and development policies.

Policy H-5.3: Annual Review of Housing Element Implementation. Provide for annual review by the Planning Commission and City Council of progress in implementing the Housing Element.

4.12.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to population and housing from the HEU's implementation are based on Appendix G of the *CEQA Guidelines*.

Implementation of the HEU could have a significant impact on the environment if it would:

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Methodology and Assumptions

The proposed project would update the City's housing element and plan for development of additional housing. Importantly, the first significance threshold above requires an evaluation of whether the project would induce "unplanned growth," which it would not, since the housing element itself is a plan. Similarly, the Final Regional Housing Needs (RHNA) Plan and the

housing requirements contained therein is also a plan. It thus follows that the HEU's conformance with those plans would avoid a significant environmental impact. Nonetheless, the analysis informs consideration of whether implementation of the HEU would induce substantial unplanned population growth, and is supplemented with a consideration of whether the planned development of new housing would displace existing people or housing, necessitating construction of replacement housing.

Impacts and Mitigation Measures

Impacts

Impact 4.12-1: Implementation of the HEU would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). (*Less than Significant Impact*)

HEU with Distributed Sites

Implementation of the HEU utilizing the Distributed Sites scenario would provide for the development of additional housing units in the City and a resulting increase in the City's population. While no specific development proposals are directly associated with the HEU, the Distributed Sites scenario would plan for development of up to 3,356 new housing units in the City, which is equivalent to the 2,114 units assigned to the City through the RHNA process plus a buffer. In doing so, the Housing Element would be updated to identify specific sites for multifamily housing in the planning areas shown in Figure 3-4. In addition, the Land Use Element of the General Plan would be amended to update applicable land use designations as needed, and sites would be rezoned to allow greater residential densities than are currently allowed. If all sites were developed at the planned densities to accommodate the total of 3,356 new units, the population of the City would increase by approximately 8,390 persons, if the Contra Costa Transportation Authority's (CCTA) travel demand model's persons-per-household factor is used to make the calculation.¹²

The number of housing units and resultant population growth assumes that each parcel identified in the inventory of opportunity sites would be developed up to 85 percent of its maximum zoning allowance, as based on development trends observed in the City over the last several years. It is important to note that the identification of housing sites in the City's Housing Element does not mean someone necessarily will develop housing on those sites at the planned unit count or level of affordability. Although the City must plan for housing development, it does not directly build, or require to be built, any housing. Instead, the identification of housing sites is intended to plan for and encourage housing, and its development by property owners and developers is largely dependent on market forces and (in the case of affordable housing) available subsidies.

Regardless, development under the HEU with Distributed Sites scenario of 3,356 units would conform to the City's revised zoning allowances, in response to the ABAG's RHNA allocation, which requires the City to identify sufficient housing sites to accommodate the City's RHNA

¹² 3,356 housing units x 2.5 persons per household = 8,390 persons.

allocation, plus a buffer of additional units at appropriate densities. By definition, such development would be “planned” rather than unplanned, and would conform to the City’s zoning code and General Plan as amended, as well as the ABAG RHNA Plan.

Housing development that could occur as a result of the HEU’s implementation would require installation of infrastructure such as access roads and utilities. However, these infrastructure improvements would be designed to serve only the planned housing, and would not enable growth or facilitate unplanned growth beyond that housing.

Based upon these considerations, implementation of the HEU with Distributed Sites would not directly or indirectly induce unplanned population growth to the area, and the impact would therefore be **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. Under such a scenario, up to 3,393 new housing units could be developed, with a resultant population increase of approximately 8,483 persons.¹³

As with the HEU with Distributed Sites scenario discussed above, development under the Downtown-Only Alternative, if it were to occur at the maximum densities specified, would conform to the City’s zoning code and General Plan, as amended, as well as the ABAG RHNA Plan, and would thus constitute “planned growth.”

Housing development that could occur as a result of the HEU’s implementation would require installation of infrastructure such as access roads and utilities. However, these infrastructure improvements would be designed to serve only the planned housing, and would not enable growth or facilitate unplanned growth beyond that housing.

Based upon these considerations, implementation of the Downtown-Only Alternative would not directly or indirectly induce unplanned population growth to the area, and the impact would therefore be **less than significant**.

Mitigation Measure: None required.

¹³ 3,393 housing units x 2.5 persons per household = 8,483 persons.

Impact 4.12-2: Implementation of the HEU would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. (*Less than Significant Impact*)

HEU with Distributed Sites

Much of the developable area of the City is already developed, and nearly all of the parcels identified for upzoning as part of the HEU with Distributed Sites scenario are already developed with some sort of use, be it residential or commercial uses, or some sort of other use such as the BART parking lots. Accordingly, in order to develop additional residential uses on those parcels at the densities greater than that which is currently present, it stands to reason that the existing structures on the site would need to be removed and the higher-intensity residential use developed in its place. For example, a collection of single-family parcels could be combined and redeveloped into a multi-family residential project. Under such a scenario, the existing residents would vacate their properties, though such a circumstance would be voluntary through the sale of their properties to the prospective developer(s). Regardless, residential use on the site would be perpetuated, though at a higher density, and there would be a net increase in available housing on the site. Therefore, the construction of replacement housing elsewhere would not be required. As such, the implementation of the HEU with Distributed Sites scenario would not displace substantial numbers of existing people or housing, and construction of replacement housing elsewhere would not be required. The impact would be **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

As with the HEU Distributed Sites scenario discussed above, development under the Downtown-Only Alternative would redevelop existing developed parcels with residential uses at a higher density than is currently present. As such, there would be a net increase in available housing on the site, and the construction of replacement housing would not be required. Therefore, the implementation of the Downtown-Only Alternative would not displace substantial numbers of existing people or housing, and construction of replacement housing elsewhere would not be required. The impact would be **less than significant**.

Mitigation Measure: None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to population and housing could occur if the incremental impacts of the HEU combined with the incremental impacts of one or more cumulative projects resulted in significant impacts and if the HEU's contribution to that impact would be cumulatively considerable.

For this topic, the cumulative scenario is represented by the HEU and the RHNA Plan themselves, which consider all planned housing and population growth within the City and Bay Area region. For the City, both the HEU and the RHNA Plan provide for provision of 2,114 housing units in the City, plus an appropriate buffer. For the Bay Area region, the broader RHNA Plan provide for provision of more than 441,000 housing units in the Bay Area, with applicable buffers in each jurisdiction.

Impact 4.12-3: Implementation of the HEU would not combine with other past, present, and reasonably foreseeable projects to create a significant impact to population and housing. (Less than Significant Impact)

As discussed under the analysis for Impacts 4.12-1 and 4.12-2, implementation of the HEU would have a less than significant impact with respect to unplanned population growth or residential displacement. As discussed above, the HEU, under either the Distributed Sites scenario or the Downtown-Only Alternative, represents a worst-case scenario by which population and housing effects in the City are evaluated. The potential population and housing growth provided for in the HEU conforms to the ABAG RHNA Plan. Under either the HEU with Distributed Sites scenario or the Downtown-Only Alternative, if growth were to occur at the maximum densities specified, that growth would conform to the City’s zoning code and General Plan, as amended, as well as the ABAG RHNA Plan, and would thus constitute “planned growth.”

Other jurisdictions in the Bay Area are also updating their housing elements in response to the RHNA Plan. Updates to those housing elements would also conform to the housing unit and buffer requirements of the RHNA Plan, and those jurisdictions would also update and amend their General Plans and zoning codes to meet the requirements of the RHNA Plan. Similar to the City’s planned growth as described above, growth in these other jurisdictions would therefore be similarly “planned” and would not contribute to a cumulatively considerable effect as relates to unplanned growth. Accordingly, implementation of the HEU would not be cumulatively considerable, and the impact would therefore be **less than significant**.

Mitigation Measure: None required.

4.12.5 References

- Association of Bay Area Governments (ABAG). 2021. Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031. Adopted December 16, 2021. Available at: https://abag.ca.gov/sites/default/files/documents/2021-12/proposed%20Final_RHNA_Allocation_Report_2023-2031.pdf. Accessed December 22, 2021.
- Association of Bay Area Governments & Metropolitan Transportation Commission (ABAG & MTC). 2021. Plan Bay Area 2050. Adopted October 21, 2021. Available at: https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf. Accessed December 22, 2021.

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4.13 Public Services and Recreation

4.13.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects on public services and recreation. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to public services and recreation. Further below, existing plans and policies relevant to public services and recreation associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to public services and recreation that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relating to public services and recreation were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- City of Lafayette General Plan (2002).
- Plan for Services for Annexation of East Contra Costa Fire Protection District to Contra Costa County Fire Protection District (2021).
- Lafayette School District Residential Development School Fee Justification Study (2020).
- Acalanes Union High School District Residential and Commercial/Industrial Development School Fee Justification Study (2020).
- Lafayette Park and Recreation Facilities Master Plan (2009).
- Park-Related Development Fees for FY 2021-22 (2021e).

4.13.2 Environmental Setting

Fire Protection and Emergency Response

The Contra Costa County Fire Protection District (CCCFPD) provides fire protection and emergency medical response services for over 600,000 people within Contra Costa County, including the City of Lafayette. CCCFPD is an all-hazards fire district providing traditional fire protection, wildland firefighting, emergency medical services, Advanced Life Support (ALS), ambulance transport, various special operations (e.g., water rescue, hazardous materials response, marine firefighting, technical rescue, etc.), and a comprehensive life-safety and prevention program that includes inspections, a dedicated fire investigation unit, code enforcement, plan reviews, and public education.

In 2016, CCCFPD developed a unique arrangement with American Medical Response, Inc. (AMR) that they refer to as the “Alliance.” The program utilizes AMR emergency medical

services personnel to staff CCCFPD's ALS ambulances, assisted by CCCFPD firefighters certified as EMTs or Paramedics and functioning in a first-responder capacity.

CCCFPD operates the Contra Costa Regional Fire Communications Center (CCRFCC), which serves as a secondary Public Safety Answering Point (PSAP) for most fire and EMS 911 calls in the County. CCRFCC provides dispatch to its district, plus the East Contra Costa Fire Protection District, the Rodeo-Hercules Fire District, and four other fire agencies. The Center dispatches more than 140,000 emergency and non-emergency fire and EMS incidents annually. CCCFPD currently maintains approximately 435 funded positions, including staff in the dispatch center.

CCCFPD currently maintains 27 fire stations throughout the County. CCCFPD stations have a combined staffing capacity of approximately 192 personnel and 65 apparatus bays. CCCFPD staffs three fire stations within the City of Lafayette: Station 15 (3338 Mount Diablo Boulevard), Station 16 (4007 Los Arabis Drive), and Station 17 (620 St. Mary's Road).

In 2020, CCCFPD responded to over 47,000 fire, emergency medical services, and other incidents. CCCFPD follows the National Fire Protection Association Standard 1710 (NFPA) for providing an effective firefighting force of at least 17 personnel on the initial response to a single-family residential structure fire. Across the District, the travel time for the full first alarm contingent of 17 personnel is 12 minutes, 90 percent of the time, for suburban areas. The average travel time for all priority incidents is just over 8 minutes. The number of priority incidents within six-minutes travel of a fire station for each agency during 2020 for CCCFPD was 96 percent, or 31,074 of 32,161 total priority incidents (CCCFPD, 2021).

Police Protection

The City of Lafayette Police Department provides law enforcement services to the City through a contract with the Contra Costa County Sheriff's Office. Services include crime suppression, investigation, traffic enforcement, youth services, vehicle abatement, and community education. The Public Safety function of the Police Department encompasses the crossing guard program, the costs of which are shared with the Lafayette School District. The Lafayette Police Department has one Chief, 2 Sergeants, 16 Sworn Officers, 3 Reserve Officers and 5 Non-Sworn Staff Members (City of Lafayette, 2021a). The City Council recently approved a third Sergeant's position, which is expected to be in place in early 2022 (City of Lafayette, 2021b).

There is one police station in the City, located at 3675 Mount Diablo Boulevard. The Police Department is also responsible for maintaining the City's Emergency Operations Center, which is located at 3491 Mount Diablo Boulevard in the Library.

A call for service is generated anytime someone calls into Police Department Dispatch requesting service or when an officer initiates some form of proactive patrol. Common calls for service are traffic concerns, requests for patrol, and reports of criminal activity. In 2019, a total of 16,789 calls for service were received. Between January and September 2020, the Lafayette Police Department received 10,735 calls for service, a decrease to prior years (City of Lafayette Police Department, 2020).

Public Schools

The City is served by the Lafayette School District (LAFSD) and the Acalanes Union High School District (AUHSD). Students in kindergarten through Grade 8 living in Lafayette attend schools in the LAFSD. Students in Grade 9 and higher attend Acalanes High School or Campolindo High School in the AUHSD.

Lafayette School District (K-8)

The LAFSD operates four K-5 elementary schools and one 6-8 middle school in the City. Schools and their estimated capacities are listed in **Table 4.13-1** below. LAFSD school facilities in school year 2019/2020 had a capacity of 3,706. Of these 3,706 seats, 2,146 were at the elementary school level (K-5) and 1,560 were at the middle school level (6-8). Student enrollment was approximately 3,581 in school year 2019/2020; however, student enrollment exceeded facilities capacity at the elementary school level while facilities capacity did not exceed student enrollment at the middle school level in school year 2019/2020 (LAFSD, 2020).

**TABLE 4.13-1
 LAFSD SCHOOLS AND ESTIMATED CAPACITY (2020)**

School Name	Estimated Capacity
Elementary Schools (K-5)	
Happy Valley	450
Burton Valley	780
Lafayette	470
Springhill	446
Total	2,146
Middle School (6-8)	
Stanley	1,560
SOURCE: LAFSD, 2020.	

As authorized by California Government Code Sections 65995 and 65996, LAFSD collects school impact fees from developers of new residential building space. The impact fee revenue is used together with other LAFSD funds (e.g., State grants, general obligation bonds) to complete capital improvements. The amount of the fee (currently \$2.86 per square foot of new residential space) is established through LAFSD’s Developer Fee Justification Study (LAFSD, 2020).

Acalanes Union High School District

AUHSD provides education to students in grades 9 through 12 residing within all or portions of the cities of Orinda, Lafayette, Moraga, and Walnut Creek and a portion of the unincorporated County of Contra Costa. The City lies within the attendance boundaries for Alacanes High School and Campolindo High School within the AUHSD. Collectively, the AUHSD’s school facilities in school year 2019/2020 had a capacity of 5,892. Student enrollment was 5,637 in school year

2019/2020, meaning that facilities capacity did not exceed student enrollment in school year 2019/2020 (AUHSD, 2020).

As authorized by California Government Code Sections 65995 and 65996, AUHSD collects school impact fees from developers of new residential building space. The impact fee revenue is used together with other AUHSD funds (e.g., State grants, general obligation bonds) to complete capital improvements. The amount of the fee (currently \$1.22 per square foot of new residential space) is established through AUHSD's Developer Fee Justification Study (AUHSD, 2020).

Parks and Recreation

The City of Lafayette Parks, Trails & Recreation Department manages recreation programs and services in the City. The City of Lafayette contains neighborhood and community parks, neighborhood trails, a community center and a variety of recreation programs for all ages and interests (City of Lafayette, 2021c).

Parks

The City's General Plan (2002) defines two broad categories for City-owned parks: Neighborhood Parks and Community Parks. The Lafayette Park and Recreation Facilities Master Plan (2009) added two additional classification categories: Community Center and Downtown Parks. The following definitions characterize these spaces (City of Lafayette, 2009):

- A *neighborhood park* is a relatively small park that primarily serves a local residential area within a 0.5 to 1 mile distance. Typically people would walk to a neighborhood park.
- A *community park* is a larger area whose recreation facilities and features are designed to serve the entire community. Typically, people would drive or bike to a community park. Often, restrooms would be at a community recreational facility given the level and duration of expected use.
- A *community center* is a recreational facility consisting primarily of indoor spaces for classes, meetings and recreational activities. Typically includes complementary outdoor spaces developed for gatherings and activities – patios, benches, play area/equipment. All or part could be focused on age groups such as youth, teens, or seniors. Includes restrooms and parking.
- A *downtown park* is a relatively small site, similar to a neighborhood park, except that it relates to the commercial activities of a downtown. Downtown parks serve people shopping, eating, walking and biking in the downtown area.

Parks and recreation facilities can be “active: (e.g., community center, sports fields, children’s play equipment, designed sports areas) or more “passive” (e.g., play lawn, picnic area, wayside stop for walkers or bike riders, horseshoes, nature interaction and education). Existing classifications and acreages of City-owned parks and recreation facilities are shown in **Table 4.13-2** below.

Future facilities within the City include the Hamlin Nature Park site (3333 Hamlin Road), which was undergoing the preparation of a master plan and park design concept for public consideration as of April 2021 (City of Lafayette, 2021d).

**TABLE 4.13-2
 EXISTING CITY-OWNED PARKS AND RECREATION FACILITIES**

Park Name (Use)	Acres
Neighborhood Parks	
Brook Street Park (Active)	0.4
Leigh Creekside Park (Passive)	0.6
Mildred Lane Pocket Park (Passive)	0.1
Murray Lane Parkland (Passive)	2.2
Subtotal	3.3
Community Parks	
Lafayette Community Park (Active and Passive)	68.0
Buckeye Fields (Active)	11.5
Hamlin Nature Park (Undeveloped)	20.0
Subtotal	99.5
Community Center	
Lafayette Community Center (Active)	8.2
Downtown Parks	
Elam and Margaret Brown Plaza (Passive)	0.3
Total Existing Acreage	111.3

SOURCE: Lafayette Park and Recreation Facilities Master Plan (City of Lafayette, 2009)

There are also two regional parks that residents use to meet their recreational needs: East Bay Regional Park District’s (EBRPD) Briones Regional Park and East Bay Municipal Utility District’s (EBMUD) recreation facilities at Lafayette Reservoir. Located within the City and managed by EBMUD, the Lafayette Reservoir Recreation Area is an all-year day-use area ideal for hiking, jogging, fishing, boating and picnicking, located off Highway 24 only 1 mile from the Lafayette BART station (EBMUD, 2021). In addition, the City borders Briones Regional Park, an approximately 6,255-acre regional park commonly used for hiking, running, and horseback riding over the park’s scenic trails; picnicking, birdwatching, and similar activities. Entry closest to the City is available at the Bear Creek Staging Area at 1611 Bear Creek Road in Lafayette (EBRPD, 2021).

Trails

Lafayette has an extensive system of trails provided by the City, EBRPD, and EBMUD. The Lafayette-Moraga Regional Trail – the first “rails to trail” conversion of its kind (dedicated 1978) – is maintained by the EBRPD and extends southward from the trail head at Olympic Boulevard and

Reliez Station Road to the Town of Moraga. The EBMUD maintains an extensive network of trails adjacent to the Lafayette Reservoir (City of Lafayette, 2002). The City maintains a number of neighborhood trails including the Hidden Oaks Trail, the Walter Costa Trail, the Petar Jakovina Trail, the Silver Springs Loop Trail, the Moraga Road to the Reservoir Rim Trail, the John Kiefer Trail, the Murray Lane Trail, the Acalanes Ridge Trail, and a series of trails within Lafayette Community Park (City of Lafayette, 2014).

Community Center and Multi-Sport Rink

The Lafayette Community Center (500 St. Mary’s Road) is well used by the community and serves as a community gathering place. It provides rooms for community meetings and classes, a large event space, and a fenced to play area. Lafayette’s City Council, commissions and committees utilize the facility for meetings, and the offices of the Parks and Recreation Department are housed there. The facility is also available for rental and is largely self-supporting (City of Lafayette, 2009).

Adjacent to the Community Center is a 180’ x 80’ outdoor, multi-sport arena called “The Rink”. The Rink is enclosed by regulation size hockey boards and is striped for hockey, basketball, and pickle ball. The facility has covered spectator stands, bike racks and drinking fountains. A wide variety of recreational activities take place at ‘The Rink’, including camps, classes, and rentals (City of Lafayette, 2021c).

4.13.3 Regulatory Setting

Federal

National Fire Protection Association 1710

National Fire Protection Association (NFPA) 1710 is the Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments. NFPA developed NFPA 1710 as an industry standard for the deployment of fire suppression operations to ensure safe and effective fire service operations. The Standard stipulates that the first fire engine should arrive to 90 percent of emergency calls within a range of 6:15 and 6:45 minutes. It is recognized that the NFPA 1710 Standard is the optimal nationally and is not regularly achieved in Contra Costa County fire agencies (Contra Costa LAFCO, 2016).

State

California Fire Code

The California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction,

fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, and fire safety during construction and demolition.

Senate Bill 50

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), authorizes school districts to levy developer fees to finance the construction or reconstruction of school facilities, and restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate. School impact fees are collected at the time when building permits are issued. Payment of school fees is required by SB 50 for all new residential development projects and is considered full and complete mitigation of any school impacts. School impact fees are payments to offset capital cost impacts associated with new developments, which result primarily from costs of additional school facilities, related furnishings and equipment, and projected capital maintenance requirements. As such, agencies cannot require additional mitigation for any impacts on school facilities or due to the inadequacy of school facilities. Indirect impacts related to school attendance or construction of new facilities must still be considered under CEQA (e.g., indirect impacts on traffic, air quality, noise).

Quimby Act

California Government Code Section 66477, Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The dedication of land or in-lieu fees may be required for land or condominium subdivisions. Land dedicated and fees collected pursuant to the Quimby Act may only be used for developing new, or rehabilitating existing, park or recreational facilities. The City of Lafayette has adopted Parkland Dedication Fee pursuant to the Quimby Act (See *Local* below for more information).

Mitigation Fee Act

The Mitigation Fee Act (California Government Code Section 66000), enacted through Assembly Bill 1600 in 1987, provides the requirements for development impact fee programs. These programs include fees charged by local agencies to applicants in connection with approval of development projects to defray all or a portion of the cost of public facilities related to the projects. The City's Park Facilities Fee is authorized under the Mitigation Fee Act (See *Local* below for more information).

Regional

EBPRD Master Plan

The EBRPD provides and manages the regional parks for Alameda and Contra Costa Counties, a 1,400 square mile area that is home to 2.6 million people. The EBPRD Master Plan (2013) defines the overall mission and vision for the Park District. It contains policies and descriptions of programs in-place for achieving the highest standards of service in resource conservation, management, interpretation, public access, and recreation. The goal is to maintain a careful balance between the need to protect and conserve resources and the need to provide opportunities

for recreational use of the parklands, both currently and in the future. The Briones Regional Park is defined as a regional park, or a spacious land area with outstanding natural features and sufficient size to support many outdoor recreational opportunities (EBRPD, 2013).

East Bay Watershed Master Plan

The East Bay Watershed Master Plan provides long-term management direction for EBMUD-owned lands and reservoirs to ensure the protection of the EBMUD water resources and preserve environmental resources on EBMUD-owned lands. The Lafayette Reservoir is included in the Plan, as the surrounding lands are managed by EBMUD primarily for recreation. The Lafayette Reservoir is designed to serve large numbers of people, through the provision of expansive open space views, wildlife viewing opportunities, hiking trails, small boat navigation and fishing, and limited vehicular access (EBMUD, 2018).

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to public services and recreation are listed below.

Goal LU-18: Coordinate with other jurisdictions to protect and restore environmental resources and to provide public services.

Policy LU-18.2: Coordination of Public Services. Coordinate water supply, flood control, wastewater and solid waste disposal, soil conservation, and open space preservation with other jurisdictions to create the greatest public benefit and the least degree of environmental impact.

Goal LU-19: Maintain the existing infrastructure essential to the public health and safety of the community.

Policy LU-19.2: Finance Capital Improvements. Provide public facilities to meet the needs generated by new development within Lafayette through continued planning and budgeting for public facilities and coordination with other agencies for public services the City does not provide.

Goal LU-20: Match the demand for public facilities and infrastructure generated by new development with the capacity of existing facilities, capital improvement programs and development mitigation programs.

Policy LU-20.2: Schools. Coordinate planning with the Lafayette School District and the Acalanes Union High School District so that Lafayette's school-aged children are well-served by the school system.

Policy LU-20.4: Fire. Review all development projects for their impacts on standards for fire service specified in the General Plan: fire stations three miles apart in urban areas, six miles apart in rural areas, with a five-minute response time. Require fair share payments

and/or mitigation measures to ensure that these standards or their equivalent are maintained.

Policy LU-20.5: Police. Strive to maintain a three-minute response time for all life-threatening calls and those involving criminal misconduct.

Policy LU-20.8: Parks. Apply the maximum standard for parks to new development.

Policy LU-20.13: Capital Improvement Program. Ensure that the Capital Improvement Program identifies capital projects necessary to maintain levels of performance as well as funding sources for all phases of intended projects.

Goal OS-1: Preserve areas of visual prominence and special ecological significance as Open Space.

Program OS-1.3.2: Require that land dedicated as open space as a condition of development approval be permanently restricted to open space uses by recorded map or deed.

Goal OS-2: Expand the amount of publicly owned open space.

Policy OS-2.1: Open Space Strategy. Develop a strategy to expand public ownership and stewardship of key parcels.

Goal P-1: Provide an attractive system of parks, trails and recreation facilities throughout the City to meet the needs and interests of all ages and capabilities.

Policy P-1.1: Parks, Trails and Recreation Master Plan. Existing and future parks, trails and recreation facilities will be acquired and designed in accordance with a comprehensive, community-wide vision.

Policy P-1.2: Park Planning and Design. Develop a system of high quality, well designed parks and recreation facilities that take advantage of the City's semi-rural character.

Policy P-1.3: Parkland Standard. Provide parks and recreation facilities in accordance with standards and practices appropriate to a semi-rural and largely built-out residential community.

Program P-1.3.1: Use the standard of up to five acres of parkland per 1,000 residents for the dedication, acquisition, and improvement of parkland pursuant to the provisions of the Quimby Act. (Government Code §66477)

Policy P-1.5: Operate, Maintain and Improve Facilities. Operate, maintain and improve facilities, as needed, to achieve high-quality and good design.

Policy P-1.5: Fund Operation, Maintenance and Improvements. Fund operation, maintenance and improvements for parks, trails and recreation facilities through a variety of funding mechanisms outside the General Fund.

Goal P-2: Provide recreational, educational, and cultural programs to meet the needs and interests of all age groups.

Policy P-2.1: Community Center. Maintain the Community Center as a multi-use facility available for recreational, educational, and cultural programs and civic and community activities.

Goal P-3: Implement the *Lafayette Master Trails Plan*.

Policy P-3.1: Complete the Trail System. Complete the trail system as shown on the *Lafayette Master Trails Plan* on file at the City offices and the Parks and Recreation Department.

Goal S-4: Minimize risks to Lafayette residents and property from fire hazards.

Policy S-4.1: Adequate Fire Protection. Enforce regulations and standards which contribute to adequate fire protection.

Policy S-4.2: Reducing Fire Risk From Development. Take measures to reduce fire risks from new and existing development as well as natural fire hazards.

Policy S-4.3: Development and Mitigation Fees. Maintain development and mitigation fees at a level to adequately finance fire protection costs.

Goal S-7: Maintain effective police services.

Policy S-7.1: Demand for Police Services. Review development proposals for their demand on police services and require mitigating measures, if necessary, to maintain the community's standard for police services. Levy police impact fees for capital facilities and equipment, if warranted.

Policy S-7.2: Interjurisdictional Cooperation. Work with the Contra Costa County Sheriff's Department and neighboring jurisdictions to improve police service in Lafayette.

Policy S-7.3: Response Time Standards. Strive to maintain a three-minute response time for all life-threatening calls and those involving criminal misconduct, and a seven-minute response time for the majority of non-emergency calls.

Lafayette Municipal Code

Chapter 6-16: Dedication of Parkland and Park Facilities and Payment of Fees for Park, Trail and Recreation Purposes. The City's Parkland Dedication Fee and the Park Facilities Fee allow the City to purchase parkland and provide recreation facilities to meet the demand generated by new residential development. The Fees also allow the City to intensify the use of current recreational resources so that they can accommodate more users. The Fee revenues fund the acquisition of new parkland, improvements to parks and supporting facilities, expansion of trails, construction and renovation of playgrounds, playing fields, and outdoor courts; as well as other amenities that will be needed to serve future Lafayette residents. The Fees are assessed on new residential development and additions in the City that will result in an increase in the resident population. The proposed fee schedule is differentiated among residential land use types to reflect the differences in facility need among types of new development, based on the number of new residents each residential unit type is likely to generate.

Lafayette Park and Recreation Facilities Master Plan

The Lafayette Parks and Recreation Facilities Master Plan presents initiatives for new park and recreation facilities in keeping with the City of Lafayette's adopted General Plan goals for meeting the needs of its citizens. The Parks and Recreation Facilities Master Plan details the rationale for these desired facilities and their features, lists criteria for finding suitable sites, and

includes analysis of potential costs for acquiring, developing and maintaining the proposed parks (City of Lafayette, 2009).

Lafayette Trails Master Plan

The Lafayette Trails Master Plan contains proposed trail segments in the City using a framework of the goals and policies within the City’s General Plan. The Lafayette Trails Master Plan also contains narrative and graphic descriptions of trail standards, an implementation plan delineating methods for acquiring trails, installation responsibility for each trail segment, a phasing plan and cost estimates associated with implementation, and a maintenance plan (City of Lafayette, 2006).

4.13.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to public services and recreation are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project could have a significant impact on the environment if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - Fire protection;
 - Police protection;
 - Schools;
 - Parks;
 - Other public facilities.
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Methodology and Assumptions

Potential direct impacts to public services are discussed relative to potential substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, as directed by the Significance Thresholds defined in Appendix G of the *CEQA Guidelines*. Similarly, potential direct impacts to recreation are discussed related to the accelerated substantial physical deterioration of recreational facilities and the construction/expansion of recreational facilities. The cumulative analysis considers potential public services and recreation impacts of the HEU’s implementation combined with cumulative development in the vicinity and Citywide.

Implementation of the HEU could have a significant impact on public services if: (1) it would require the construction of new or physically altered governmental facilities in order to maintain acceptable levels of public services; and (2) the construction or alteration of such facilities would result in a substantial adverse physical impact on the environment.

For purposes of the impact analysis, it is assumed that any projects developed as a result of the HEU's implementation would be designed to comply with the most up-to-date building and fire codes and would include fire safety measures and equipment, including but not limited to, use of fire retardant building materials, inclusion of emergency water infrastructure (fire hydrants and sprinkler systems), installation of smoke detectors and fire extinguishers, installation of emergency response notification systems, and provision of adequate emergency access ways for emergency vehicles. Project fire safety plans would be subject to review and approval by the City and CCCFPD.

Impacts and Mitigation Measures

Impacts

Impact 4.13-1: Implementation of the HEU would not result in an increase in demand for fire protection and emergency medical response services that would require new or physically altered fire protection facilities in order to maintain acceptable service ratios, response times, or other performance objectives, construction of which could have significant physical environmental impacts. (*Less than Significant Impact*)

HEU with Distributed Sites

While no specific development proposals are directly associated with the HEU, theoretical development would result in an increase in population and thus an increase in demand for fire protection and emergency medical response services from the CCCFPD. As discussed in Section 4.13.2, the CCCFPD average travel time for all priority incidents is just over 8 minutes. Thus, under existing conditions, the City's General Plan target response time of 5 minutes is not being met (General Plan Policy LU-20.4). However, it is important to note that the City's response time target is more stringent than the NFPA 1710 Standard, which stipulates that the first fire engine should arrive to 90 percent of emergency calls within a range of 6:15 and 6:45 minutes. Travel time performance by region is variable and influenced by factors such as individual response unit workload, the size of the station area, and the street system serving it. Connected, grid-patterned street systems provide faster response times than do areas with meandering streets and numerous dead ends (CCCFPD, 2021).

The increase in population as a result of the HEU with Distributed Sites would be expected to generate the typical range of service calls, including fire, emergency medical service, and other incidents. New fire personnel, vehicles, and equipment would be required to provide adequate response times to serve future development. Therefore, the CCCFPD's costs to maintain equipment and facilities and to train and equip personnel would also increase. However, the additional personnel and materials costs would likely be gradual as the increase in population as a result of development under the HEU with Distributed Sites would occur incrementally over time. In accordance with General Plan Policy LU-20.4, project applicants and the City would be

required to ensure that there are adequate fire services at the time that specific development projects are proposed. As such, it would be possible to assess the need for additional fire and emergency medical service personnel and equipment and address these needs to ensure that adequate fire service response time standards are maintained. However, as a matter of information, if and when the construction or expansion of facilities to accommodate additional personnel or equipment should become necessary, CEQA review, General Plan provisions, Municipal Code regulations, and payment of impact fees would all be required. Additional fire facilities are not expected to be required to serve the population as a result of the HEU with Distributed Sites. Therefore, the impact on fire protection and emergency medical response services would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. Development projects under the Downtown-Only Alternative would be subject to the same policies and fee requirements as identified for the HEU utilizing the Distributed Sites scenario as described above. The concentration of development under the Downtown-Only Alternative would ensure that no additional or expanded fire facilities would be required to serve the population under this alternative. Therefore, the impact of the HEU with the Downtown-Only Alternative regarding fire protection and emergency medical response services would be **less than significant**.

Mitigation Measure: None required.

Impact 4.13-2: Implementation of the HEU would not result in an increase in demand for police protection services that would require new or physically altered police facilities in order to maintain acceptable service ratios, response times, or other performance objectives, construction of which could have significant physical environmental impacts. (*Less than Significant Impact*)

HEU with Distributed Sites

While no specific development proposals are directly associated with the HEU, theoretical development would result in an increase in population and thus an increase in demand for police protection services from the Lafayette Police Department. As discussed in Section 4.13.2, the Police Department has one Chief, 3 Sergeants, 16 Sworn Officers, and 3 Reserve Officers. Based on the City's 2020 population of 26,638 (see Section 4.12, *Population and Housing*), the existing officer to resident ratio is approximately 0.9 officers per 1,000 residents. With the addition of 8,390 potential residents under the HEU with Distributed Sites (again, see Section 4.12), the ratio would be approximately 0.7 officers per 1,000 residents. While there is no adopted officer-to-resident service ratio in the City, the increase in population and associated increase in calls for service is likely to require additional police personnel. Additionally, General Plan Policies S-7.3 and LU-20.5 contain a goal to maintain a 3-minute response time for all life-threatening calls and those involving criminal misconduct, and a 7-minute response time for the majority of non-emergency calls.

Implementation of the HEU with Distributed Sites would increase overall demand on police protection services in the City. Future development is expected to generate the typical range of service calls. Additional police personnel, vehicles, and equipment would likely be required to provide adequate response times to serve future growth. Therefore, the City's costs to maintain equipment and facilities and to train and equip personnel would also increase. However, the additional personnel and materials costs would likely be gradual as the increase in population would occur incrementally over time. General Plan Policy S-7.1 provides a framework for evaluating the potential impact of development on the delivery of police protection services and assessing impact fees as warranted. As such, it would be possible to assess the need for additional police personnel and equipment and address these needs to ensure that the law enforcement response time standards in the community are maintained. However, as a matter of information, if and when the construction or expansion of facilities to accommodate additional personnel or equipment could become necessary, CEQA review, General Plan provisions, Municipal Code regulations, and payment of impact fees would all be required. Additional police protection facilities are not expected to be required to serve the population as a result of the HEU with Distributed Sites. Therefore, the impact on police protection services would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. With the addition of 8,483 potential residents under the Downtown-Only Alternative (see Section 4.12), the ratio would be approximately 0.7 officers per 1,000 residents, similar to the HEU with Distributed Sites. The concentration of development under the Downtown-Only Alternative would ensure that no additional or expanded police protection facilities are required to serve the population under this alternative. As a matter of information, development projects under the Downtown-Only Alternative would be subject to the same policies and fee requirements as identified for the HEU utilizing the Distributed Sites scenario as described above. Therefore, the impact of the HEU with the Downtown-Only Alternative regarding police protection would be **less than significant**.

Mitigation Measure: None required.

Impact 4.13-3: Implementation of the HEU would not result in an increase in new students for public schools at a level that would require new or physically altered school facilities in order to maintain acceptable service ratios or other performance objectives, construction of which would have significant physical environmental impacts. (*Less than Significant Impact*)

While no specific development proposals are directly associated with the HEU, theoretical development would result in an increase in population and thus an increase in school-aged children that could be enrolled in LAFSD and AUHSD schools. As shown in **Table 4.13-3**, the HEU with Distributed Sites would result in approximately 970 new school-age children, and the Downtown-Only Alternative would result in approximately 1,016 new school-age children.

**TABLE 4.13-3
 ESTIMATED STUDENT GENERATION**

Grade Group	Students per Multi-Family Unit^a	Students per Single Family Unit^a	Estimated HEU School-Age Children – with Distributed Sites^b	Estimated HEU School-Age Children – Downtown-Only Alternative^c
Kindergarten – 5th Grade (LAFSD)	0.1148	0.2222	455	474
6th – 8th Grade (LAFSD)	0.0510	0.1237	219	230
9th – 12th Grade (AUHSD)	0.0703	0.1633	296	312
		Total	970	1,016

NOTES:

^a Student generation rates for LAFSD are those contained in the *Lafayette School District Residential Development School Fee Justification Study* (LAFSD, 2020). Student generation rates for AUHSD are those contained in the *AUHSD Residential and Commercial/Industrial Development School Fee Justification Study* (AUHSD, 2020).

^b Assumes 2,714 multi-family units in Planning Areas 1-9 and 13, and 642 single family units included as Scattered Sites.

^c Assumes 2,611 multi-family units in Planning Areas 1-6, and 782 single family units included as Scattered Sites.

SOURCE: LAFSD, 2020; AUHSD, 2020.

HEU with Distributed Sites

The approximately 970 new students generated under the HEU with Distributed Sites would be added to the applicable district-wide enrollment incrementally over time as development occurs. As discussed in Section 4.13.2 and in Table 4.13.1, LAFSD student enrollment was approximately 3,581 in school year 2019/2020; however, student enrollment exceeded facilities capacity at the elementary school level while facilities capacity exceeded student enrollment at the middle school level in school year 2019/2020. Planning Areas 1-9 and 13 under the HEU with Distributed Sites span all four LAFSD attendance boundaries, but primarily lay within the attendance boundary for Lafayette Elementary and Happy Valley Elementary Schools. These schools would likely need facility updates to increase capacity to meet the needs of the increase in the K-5 student population as a result of the HEU with Distributed Sites over time. While Stanley Middle School currently has excess capacity, due to the number of 6-8 students generated as a result of the HEU with Distributed Sites over time, facility updates to increase capacity would also likely be required.

The addition of high school-aged students to AUHSD due to development under the HEU with Distributed Sites would exceed the current capacity at the collective AUHSD high schools. Planning Areas 1-9 and 13 under the HEU with Distributed Sites are also all within the attendance boundary for Acalanes High School. Thus, facility updates to increase capacity would also likely be required for AUHSD and particularly at Acalanes High School to accommodate the growth in high school-aged students under the HEU with Distributed Sites. Any expansion of school facilities would be required to undergo environmental review as they are identified. Appropriate measures would be identified and implemented as applicable to reduce any construction-related or operational effects of those facilities.

The City’s adherence to General Plan Policy LU-20.2, described under Section 4.13.3 would reduce the potential for effects to school facilities associated with increased enrollment. As

described in Section 4.13.3, projects developed under the HEU would be required to comply with SB 50 and California Government Code Section 65996, which would fully mitigate the potential effect on public school facilities from the new student population that may be generated by the HEU. California Government Code Section 65996 and Education Code Section 17620 authorize school districts to levy a development fee on new residential projects to offset the costs associated with new students present in the districts as a result of new development. Section 65996 states that the payment of school impact fees that may be required by a State or local agency constitutes full and complete mitigation of school impacts from development. Therefore, this impact would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. Planning Areas 1-6 primarily lay within the attendance boundary for Lafayette Elementary School, with some enrollment at Happy Valley and Burton Valley Elementary Schools. Planning Areas 1-6 under the Downtown-Only Alternative are also all within the attendance boundary for Acalanes High School. The approximately 1,016 new students generated under the Downtown-Only Alternative (see Table 4.13-3) would be added to the applicable district-wide enrollment incrementally over time as development occurs, similar to the HEU with Distributed Sites Scenario. Thus, facility updates to increase capacity would also likely be required for LAFSD and AUHSD facilities to accommodate the growth in school-aged students under the Downtown-Only Alternative. Development projects under the Downtown-Only Alternative would be subject to the same school facilities development fees, as identified for the HEU utilizing the Distributed Sites scenario as described above. Therefore, the impact of the HEU with the Downtown-Only Alternative regarding schools would be **less than significant**.

Mitigation Measure: None required.

Impact 4.13-4: Implementation of the HEU would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (*Less than Significant Impact*)

HEU with Distributed Sites

While no specific development proposals are directly associated with the HEU, theoretical development would result in an increase in population and thus an increased use in existing neighborhood and regional parks, and recreation facilities. The increase in residents as a result of the HEU would result in an increase in use of existing City parks. However, the population increase and resulting use of existing City park and recreation facilities would occur over time as individual projects are developed. Individual projects under the HEU with Distributed Sites would be subject to the City's Parkland Dedication Fee and the Park Facilities Fee, which require either dedicating land to serve new residents, constructing new park or trail amenities, or paying fees to offset the increased costs of providing new park facilities for new development. The fees also allow the City to intensify the use of current recreational resources so that they can

accommodate more users. The fee revenues fund the acquisition of new parkland, improvements to parks and supporting facilities, expansion of trails, construction and renovation of playgrounds, playing fields, and outdoor courts, as well as other amenities that will be needed to serve future Lafayette residents (City of Lafayette, 2021).

As discussed in Section 4.13.2, *Environmental Setting*, Lafayette residents also use nearby Briones Regional Park and recreation facilities at the Lafayette Reservoir to meet recreation needs. New residents as a result of the HEU would be expected to use these facilities from time to time; however, given the vast size of the regional park facilities and the relatively infrequent usage that future residents would make of them, the HEU with Distributed Sites would not result in their substantial deterioration. A modest increase in usage of built facilities, such as visitor centers, picnic areas, children's play areas, and parking facilities, could result from buildout of the HEU; however, this incremental growth would not be likely to trigger the construction of new built facilities over and above that already foreseen in the long-range planning documents for these regional park facilities.

As a matter of information, future development projects would also be subject to the open space development requirements in the Lafayette Municipal Code for each applicable zoning district. These may include portions of the sites being reserved for open space and landscaping, and ground-level private, semipublic, or public open space. Open space in future development projects would be expected to absorb a small portion of the demand for parks and recreational facilities by new residents.

While the HEU with Distributed Sites would increase the use of existing City parks and recreational facilities, individual projects under the HEU with Distributed Sites would be subject to the City's Parkland Dedication Fee and the Park Facilities Fee, which would fund improvements to existing facilities as a result of increased demand. The increased demand on existing regional parks would also not substantially increase or accelerate the physical deterioration or degradation of existing parks and recreation facilities, as these areas are much larger in size and have planned for regional recreational use. In addition, open space developed as a result of requirements for individual projects would also absorb a small portion of the demand for parks and recreational facilities by new residents. Therefore, impacts from the accelerated physical deterioration of parks and recreation resources would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. Development projects under the Downtown-Only Alternative would be subject to the same Parkland Dedication Fee and the Park Facilities Fee and open space zoning requirements, as identified for the HEU utilizing the Distributed Sites scenario as described above. Therefore, the impact of the HEU with the Downtown-Only Alternative regarding parkland would be **less than significant**.

Mitigation Measure: None required.

Impact 4.13-5: Implementation of the HEU would not include recreational facilities or require the construction or expansion of parks or recreational facilities which might have an adverse physical effect on the environment. (*Less than Significant Impact*)

HEU with Distributed Sites

While no specific development proposals are directly associated with the HEU, theoretical development would result in an increase in population and thus an increased demand for parks and recreation facilities. As discussed in Section 4.13.3, *Regulatory Setting*, the City has a service-level objective for parkland of 5 acres of parkland per 1,000 residents. Based on the City's 2020 population of 26,638 (see Section 4.12, *Population and Housing*), the existing parkland ratio is approximately 4.2 acres per 1,000 residents. With the addition of 8,390 potential residents under the HEU with Distributed Sites (see Section 4.12), the ratio would be approximately 3.2 per 1,000 residents. Therefore, the HEU with Distributed Sites would worsen this existing deficiency. Based on the City's desired General Plan service levels, the addition of approximately 8,390 residents would generate a demand for up to approximately 42 acres of additional parkland.

As a matter of information, individual projects under the HEU with Distributed Sites would be subject to the City's Parkland Dedication Fee and the Park Facilities Fee, which require either dedicating land to serve new residents, constructing new park or trail amenities, and/or paying fees to offset the increased costs of providing new park facilities for new development. The Fees are assessed on new residential development and additions in the City that will result in an increase in the resident population. The fee schedule is differentiated among residential land use types to reflect the differences in facility need among types of new development, based on the number of new residents each residential unit type is likely to generate. At this time, the mix of housing types that could be developed under the HEU is not known. On-site parks, open space, and/or trails for development projects under the HEU could be dedicated and improved as needed through a parkland agreement with the City. The City's Parkland Dedication Fee and the Park Facilities Fee are consistent with the Quimby Act and provide up to 5 acres of parkland per 1,000 residents added by a project, and advance the parks and recreation goals and policies of the General Plan. As the residential population of Lafayette increases as a result of the HEU, the construction of new parks and recreational facilities in the City would occur. The park projects developed as a result of the Parkland Dedication Fee and the Park Facilities Fee would be required to undergo environmental review as they are identified. Appropriate measures would be identified and implemented as applicable to reduce any construction-related or operational effects of those facilities.

Although the HEU with Distributed Sites would worsen existing parkland deficiencies in the City, individual projects would be subject to the City's Parkland Dedication Fee and the Park Facilities Fee as they are developed. The City's Parkland Dedication Fee and the Park Facilities Fee allow the City to purchase parkland and provide recreation facilities to meet the demand generated by new residential development. As noted above, parks, trails, and other recreational facilities developed as a result would be subject to environmental review as they are identified. Therefore, parkland impacts would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. With the addition of 8,483 potential residents under the Downtown-Only Alternative (see Section 4.12, *Population and Housing*), the parkland ratio would also be approximately 3.2 per 1,000 residents. Therefore, the Downtown-Only Alternative would worsen this existing deficiency, similar to the HEU with Distributed Sites. Based on the City's desired General Plan service levels, the addition of approximately 8,483 residents would also generate a demand for up to approximately 42 acres of additional parkland. Development projects under the Downtown-Only Alternative would be subject to the same Parkland Dedication Fee and the Park Facilities Fee and park projects developed would be required to undergo environmental review as they are identified, as was similarly noted for the HEU utilizing the Distributed Sites scenario as described above. Therefore, the impact of the HEU with the Downtown-Only Alternative regarding parkland would be **less than significant**.

Mitigation Measure: None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to public services and recreation could occur if the incremental impacts of the HEU combined with the incremental impacts of cumulative development described in Section 4.0 of this EIR.

Impact 4.13-6: The HEU, combined with cumulative development in the vicinity and Citywide, would not result in an adverse cumulative increase in demand for public services that would require new or physically altered governmental facilities, construction of which could have significant physical environmental impacts. (*Less than Significant Impact*)

The HEU, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity would increase the demand for fire protection and emergency medical response services, police protection services, and public schools. As described in Section 4.0, there are numerous other housing developments proposed to be constructed or under review approval consideration with the City. As discussed above under Impacts 4.13-1 and 4.13-2, the HEU would have less than significant impacts with regard to fire protection and emergency medical response services and police protection services. Similar to the HEU, cumulative development would be subject to Parkland Dedication Fees and Park Facilities Fees that contribute to long-term parks and recreational facilities planning and capacity improvements. The City would also be required to ensure compliance with development standards contained in General Plan Policy LU-20.4 related to fire services and General Plan Policy S-7.1 related to police services. With regard to public schools, similar to future development under the HEU, cumulative projects would be subject to school impact fees. Therefore, when considered in the cumulative context, the HEU's public services-related impacts would not be cumulatively considerable. Cumulative impacts would be **less than significant**.

Mitigation Measure: None required.

Impact 4.13-7: Implementation of the HEU, combined with cumulative development in the vicinity and citywide, would not result in significant cumulative impacts to parks and recreation. (*Less than Significant Impact*)

The HEU, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity would incrementally increase the demand for and use of existing parks and recreation facilities. As described in Section 4.0, there are numerous other housing developments proposed to be constructed or under review approval consideration with the City. As discussed above under Impacts 4.13-4 and 4.13-5, the HEU would have less than significant impacts with regard to recreation. Similar to the HEU, cumulative development would be subject to Parkland Dedication Fees and Park Facilities Fees that contribute to long-term parks and recreational facilities planning and capacity improvements. The City would also be required to ensure compliance with General Plan Goal LU-19 and Goal LU-20 related to the maintenance and demand for parks and recreational facilities. Therefore, when considered in the cumulative context, the HEU's parks and recreation-related impacts would not be cumulatively considerable. Cumulative impacts related to parks and recreation would be **less than significant**.

Mitigation Measure: None required.

4.13.5 References

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4.14 Transportation

4.14.1 Introduction

This chapter includes a description of the physical and regulatory transportation setting for the Housing Element Update (HEU), and a description of the transportation impacts with respect to all modes of travel (vehicular, bicycle, pedestrian, and transit).

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The California Department of Transportation (Caltrans) submitted a comment letter that identified items it requested to be addressed in the Transportation Impact Study prepared for the proposed project, including evaluation of transportation impacts in accordance with applicable Caltrans methods. The Caltrans letter also identified evaluation of primary and secondary impacts of VMT mitigation on pedestrians, bicycles, travelers with disabilities, and transit performance for inclusion in the proposed project to meet Caltrans requirements.

4.14.2 Environmental Setting

Roadway Network

The roadway network serving the Lafayette Housing Element Update planning areas is shown in **Figure 4.14-1**. Key roadways are described below.

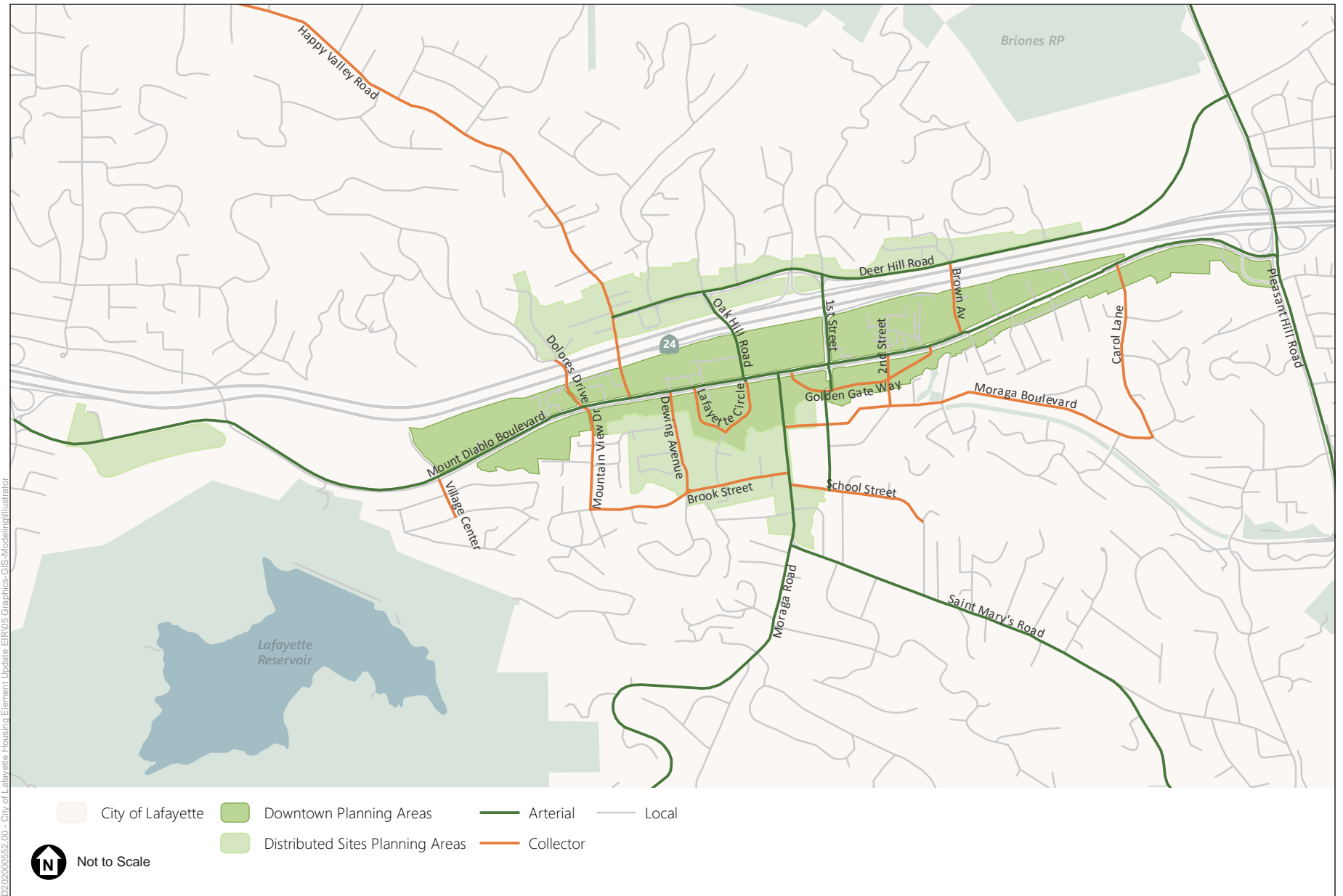
State Highways

State Route 24 (SR-24) is an east–west California Scenic Highway that serves the eastern San Francisco Bay Area. This freeway connects the Interstate 580/Interstate 980 interchange in Oakland to the Interstate 680 junction in Walnut Creek, crossing under the Berkeley Hills via the Caldecott Tunnel. SR-24 is a major transportation facility linking the project area to the broader East Bay region.

Arterials and Collectors

As described in the City of Lafayette General Plan Circulation Chapter, arterials are major streets carrying the traffic of local and collector streets to and from freeways and other major streets, with controlled intersections and generally providing direct access to properties. Collectors are streets for traffic moving between arterial and local streets, generally providing direct access to properties. Local streets provide direct access to properties and are often designed to discourage through traffic. Key arterials and collectors in the City, as described in the *Downtown Lafayette Specific Plan Draft EIR* (January 26, 2010) are described below.

Mount Diablo Boulevard is an east-west arterial street with two lanes in each direction and with sections of a center left turn lane and sections with dedicated left turn lanes and medians, which extends from Acalanes Road on the west to Pleasant Hill Road on the east, providing access through the entire length of downtown Lafayette. Between Oak Hill Road and First Street, the



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SOURCE: Fehr & Peers, 2022

Lafayette Housing Element Update EIR

Figure 4.14-1
Roadway Network



number of eastbound travel lanes increases to three lanes. At its easterly and westerly ends, Mount Diablo Boulevard connects with SR-24 freeway ramps.

Moraga Road is an arterial that runs north-south through the downtown area, connecting Mount Diablo Boulevard on the north with the Town of Moraga to the south. Moraga Road is four lanes north of St. Mary's Road and narrows to two lanes south of St. Mary's Road.

Pleasant Hill Road is a four-lane arterial that runs north-south and connects with SR-24 at a full access interchange. It connects Mount Diablo Boulevard with Olympic Blvd to the south and the City of Pleasant Hill and northeasterly areas of Lafayette to the north. Pleasant Hill Road is a route of regional significance north of SR-24.

First Street is a four-lane arterial between Mount Diablo Boulevard and Deer Hill Road that runs north-south and connects to SR-24 with an eastbound freeway on-ramp. First Street narrows to two lanes south of Mount Diablo Boulevard. South of Golden Gate Way, it becomes a one-way southbound roadway that ends at School Street.

Oak Hill Road is a four-lane arterial that runs north-south between Mount Diablo Boulevard and Deer Hill Road and connects to SR-24 at an eastbound freeway off-ramp. Oak Hill Road terminates at the signalized intersection with Mount Diablo Boulevard and Lafayette Circle (east), a two-lane north-south collector that continues south of the intersection and provides local access.

Deer Hill Road is a four-lane arterial between Happy Valley Road and First Street, narrowing to two lanes and connecting to Pleasant Hill Road to the east. Westbound SR-24 highway on- and off-ramps connect directly to Deer Hill Road, which also provides access to the Lafayette BART station parking lots at multiple driveways.

St. Mary's Road is a two-lane arterial that connects Moraga Road with southeasterly areas of Lafayette and St. Mary's College in Moraga.

Collector streets in the study area include Lafayette Circle (east and west), Dewing Avenue, Happy Valley Road, Mountain View Drive, Dolores Drive, Village Center, Golden Gate Way, Second Street, Brown Avenue, Carol Lane, Moraga Boulevard, Brook Street, and School Street.

Bicycle and Pedestrian Facilities

Bicycle Facilities

Bicycle planning and design typically relies on guidelines and design standards established by the California Department of Transportation (Caltrans) in the *Highway Design Manual* (Chapter 1000: Bikeway Planning and Design). The *Highway Design Manual* provides four distinct types of bikeway facilities, as described below.

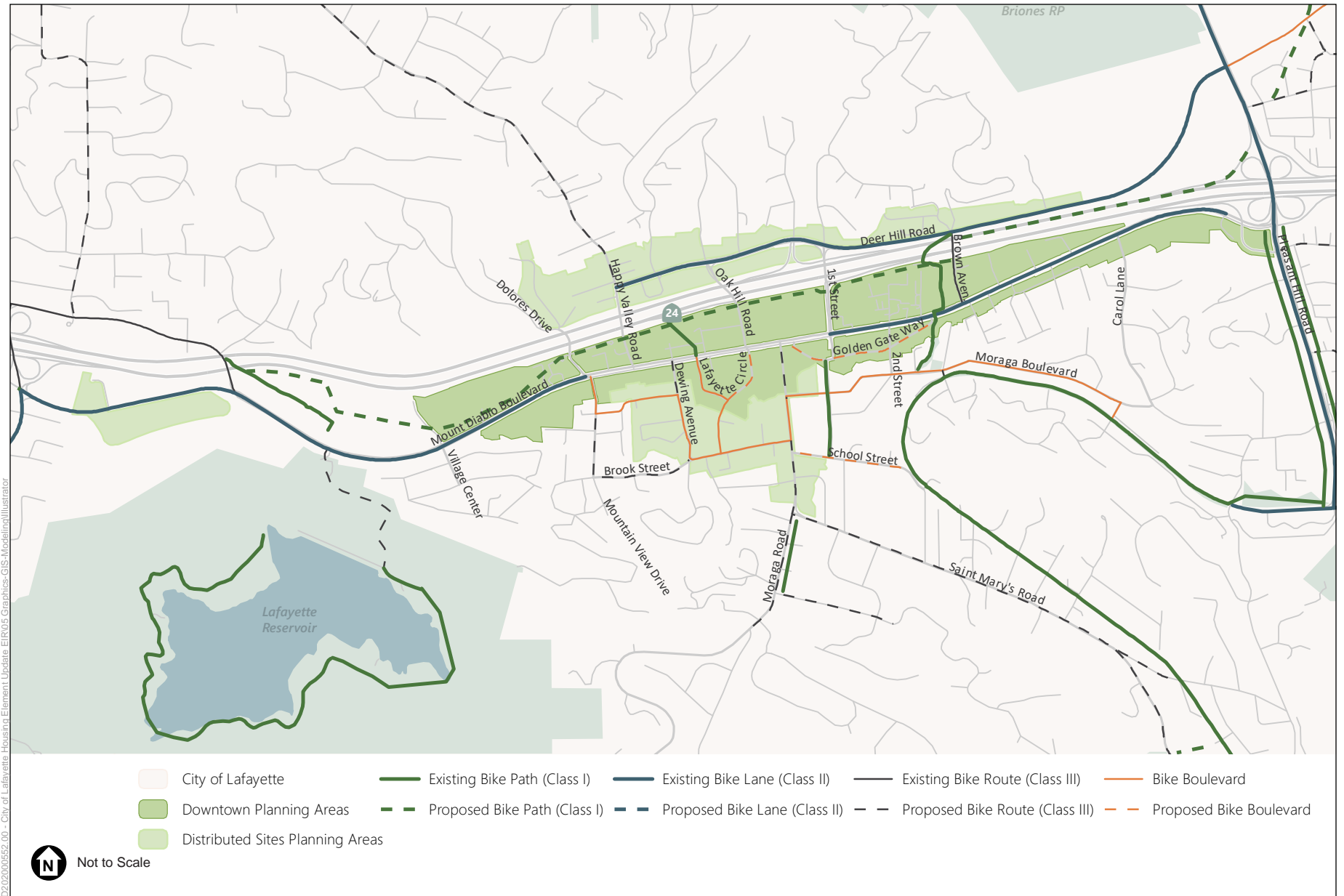
- **Class I Bikeways (Shared-Use Path)** provide a completely separate right-of-way and are designated for the exclusive use of bicycles and pedestrians, with vehicle and pedestrian

crossflow minimized. In general, bike paths serve corridors where on-street facilities are not feasible or where sufficient right-of-way exists to allow them to be constructed.

- **Class II Bikeways (Bicycle Lanes)** are dedicated lanes for bicyclists generally adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bicycle lanes are typically at least five feet wide. Adjacent vehicle parking and vehicle/pedestrian crossflow are permitted. Class II buffered bike lanes provide greater separation from an adjacent traffic lane and/or between the bike lane and on-street parking. This separation is created with chevron or diagonal striping.
- **Class III Bikeways (Bicycle Route)** are designated by signs or pavement markings for shared use with pedestrians or motor vehicles but have no separated bike right-of-way or lane striping. Bike routes serve either to a) provide a connection to other bicycle facilities where dedicated facilities are infeasible, or b) designate preferred routes through high-demand corridors.
- **Class IV Bikeways (cycle tracks or “separated” bikeways)** provide a right-of-way designated exclusively for bicycle travel within a roadway and are protected from other vehicle traffic by physical barriers, including, but not limited to, grade separation, flexible posts, inflexible vertical barriers such as raised curbs, or parked cars.

Existing and planned bicycle facilities are shown on **Figure 4.14-2**, based on the *City of Lafayette Bikeways Plan* (2006). The *Bikeways Plan* identifies the following recommended bicycle facility improvements within or adjacent to the Housing Element Update planning areas.

- **EBMUD Aqueduct/Caltrans ROW Trail:** The EBMUD Aqueduct runs east-west through downtown Lafayette and parallels SR-24, BART, and Mt. Diablo Blvd. before it turns northeast to cross Pleasant Hill Road and continues to the Walnut Creek border. The City is considering installing a 12-foot wide, paved, non-motorized trail along this gravel corridor from the Lafayette Reservoir to Brown Avenue, under SR-24 and further east to the Briones Regional Trail in Walnut Creek. This facility would constitute of 3.54 miles of Class I shared path largely within or adjacent to the study area.
- **Downtown Mt. Diablo Bypass Route:** The bypass route would provide cyclists with an alternate east-west route through Downtown Lafayette. Improvements include signage as well as the establishment of Bicycle Boulevards along Golden Gate Way, Lafayette Circle and School Street and Class III facilities along Mountain View Drive, Brook Street and Dewing Avenue. The proposed 3.30-mile bypass route includes 1.83 miles of bicycle boulevards and 1.47 miles of Class III bicycle routes.
- **Gap Connectors:** Several network improvements have been proposed as bikeway “gap connectors” which will connect segments of the existing network. This includes 0.76 miles of Class III bicycle route designation on Moraga Road.
- **Regional Recreational Route:** Several roads used by regional cyclists are prioritized for signage improvements and Class III bicycle route designation. These include approximately 9.75 miles of Class III facilities on Acalanes Road, Happy Valley Road, Upper Happy Valley Road and St. Mary’s Road.
- **School Access Routes:** In addition to the improvements mentioned above, select facilities are identified to improve access to local schools. Approximately 3.29 miles of Class III bicycle route facilities are proposed on Acalanes Ave/Nogales Street, Camino Diablo, Hamlin Road, Old Tunnel Road and Condit Road.



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SOURCE: Fehr & Peers, 2022

Lafayette Housing Element Update EIR

Figure 4.14-2
Bicycle Facilities



Pedestrian Facilities

The *City of Lafayette Master Walkways Plan* (2015) identifies several streets within or adjacent to the project area for improvement. Improvements are categorized into walkways, sidewalks, trails, frontage improvements. Walkways are considered necessary on both sides of the street throughout downtown, within a designated subdivision zone for office, retail, business, or commercial use. They are considered necessary along at least one side of all streets that serve as pedestrian routes for schools, libraries, parks, public transportation, trails and neighborhood links, and community attractions or housing serving individuals with limited mobility.

The following roadways in the project area are included on the master walkways list. Highest priority for improvement is given to those in the downtown area, followed by those connecting or completing a connection to downtown schools, and lastly to those of import to a unique area within the City of Lafayette.

- **Priority 1:** Brook Street, Dewing Avenue, Happy Valley Road, Lafayette Circle, Monroe Avenue, Moraga Road, Mt. Diablo Boulevard, Mt. View Drive.
- **Priority 2:** Acalanes Road, Bickerstaff Road, Carol Lane, Chestnut Street, First Street, Moraga Road (Old Mountain View to Tanglewood), Pleasant Hill Road, School Street, Second Street, Springhill Road, Springbrook Road, Stanley Boulevard.
- **Priority 3:** Reliez Station Road (Pleasant Hill Road to Olympic Boulevard), Walnut Street, St. Mary's Road.
- **Priority 4:** Camino Diablo, Deer Hill Road.

Public Transportation

Transit agencies that provide local and regional transit service to the City of Lafayette include BART and County Connection.

The Lafayette BART station can be accessed by vehicle from Happy Valley Road and Deer Hill Road, and a walking path connects the south side of the station to Mount Diablo Boulevard. Lafayette BART is on the Antioch – San Francisco Airport orange line.

County Connection provides one fixed local route serving Lafayette, as shown in **Figure 4.14-3** and described below. The route operates from 6:00 AM to 8:00 PM Monday through Friday, and from 9:30 AM to 5:30 PM on Saturday and Sunday. All County Connection buses are wheelchair accessible and equipped with bike racks.

- **Route 6 – Lafayette BART/Orinda BART:** This route runs between Lafayette and Orinda BART stations with main stop locations at regular intervals along Moraga Road, St. Mary's Road and Moraga Way. Weekday headways are 30 minutes, expanding to one hour and 15 minutes on the weekends. Weekday service begins in Lafayette at 6:00 AM with a last stop time of 7:52 PM. On Weekends service begins in Lafayette at 9:24 AM with a last stop time of 4:54 PM.



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SOURCE: Fehr & Peers, 2022

Lafayette Housing Element Update EIR

Figure 4.14-3
Transit Routes



4.14.3 Regulatory Setting

Federal

No federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the project.

State

Assembly Bill 1358

Assembly Bill 1358, also known as the California Complete Streets Act of 2008, requires cities and counties to include “Complete Street” policies in their general plans. These policies address the safe accommodation of all users, including bicyclists, pedestrians, motorists, public transit vehicles and riders, children, the elderly, and the disabled. These policies can apply to new streets as well as the redesign of corridors.

The City of Lafayette adopted its Complete Streets policy on November 13, 2012.

Senate Bill 375

Senate Bill (SB) 375 provides guidance regarding curbing emissions from cars and light trucks. There are four major components to SB 375. First, SB 375 requires regional greenhouse gas emission targets. These targets must be updated every 8 years in conjunction with the revision schedule of the housing and transportation elements of local general plans. Second, Metropolitan Planning Organizations are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. Third, SB 375 requires housing elements and transportation plans to be synchronized on 8-year schedules. Finally, Metropolitan Planning Organizations must use transportation and air emissions modeling techniques that are consistent with the guidelines prepared by the California Transportation Commission.

Senate Bill 743

Passed in 2013, California Senate Bill (SB) 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change is being made by replacing Level of Service (LOS) as a performance metric with a vehicle miles traveled (VMT) approach. This shift in transportation impact focus is intended to better align transportation impact analysis and mitigation outcomes with the State’s goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through development of multimodal transportation networks. LOS or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review and impact fee programs.

In December 2018, the Natural Resources Agency finalized updates to Section 15064.3 of the CEQA Guidelines, including the incorporation of SB 743 modifications. The Guidelines’ changes were approved by the Office of Administrative Law and as of July 1, 2020 are now in effect statewide.

To help aid lead agencies with SB 743 implementation, the Governor’s Office of Planning and Research (OPR) produced the *Technical Advisory on Evaluating Transportation Impacts in CEQA* that provides guidance about the variety of implementation questions they face with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project’s transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a “per rate” basis.
- OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold. In other words, an office project that generates VMT per employee that is more than 85 percent of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the State’s emissions goals.
- OPR recommends that where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.
- Lead agencies have the discretion to set or apply their own significance thresholds.

Caltrans

Caltrans issued the VMT-Focused Transportation Impact Study Guide (TISG) in May 2020, providing the process by which Caltrans will review and assess VMT impacts of land development projects. The TISG generally aligns with the guidance in the OPR *Technical Advisory*.

Caltrans also issued the Transportation Analysis Framework (TAF) in September 2020, which details methodology for calculating induced travel demand for capacity increasing transportation projects on the State Highway System. Caltrans also issued the Transportation Analysis Under CEQA (TAC) guidance in September 2020 which describes significance determinations for capacity increasing projects on the State Highway System. It is noted that the Housing Element Update does not propose any changes to the Caltrans owned and operated network.

Caltrans also issued Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioner Guidance in December 2020, describing the methods with which Caltrans will assess the safety impacts of projects on the Caltrans owned and operated network. This guidance states that Caltrans will provide its safety assessment to lead agencies for inclusion in environmental documents.

Finally, Caltrans has adopted procedures to oversee construction activities on and around its facilities. The Caltrans Construction Manual (Caltrans, 2020b) describes best practices for construction activities, including personnel and equipment safety requirements, temporary traffic control, signage, and other requirements aimed at reducing construction-related hazards and

constructing projects safely and efficiently. Any work proposed on Caltrans facilities would be required to abide by these requirements.

Regional

Contra Costa County Congestion Management Program

The Contra Costa Transportation Authority (CCTA) is Contra Costa County's designated Congestion Management Agency (CMA). It is responsible for implementing programs to ensure traffic levels remain manageable. Lafayette serves on the Southwest Area Transportation Committee (SWAT) that includes Contra Costa County, the Town of Danville and Moraga, and the cities of Orinda and San Ramon.

As the CMA, CCTA is in charge of coordinating land use, air quality, and transportation planning among local jurisdictions. A Congestion Management Program (CMP) was created to spend the funds allocated to these projects, known as Measure J. This measure is a one-half cent Countywide sales tax used for transportation improvements within the County. The revenue must be spent on projects and programs included in the CCTA Transportation Expenditure Plan (Expenditure Plan). The Expenditure Plan designates 18 percent of the annual sales tax revenue as "return-to-source" funds. The City's eligibility for these funds is contingent on compliance with the City's Growth Management Program (GMP), reflected in the Growth Management section of the General Plan.

Contra Costa Countywide Transportation Plan

As a member of CCTA, the City of Lafayette is active in the development of the Countywide Transportation Plan (CTP), intended to carry out the following Countywide transportation goals:

- Enhance the movement of people and goods on highways and arterial roads.
- Manage the impacts of growth to sustain Contra Costa's economy and preserve its environment.
- Provide and expand safe, convenient, and affordable alternatives to the single-occupant vehicle; and
- Maintain the transportation system.

The CTP incorporates five sub-regional Action Plans for Routes of Regional Significance (Action Plans). This is one of the primary vehicles for implementing achieving the Measure J Growth Management Program's goal of reducing the cumulative impacts of growth. The Action Plans also fulfill a key requirement of CCTA's Congestion Management Program. This is a State-mandated program for evaluating the impact of land use decisions on the regional transportation system and establishing performance measures. Each Action Plan contains these components:

- Long range assumptions about future land uses based on local general plans and travel demand based on household and job growth.
- Multi-modal transportation objectives that can be measured and timed.

- Specific actions to be implemented by each jurisdiction.
- A process for consultation on environmental documents.
- A procedure for reviewing the impacts of local General Plan amendments that could affect the transportation objectives.
- A schedule for reviewing and updating the Action Plans.

The City of Lafayette is included in the Lamorinda Action Plan. The Action Plan includes both regional actions and actions for specific routes. There are three Routes of Regional Significance within Lafayette:

- State Route 24
- Pleasant Hill Road between SR-24 and Taylor Boulevard
- BART

The Action Plan also includes interjurisdiction routes. These routes do not warrant designation as Routes of Regional Significance, but would benefit from the multi-jurisdictional planning process envisioned in Measure J. The intent is to be able to monitor the performance of these routes and work cooperatively to specify projects and programs intended to increase the safety and reliability of the routes while increasing multimodal mobility within Lamorinda. There are three Interjurisdictional Routes in Lafayette:

- Moraga Road – from Mt. Diablo Boulevard in Lafayette to St. Mary’s Road (south) in Moraga
- Mount Diablo Boulevard – from Happy Valley Road to Brown Avenue
- Lafayette-Moraga Regional Trail

CCTA VMT Guidance for Member Agencies

The CCTA has developed guidance for member jurisdictions to use in developing their own VMT analysis methods, metrics, and thresholds of significance. The CCTA’s *Growth Management Program Implementation Guide* (Revised February 17, 2021), Appendix F (CCTA Recommended Methodology) describes the recommendations. A flow chart describing the recommended methodology is included in the Technical Appendix. The City of Lafayette has chosen to follow the CCTA guidance. More detail on the VMT analysis methodology, metrics, and thresholds of significance are provided in Section 4.14.3, Methodology and Assumptions.

Local

Lafayette General Plan

The *Lafayette General Plan* (2002) is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements

within the General Plan include goals and policies for the physical development of the City. The City is in the process of updating the General Plan. However, because the update is underway and not yet complete, the goals and policies from the current General Plan that are relevant to this transportation impact analysis are listed below.

Goal C-1: Develop a safe and efficient circulation system that respects Lafayette’s quality of life and community character and is consistent with other City goals.

Policy C-1.2: Level of Service Standards and Goals. Establish the following level of service (LOS) standards and goals. Transportation improvements must be consistent with the community’s strong desire to preserve Lafayette’s unique identity and quality of life.

Signalized Intersections	LOS Standard	Standard v/c Ratio	HCM Goal (Stopped Delay at Peak Hours)
Downtown Intersections	Poor D	0.85 to 0.89	33 to 40 seconds
Intersections Outside Downtown	Good D	0.80 to 0.84	25 to 33 seconds

Refer to the Lafayette General Plan Circulation Chapter for additional details and definitions.

Policy C-1.5: Roadway Improvements. Plan for and implement changes to the roadway system so that the system is safe and efficient for all modes of travel while preserving the semi-rural character of the community.

Policy C-1.6: Traffic Safety. Improve the safety of the roadway system.

Goal C-2: Regulate traffic so as to preserve the peace and quiet of residential areas.

Policy C-2.1: Manage Traffic Flow: Discourage diversion of through-traffic onto local streets.

Goal C-3: Regard the quality of life in Lafayette and maintaining community identity as more important than accommodating through-traffic.

Policy C-3.1: Community Identity and Through Traffic. Place a higher priority on safety, encouraging a pedestrian-oriented design and scale; and on maintaining the quality of life and identity of residential neighborhoods than on accommodating through-traffic.

Goal C-4: Coordinate land use and circulation planning.

Policy C-4.1: Balance Circulation and Land Use Patterns. Limit development to that which can be adequately served by Lafayette’s circulation system.

Policy C-4.2: Traffic Mitigation. Require new developments to pay their fair share of circulation improvements

Goal C-7: Reduce automobile travel demand.

Policy C-7.1: Automobile Travel Demand. Seek to reduce vehicle trips by promoting alternatives to the single-occupant automobile.

Goal C-8: Promote alternatives to the single-occupant automobile.

Policy C-8.1: Increase Use and Availability of Public Transit. Take measures to increase use of public transit. Work with public transit providers to improve equipment, schedules, and better serve the community. Encourage providers to promote their services.

Policy C-8.2: Bicycles. Encourage bicycling by making it easier and safer for people to travel by bicycle.

Goal C-9: Provide Access for the Mobility Impaired.

Policy C-9.1: Accessible Public Transportation. Support improved access to public transportation and sidewalks for people with disabilities.

Policy C-9.2: Accessible Pedestrian Circulation. Design a pedestrian circulation system to meet the accessibility needs of all segments of the population.

Goal C-10: Inter-Jurisdictional Coordination. Work closely with neighboring jurisdictions and agencies responsible for roadways, transit facilities and transit services in Lafayette.

Policy C-10.1: Regional Planning. Participate in regional transportation planning in order to minimize adverse impacts on Lafayette’s circulation system. Evaluation of proposed changes within Lafayette’s circulation system must consider the seismic, soils and scenic constraints in addition to the goals and policies of the Lafayette General Plan.

Policy C-10.3: Multi-Modal Transportation Service Objectives (MTSO’s). Work toward achieving Lafayette-approved multi-modal transportation service objectives on roads such as Highway 24 and Lafayette’s portion of Pleasant Hill Road. (Reso. 2009-021, 2009)

Goal C-11: Provide a balanced, multimodal transportation network that meets the needs of all users and provides safe and convenient travel that is consistent with local conditions and needs of the community. (Reso. 2012-46, 2012)

Policy C-11.1: All Users. Design and operate City streets based on a “Complete Streets” concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, movers of commercial goods and transit users of all ages and abilities. (Reso. 2012-46, 2012)

Policy C-11.2: Context Sensitivity. Ensure that the designs of public right-of-way improvements are consistent with the character of the project neighborhood. (Reso. 2012-46, 2012)

Policy C-11.3: Connectivity. Provide a connected network of facilities accommodating all modes of travel in the transportation system. This includes looking for opportunities for repurposing existing publicly-owned rights-of-way to enhance connectivity for cyclists, pedestrians, and transit users to schools, parks, commercial areas, civic destinations, and regional non-motorized networks. (Reso. 2012-46, 2012)

Policy C-11.4: All Departments. Work towards making Complete Streets practices a routine part of everyday operations. Each City of Lafayette department should approach relevant projects, programs, and practices as an opportunity to improve streets and the transportation network for all users, and work in coordination with other departments, agencies, and jurisdictions to maximize opportunities for Complete Streets connectivity. (Reso. 2012-46, 2012)

Policy C-11.5: All Projects and Phases. Apply Complete Street concept to the planning, funding, design, approval, and implementation phases of roadway projects, including those involving new construction, reconstruction, retrofits, major rehabilitation, or changes in the allocation of pavement space on an existing roadway, as well as those that involve new privately built roads and easements intended for public use. Specific infrastructure for a given category of users may be excluded if an exemption is approved via the process set forth in Policy C11.6, “Exemptions.” (Reso. 2012-46, 2012)

Goal S-1 Minimize risks to Lafayette residents and property from landslides and other geologic hazards.

Policy S-1.2: Density and Location of Buildings. Limit building in areas with significant risk potential. Intensity of development shall be minimal in areas of high risk. Consider potential seismic or geologic hazards when determining building density and in siting dwellings.

Policy S-1.3: Roadways and Roadway Improvements. Prohibit new roadways or roadway modifications that would create unstable geological conditions. (An example would be cuts and fills in areas with unstable soils.)

Goal S-2 Minimize risks to Lafayette residents and property from earthquakes.

Policy S-2.1: Seismic Hazards. New development, including subdivisions, new construction, and remodels or expansions of existing structures, shall minimize exposure to seismic hazards through site planning and building design.

Policy S-2.2: Areas of Significant Risk Potential. Locate construction of high density residential and other critical, high-occupancy or essential services buildings outside high risk zones.

Goal S-3 Reduce flood hazards.

Policy S-3.5: Building Location. Consider potential flood hazards when siting a building. Intensity of development shall be the lowest in areas of high risk.

Goal S-4: Minimize risks to Lafayette residents and property from fire hazards.

Policy S-4.1: Adequate Fire Protection. Enforce regulations and standards which contribute to adequate fire protection.

Program S-4.1.1: Improve access and response time of emergency response vehicles.

Program S-4.1.2: Ensure that new traffic signals include an EMTRC system which allows emergency vehicles to change the signal.

Program S-4.1.3: Encourage the Contra Costa County Fire Protection District including paramedic services to improve its response time for Lafayette, particularly in the urban wild land fire interface zones. The location of fire stations should strive for a five-minute response time. (Reso. 2009-021, 2009)

Program S-4.1.4: Restrict parking on narrow roads to allow access by emergency vehicles and to facilitate evacuation.

Program S-4.1.5: Require development that includes private access roads or fire roads to provide access rights and keys to all gates to the Contra Costa County Fire Protection District.

Policy S-4.2: Reducing Fire Risk From Development. Take measures to reduce fire risks from new and existing development as well as natural fire hazards.

Policy S-4.3: Development and Mitigation Fees. Maintain development and mitigation fees at a level to adequately finance fire protection costs.

Policy S-4.4: Mutual Aid Agreements. Participate in mutual aid agreements with the County and State firefighting agencies.

Goal S-8: Provide adequate response and support services in the event of a major emergency or natural disaster.

Policy S-8.1: Emergency Operations Plan. Periodically review the Emergency Operations Plan to assure that it meets current needs in the event of a major disaster.

Policy S-8.2: Cooperate with the County's Emergency Preparedness Plan. Cooperate with Contra Costa County's Emergency Preparedness Plan.

Policy S-8.3: Emergency Operations Center. Ensure that Lafayette has an adequate and well equipped Emergency Operations Center (EOC).

Policy S-8.5: Evacuation Routes. Identify and publicize evacuation routes to be used in emergencies.

Vision Zero Initiative

On November 22, 2021, the Lafayette City Council unanimously approved a resolution adopting a Vision Zero policy. This policy asserts that transportation-related severe injuries and fatalities are unacceptable and preventable and directs staff to make design and implementation decisions that are supportive of this goal. Key principles, and the shift from the traditional safety approach to the Vision Zero approach are described in the Contra Costa County Transportation Authority's Transportation Policy and Implementation Guide.

To be consistent with this new policy in Lafayette, other City plans and policies should include similar considerations, as detailed in the Vision Zero Policy staff report:¹

- Vision Zero improvements are made to specifically protect and give precedence to active transportation users (pedestrian and bicyclists) even if these improvements present a hindrance to vehicle drivers.
- Vision Zero concepts include reducing vehicle speeds; providing dedicated and protected pedestrian crossings; providing separate and dedicated spaces for pedestrians, bicyclists, and vehicle drivers; and making active transportation users more visible to drivers.
- Because Lafayette was originally developed with very few sidewalks and bike lanes, and space was not allocated for adding these features in the future, it may be necessary to alter street design to remove parking and vehicle travel lanes in order to provide these spaces for

¹ City of Lafayette. 2021. Adoption of City Vision Zero Policy. Staff Report. November 22, 2021. Available at: https://lafayette.granicus.com/MetaViewer.php?view_id=3&clip_id=5874&meta_id=142829. Accessed February 11, 2022.

pedestrians and bikers. This will potentially impact traffic flows at peak travel times and could reduce the amount of available on-street public parking.”

In 2022, Lafayette intends to complete a Local Road Safety Plan, which will be an action and implementation plan for Vision Zero following the Federal Highway Administration’s Safe System Approach.² Policies, programs, and actions in that Plan should also be reflected and consistent with the Housing Element as they move forward together this year.

4.14.4 Environmental Impacts and Mitigation Measures

This section describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the proposed project on the transportation system. Transportation/traffic impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

Traffic Impact Assessment under CEQA

State law has changed with respect to how transportation-related impacts may be addressed under CEQA. Traditionally, lead agencies used level of service (LOS) to assess the significance of such impacts, with greater levels of congestion considered to be more significant than lesser levels. Mitigation measures typically took the form of capacity-increasing improvements, which often had their own environmental impacts (e.g., to biological and cultural resources). Depending on circumstances, and an agency’s tolerance for congestion (e.g., as reflected in its general plan), LOS D, E, or F often represented significant environmental effects. In 2013, however, the Legislature passed legislation with the intention of ultimately doing away with LOS in most instances as a basis for environmental analysis under CEQA. Enacted as part of Senate Bill 743 (2013), PRC section 21099, subdivision (b)(1), directed the Governor’s Office of Policy and Research (OPR) to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing “criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. The office may also establish criteria for models used to analyze transportation impacts to ensure the models are accurate, reliable, and consistent with the intent of this section.”

CEQA Guidelines section 21099(b)(2) further provides that “[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, *shall not be considered a significant impact on the environment* pursuant to [CEQA], except in locations specifically identified in the guidelines, if any.” (Italics added.)

² Principles of the Safe System Approach can be found on FHWA’s website at: https://safety.fhwa.dot.gov/zerodeaths/docs/FHWA_SafeSystem_Brochure_V9_508_200717.pdf. Accessed February 11, 2022.

Pursuant to SB 743, the Natural Resources Agency promulgated CEQA Guidelines section 15064.3 in late 2018. It became effective in early 2019. Subdivision (a) of that section provides that “[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, ‘vehicle miles traveled’ refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) [regarding roadway capacity], a project’s effect on automobile delay shall not constitute a significant environmental impact.”

Significance Thresholds

The significance criteria used to evaluate the HEU’s impacts on transportation under CEQA are based on Appendix G of the State CEQA Guidelines, as well as VMT thresholds of significance recommended by the CCTA.

The following describes the significance criteria used to identify impacts on the transportation for the proposed HEU. A significant impact would occur if implementation of the HEU would:

- Conflict with an applicable program, plan, ordinance, or policy establishing measures of effectiveness for the performance of addressing the circulation system, including transit, bicycle, and pedestrian facilities.
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). For the purposes of this evaluation, this impact would be significant, if the implementation of the HEU would generate home-based VMT per resident within the HEU planning areas that is higher than 85 percent of the County-wide average home-based VMT per resident.
- Result in designs for on-site circulation, access, and parking areas that fail to meet City or industry standard design guidelines.
- Result in inadequate emergency access to development sites.

Methodology and Assumptions

The VMT analysis methodology utilizes the procedures described in the CCTA’s *Growth Management Program Implementation Guide* (Revised February 17, 2021), Appendix F. The procedures are summarized below.

Project Screening

There are five screening criteria that can be applied to screen projects out of conducting project-level VMT analysis.

1. **CEQA Exemption.** Any project that is exempt from CEQA is not required to conduct a VMT analysis.
2. **Small Projects.** Small projects can be presumed to cause a less-than-significant VMT impact. Small projects are defined as having 10,000 square feet or less of non-residential space or 20 residential units or less, or otherwise generating less than 836 VMT per day.

3. **Local-Serving Uses.** Projects that consist of Local-Serving Uses can generally be presumed to have a less-than-significant impact absent substantial evidence to the contrary, since these types of projects will primarily draw users and customers from a relatively small geographic area that will lead to short-distance trips and trips that are linked to other destinations.
4. **Projects Located in Transit Priority Areas (TPAs).** Projects located within a TPA can be presumed to have a less-than-significant impact absent substantial evidence to the contrary. This exemption would not apply if the project:
 - Has a Floor Area Ratio (FAR) of less than 0.75;
 - Includes more parking for use by residents, customers, or employees than required by the lead agency (if the agency allows but does not require the project to supply a certain amount of parking);
 - Is inconsistent with the applicable Sustainable Communities Strategy (SCS) (as determined by the lead agency, with input from the Metropolitan Transportation Commission (MTC)); or
 - Results in a net reduction in multi-family housing units.
5. **Projects Located in Low VMT Areas.** Residential and employment-generating projects located within a low VMT-generating area can be presumed to have a less-than-significant impact absent substantial evidence to the contrary.

For residential projects, a low VMT area is defined as an area with existing home-based VMT per resident that is 85 percent or less of the existing Countywide average.

As will be discussed below under Impact 4.14-2, the HEU does not meet these five potential screening approaches and thus requires a full VMT assessment.

Projects Requiring VMT Analysis

A project not excluded from VMT analysis through the screening process described above is subject to a VMT analysis to determine if it has a significant VMT impact. The analysis scenarios and significance assessment are described below.

Analysis Scenarios and Significance Test

The following scenarios are addressed in the VMT analysis. Note that, while the CCTA guidance recommends that project-level impacts be evaluated against baseline conditions, for this analysis the home-based VMT per resident of the HEU is evaluated under both baseline (2020) and future (2040) conditions, because the build-out period is expected to be several years.³ This is supported by Lafayette's historic housing development pace, which saw 1,368 units constructed in the 40 years between 1980 and 2020.⁴ In addition to the project-level evaluation in both baseline and

³ 2040 was used in lieu of 2050 because the HEU planning period extends to 2031 and the use of 2040 allows for consideration of background (cumulative growth). Plan Bay Area 2050 does not provide forecasts specific to jurisdictions and is not yet reflected in the regional and county transportation models.

⁴ Lafayette Planning and Building Department, 2021.

future conditions, a cumulative assessment of the project's effect on total VMT rates countywide is presented.

- *Baseline (2020) Conditions:* The most current version of the baseline (2020) CCTA model is used to determine the baseline home-based VMT per resident for the traffic analysis zones (TAZs) comprising the HEU planning areas, as well as to determine the Countywide average VMT per resident and the 85 percent of Countywide average VMT per resident.
- *Baseline (2020) Plus Project Conditions:* The proposed land use(s) – in this case, the proposed additional housing units within the HEU planning areas -- are added to the 2020 model for the relevant TAZs comprising the planning areas, and a full 2020 Plus Project model run is performed. This is done separately for the HEU with Distributed Sites and the Downtown-Only Alternative.
- *Baseline Plus Project Significance Assessment:* The 2020 Plus Project home-based VMT per resident for the relevant TAZs comprising the HEU planning areas is compared to the 2020 Baseline Countywide home-based VMT per resident, for the HEU with Distributed Sites and the Downtown-Only Alternative. If the home-based VMT per resident for the TAZs comprising the HEU planning areas is higher than 85 percent of the Countywide average home-based VMT per resident, the impact is significant.
- *2040 No Project Conditions:* The most current version of the Year 2040 CCTA model is adjusted to reflect only that housing growth within Lafayette that is approved but not yet constructed, and is run to determine the 2040 No Project home-based VMT per resident for the traffic analysis zones (TAZs) comprising the HEU planning areas.⁵
- *2040 Plus Project Conditions:* The proposed land use(s) – in this case, the proposed additional housing units within the HEU planning areas -- are added to the 2040 No Project model for the relevant TAZs comprising the planning areas, and a full 2040 Plus Project model run is performed. This is done separately for the HEU with Distributed Sites and the Downtown-Only Alternative.
- *2040 Plus Project Significance Assessment:* The 2040 Plus Project home-based VMT per resident for the relevant TAZs comprising the HEU planning areas is compared to the 2020 Countywide home-based VMT per resident, for the HEU with Distributed Sites and the Downtown-Only Alternative. If the home-based VMT per resident for the TAZs comprising the HEU planning areas is higher than 85 percent of the Countywide average home-based VMT per resident, the impact is significant.
- *Cumulative Analysis and Significance Assessment (Project's Effect on Total Countywide VMT):* The total Countywide VMT per service population (defined as VMT generated by all trip types divided by all residents and employees) is compared for the 2040 Plus Project condition against the 2040 No Project condition. If the project causes total countywide VMT per service population to increase, this would constitute a significant impact. This is done separately for the HEU with Distributed Sites and the Downtown-Only Alternative.⁶

⁵ Note that the travel demand model based on Plan Bay Area 2050 was not yet available for use in this analysis.

⁶ Note that the cumulative analysis is only required by the CCTA Guidance if the project-level impact is found to be significant. While this is not the case for the HEU, the cumulative analysis is provided for information. Note also that it may be appropriate to re-distribute the HEU's housing units to other areas within the County for the 2040 No Project case, as the HEU itself does not affect market choices about where new development may occur, and therefore the development potential represented by the HEU may occur elsewhere under the 2040 No Project case. However, for this analysis, the HEU units were not re-distributed to other sites throughout the County for the 2040 No Project case.

Impacts and Mitigation Measures

Impact 4.14-1: Implementation of The HEU would not conflict with an applicable program, plan, ordinance, or policy establishing measures of effectiveness for the performance of addressing the circulation system, including transit, bicycle, and pedestrian facilities. (*Less than Significant Impact*)

HEU with Distributed Sites and Downtown-Only Alternative

Implementation of the HEU would be subject to and implement General Plan policies applicable to transit, bicycle, and pedestrian facilities and service. Additionally, development projects under the HEU would be subject to all applicable City guidelines, standards, and specifications related to transit, bicycle, or pedestrian facilities.

Specifically, any modifications or new transit, bicycle, and pedestrian facilities would be subject to and designed in accordance with all applicable General Plan policies. In particular, General Plan Policy C-3.1 encourages prioritization of safety, a pedestrian-oriented design and scale and maintenance of the quality of life and identity of residential neighborhoods over accommodation of through-traffic. General Plan Policy C-4.2 requires new developments to pay their fair share of circulation improvements. Policy C-7.1 encourages reduction of vehicle trips by promoting alternatives to the single-occupant automobile. Policy C-8.1 calls for measures to increase the use of public transit, including working with public transit providers to improve equipment, schedules, and better serve the community. Policy C-8.2 encourages bicycling by making it easier and safer for people to travel by bicycle. Policy C-9.1 supports improved access to public transportation and sidewalks for people with disabilities. Policy C-9.2 promotes the design of a pedestrian circulation system to meet the accessibility needs of all segments of the population. Policy C-11.1 states that the City will design and operate City streets based on a “Complete Streets” concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, movers of commercial goods and transit users of all ages and abilities. Policy C-11.2 ensures that the designs of public right-of-way improvements are consistent with the character of the project neighborhood. Policy C-11.3 calls for a connected network of facilities accommodating all modes of travel in the transportation system, including looking for opportunities for repurposing existing publicly-owned rights-of-way to enhance connectivity for cyclists, pedestrians, and transit users to schools, parks, commercial areas, civic destinations, and regional non-motorized networks. Finally, General Plan Policy C-11.5 states that Complete Street concepts will be applied to the planning, funding, design, approval, and implementation phases of roadway projects.

Because implementation of the HEU would be subject to all applicable City guidelines, standards, and specifications, the proposed HEU would not conflict with adopted policies, plans, or programs for transit, bicycle, or pedestrian facilities. Therefore, the HEU would result in a **less-than-significant impact** to transit, bicycle, and pedestrian facilities.

Mitigation Measure: None required.

Impact 4.14-2: Implementation of the HEU could generate home-based VMT per resident that is greater than 85 percent of the Countywide average home-based VMT per resident. (Significant and Unavoidable Impact, with Mitigation)

Screening Analysis

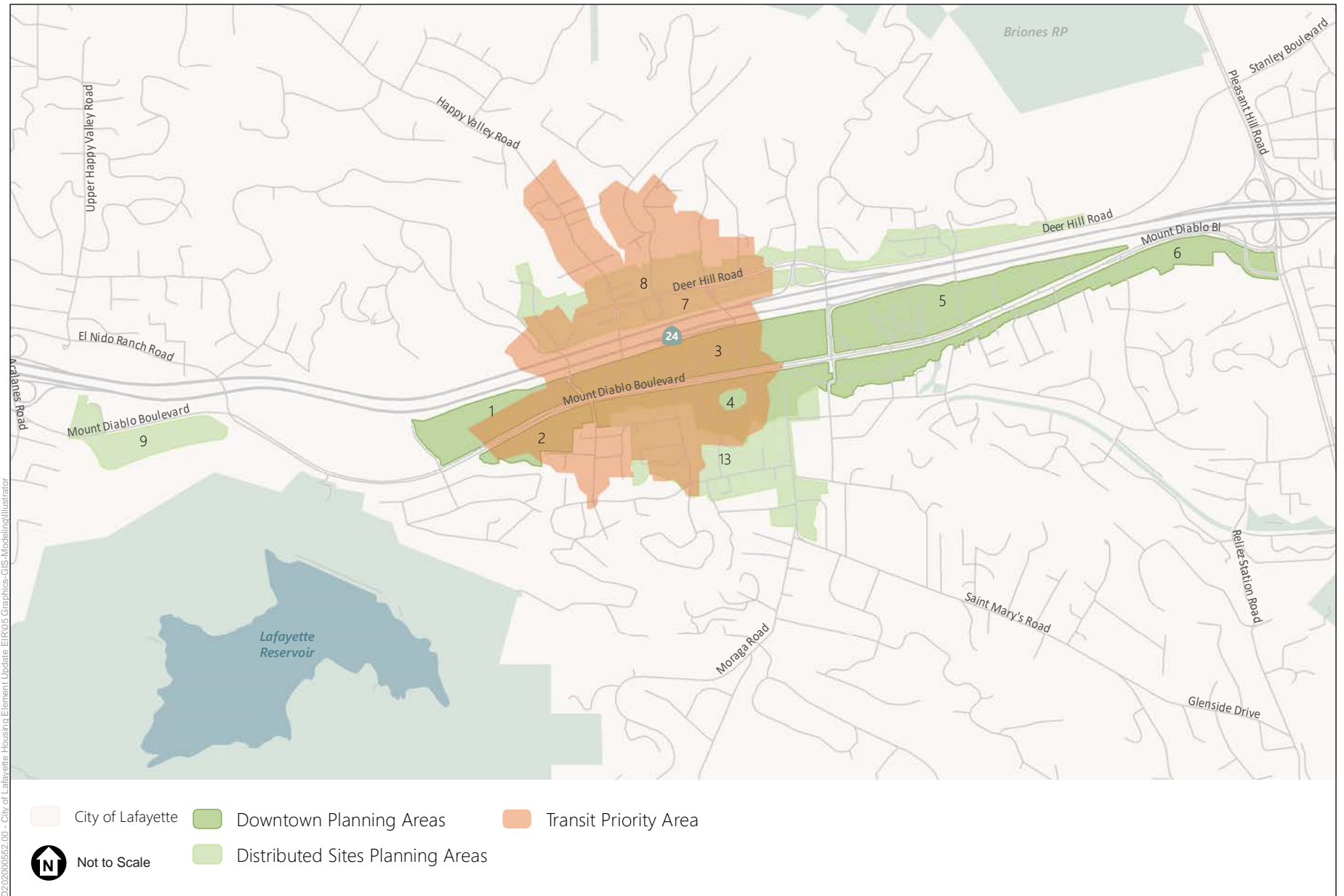
The potential to screen the full HEU, or a portion of the HEU, from a full VMT analysis was considered, as described below. The five key screening criteria are addressed. For the reasons given, it was determined that a full VMT analysis should be conducted for the HEU.

1. **CEQA Exemption.** The project is not otherwise exempt from CEQA, so this criterion does not apply.
2. **Small Projects.** While it is possible that certain housing developments built under the HEU would be 20 or fewer units, this screening test would need to be applied as a part of individual project review, and does not apply to the HEU program as a whole.
3. **Local-Serving Uses.** This screening criteria is intended to apply to commercial uses, and is not relevant to residential project types.
4. **Projects Located in Transit Priority Areas (TPAs).** The half-mile surrounding the Lafayette BART station qualifies as a TPA. The half-mile boundary, which takes into account travel distance based on the circulation network (as opposed to “as the crow flies”) is shown in **Figure 4.14-4**. Portions of Planning Areas 1, 2, 3, 4, 7, 8 and 13 fall within this boundary, and housing units within the associated TAZs that are largely within the boundary⁷ could be presumed to have a less-than-significant impact absent substantial evidence to the contrary. This exemption would not apply if a specific development project would:
 - Have a Floor Area Ratio (FAR) of less than 0.75;
 - Include more parking for use by residents than required by the City of Lafayette;
 - Is inconsistent with the Plan Bay Area 2050⁸ (the applicable Sustainable Communities Strategy for Bay Area jurisdictions); or
 - Results in a net reduction in multi-family housing units.

While housing developments built under the HEU would be expected to be consistent with Plan Bay Area 2050, and would be extremely unlikely to result in a net reduction in multi-family units on the individual development sites, the first two criteria cannot be ascertained until development projects are proposed. In addition, because the TPA only extends to a portion of the HEU planning areas, the City has elected to undertake a VMT analysis for the HEU as a whole. It should be noted however, that individual projects that are proposed within the TPA following adoption of the HEU may be screened out, requiring no VMT analysis, and would in that case be assumed to have no significant impact on VMT.

⁷ TAZs 20288, 20628, and 20629.

⁸ As discussed elsewhere, Plan Bay Area 2050 was adopted in late 2021 and the regional and county transportation models that incorporate projections from Plan Bay Area 2040 will not be updated for several years. For this reason, both Plan Bay Area 2050 and Plan Bay Area 2040 are relevant to the EIR’s analysis.



SOURCE: Fehr & Peers, 2022

Lafayette Housing Element Update EIR



Figure 4.14-4
Lafayette BART Transit Priority Area

5. **Projects Located in Low VMT Areas.** Screening based on location within a low-VMT area would be based on the VMT maps prepared by CCTA at the traffic analysis zone (TAZ) level, using the Contra Costa Countywide Travel Demand Model results. Certain TAZs meet the criteria of low-VMT generating characteristics⁹, and housing projects within these TAZs could be presumed to have a less than significant impact with respect to VMT. However, TAZ-based screening was not chosen for this analysis, because the City is considering the HEU as a whole, and project-specific details not available at the program level evaluation may be relevant to the VMT assessment of individual development proposals.

VMT Analysis

Modelling Procedure

The Contra Costa Countywide Travel Demand Model (CCTA Model) was used to generate VMT estimates for the HEU. The CCTA Model allows analysts to forecast regional travel behavior as a function of local land use development decisions, transportation network infrastructure planning, and land use and network policies. The CCTA Model reflects data included in Plan Bay Area 2040, the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) that was recently replaced with adoption of Plan Bay Area 2050 by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). CCTA has prepared a memorandum documenting the CCTA Model's consistency with Plan Bay Area 2040, and the model is currently the best available tool for analysis of VMT impacts.

Residential projects are evaluated based on the home-based VMT per resident VMT metric. Home-based VMT is defined as all home-based automobile vehicle trips traced back to the residence of the trip-maker. Non-home-based trips are excluded. This VMT includes the entire length of the trip. This home-based VMT is then divided by the number of residents to calculate home-based VMT per resident.

This calculation is done in the CCTA model via the production and attraction trip matrices to be able to attribute automobile vehicle trips to the residence of the trip-maker. The calculations are done to include all trips, including trips that leave the travel model area (the nine-county Bay Area). VMT for trips that leave the travel model area is adjusted to account for the part of the trip that occurs outside of the travel model area.

HEU with Distributed Sites and Downtown-Only Alternative

HEU Land Use

Table 4.14-1 shows the housing units associated with the No Project case, HEU with Distributed Sites, and Downtown Only Alternative. The No Project case includes housing units that are approved but not yet constructed or are in the City's development review process. Approved and under-review development would produce 791 multi-family housing units. The HEU with Distributed Sites would provide for 3,068 multi-family units and 292 single-family units within the associated planning areas (refer to the Project Description chapter for more information on the HEU Planning Area locations). These totals are inclusive of the approved and under-review development. The Downtown Only Alternative would provide for 3,103 multi-family units and

⁹ TAZs 20279, 20282, and 20625.

292 single family housing units, which would also be inclusive of the approved and under-review development.¹⁰

**TABLE 4.14-1
 HEU ALTERNATIVES LAND USE**

Planning Area	TAZ ¹	Land Use ²	Housing Units		
			No Project	Distributed Sites	Downtown Only
1	20289	MF	165	198	456
2	20288	MF	13	103	237
3	20629	MF		177	408
4	20628	MF	32	29	67
5	20281	MF	29		
5	20282	MF	166	470	1081
6	20283	MF	71		
6	20625	MF		157	361
7	20275	MF		831	
8	20275	MF		303	
9	20290	MF		306	
13	20287	MF		67	67
13	20627	MF		71	71
SS ³	20275	MF	315	315	315
SS	20279	MF		40	40
SS	20295	SF		32	32
SS	Citywide	SF		260	260
Total Multi-Family			791	3,068	3,103
Total Single Family			0	292	292

NOTES:

- ¹ MF=multi-family housing; SF=single family housing
- ² TAZ=Contra Costa Countywide Travel Demand Model traffic analysis zone
- ³ SS=Scattered sites (see Project Description chapter)

VMT Results

Project Analysis

The Contra Costa Countywide Travel Demand Model was adjusted to reflect the relevant housing unit numbers for the No Project, HEU with Distributed Sites, and Downtown Only Alternative, for 2020 and 2040 conditions, and the resulting VMT metrics were reported. **Table 4.14-2** presents the results for the 2020 Plus Project case, and **Table 4.14-3** presents the results for the 2040 Plus Project case.

¹⁰ Numbers presented here differ slightly than those presented in Chapter 3, *Project Description*, including four more units for the HEU with Distributed Site and two more units for the Downton-Only Alternative. These differences are not material to the outcome of the analysis.

**TABLE 4.14-2
VMT SUMMARY: 2020 WITH PROJECT**

VMT Area	Home-Based VMT/Resident					
	2020 Base	2020 + HEU with Distributed Sites	2020 + Downtown Only Alternative	2020 Base	2020 + HEU with Distributed Sites	2020 + Downtown Only Alternative
Countywide Average	19,993,544	20,087,251	20,070,243	17.3	17.3	17.3
Citywide Average	395,071	477,011	460,591	17.4	14.6	14.3
85 percent of 2020 Countywide Average	---	---	---	14.7	14.7	14.7
HEU (Housing Element Planning Areas)	159,997	256,046	228,114	15.8	14.6	13.9
HEU <85 percent of Countywide Average?	---	---	---	---	Yes	Yes

SOURCE: Contra Costa Countywide Travel Demand Model; Fehr & Peers, January 2022.

**TABLE 4.14-3
VMT SUMMARY: 2040 WITH PROJECT**

VMT Area	Home-Based VMT				Home-Based VMT/Resident			
	2020 Base	2040 No Project	2040 + HEU with Distributed Sites	2040 + Downtown Only Alternative	2020 Base	2040 No Project	2040 + HEU with Distributed Sites	2040 + Downtown Only Alternative
Countywide Average	19,993,544	22,164,902	22,276,073	22,256,902	17.3	16.0	16.1	16.0
Citywide Average	395,071	388,703	471,943	452,669	17.4	14.4	14.4	14.0
85 percent of 2020 Countywide Average	---	---	---	---	14.7	14.7	14.7	14.7
HEU (Housing Element Planning Areas)	159,997	168,511	253,785	223,439	15.4	14.6	14.4	13.6
HEU <85 percent of Countywide Average?	---	---	---	---	---	---	Yes	Yes

SOURCE: Contra Costa Countywide Travel Demand Model; Fehr & Peers, January 2022.

The analysis indicates that:

- The City of Lafayette VMT per resident of 17.4 miles-per-resident is slightly higher than the Countywide average VMT per resident of 17.3 miles-per-resident in the 2020 baseline, but is projected to be substantially lower than the Countywide average VMT per resident in 2040.

- VMT rates in the County as a whole, and in the City of Lafayette, are projected to decline between 2020 and 2040.
- The VMT rates within the HEU Planning Areas are projected to be less than 85 percent of the baseline Countywide average for both the HEU with Distributed Sites and the Downtown Only alternative, in both 2020 and 2040.
- The Downtown Only alternative results in lower VMT rates than the HEU with Distributed Sites, in both 2020 and 2040.

While these results suggest that the HEU’s impact with respect to VMT would be less than significant, particularly under future conditions, individual development proposals under the HEU that do not screen out of further analysis may exceed the VMT criteria. In other words, future development projects that are greater than one half mile from the BART station, not in a low-VMT area, or that are within these areas but do not screen out for other project-specific reasons, will require a project-specific VMT analysis, and results of that analysis may exceed the VMT criteria. For this reason, the impact is conservatively considered **potentially significant**, requiring mitigation.

Cumulative Analysis

The year 2040 total Countywide VMT per service population (all residents and employees) is shown in **Table 4.14-4**, for the No Project case, HEU With Distributed Sites, and Downtown Only Alternative. These metrics reflect VMT generated by all trips by all land uses in the County, as opposed to the home-based trips generated by housing development only, described above. As shown in the table, the HEU With Distributed Sites and Downtown Only Alternative both result in slightly lower total VMT per service population than the No Project case. Therefore, the cumulative impact with respect to VMT would be **less than significant**.

**TABLE 4.14-4
 CUMULATIVE VMT ANALYSIS**

VMT Area	Total VMT				Total VMT/Service Population ¹			
	2020 Base	2040 No Project	2040 + HEU with Distributed Sites	2040 + Downtown Only Alternative	2020 Base	2040 No Project	2040 + HEU with Distributed Sites	2040 + Downtown Only Alternative
Countywide Average	46,913,493	55,082,594	55,126,862	55,098,081	30.00	29.32	29.26	29.25
VMT Rate Constant or Decreasing with Project?	---	---	---	---	---	---	Yes	Yes

NOTE:

¹ Service Population consists of all residents and employees.

SOURCE: Contra Costa Countywide Travel Demand Model; Fehr & Peers, January 2022.

Mitigation Measures

Mitigation Measure 4.14-2: Implement VMT Reduction Measures.

Individual housing project development proposals that do not screen out from VMT impact analysis shall provide a quantitative VMT analysis using the methods applied in this EIR, with modifications if appropriate based on future changes to City of Lafayette practices and CCTA VMT analysis methodology guidelines. Projects which result in a significant impact shall include travel demand management measures and physical measures to reduce VMT, including but not limited to the measures below, which have been identified as potentially VMT reducing in the California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (December 2021). Potential VMT reduction estimates are included below, but detailed requirements, calculation steps, and limitations are described in the CAPCOA Handbook. In addition, application of one or more measures is generally expected to result in a net VMT reduction of 10 percent or less for development projects in suburban settings such as Lafayette.

- Unbundle parking costs (i.e. sell or lease parking separately from the housing unit). Effectiveness: up to 15.7 percent reduction in GHG from VMT per the CAPCOA Handbook.
- Provide car-sharing, bike sharing, or scooter sharing programs. Effectiveness: 0.15 – 0.18 percent reduction in GHG from VMT for car share, 0.02 – 0.06 percent for bike share, and 0.07 percent for scooter share, per the CAPCOA Handbook. The higher car share and bike share values are for electric car and bike share programs.
- Subsidize transit passes for residents of affordable housing. Effectiveness: up to 5.5 percent reduction in GHG from VMT per the CAPCOA Handbook.

In addition to the on-site measures noted above, individual housing projects that are above the VMT threshold could potentially contribute to future VMT mitigation fee programs, banks, or exchanges. No regional VMT mitigation programs currently exist; however, the CCTA is currently evaluating different mitigation program frameworks which may lead to a Countywide or sub-regional VMT mitigation program. Should such a program be implemented, development projects could potentially pay into a fee program or purchase mitigation credits to achieve needed VMT mitigation instead of, or in addition to, onsite TDM measures.

Because the effectiveness of the above measures in reducing an individual project's VMT impact to a less than significant level cannot be determined in this analysis, the impact for projects which do not screen out from VMT impact analysis would conservatively remain **significant and unavoidable with mitigation**.

Impact 4.14-3: Implementation of the HEU would not result in designs for on-site circulation, access, and parking areas that fail to meet City or industry standard design guidelines. (*Less than Significant Impact*)

Subsequent projects under the HEU, including any new roadway, bicycle, pedestrian, and transit infrastructure improvements, would be subject to, and designed in accordance with City standards and specifications which address potential design hazards including sight distance, driveway placement, and signage and striping. Additionally, any new transportation facilities, or improvements to such facilities associated with subsequent projects would be constructed based on industry design standards and best practices consistent with the City's zoning code and building design and inspection requirements. The City's evaluation of projects' access and circulation will incorporate analysis with respect to City standards for vehicular level of service and queueing, as well as for service to pedestrians, bicyclists, and transit users. Therefore, the HEU would result in a **less-than-significant impact** to transportation hazards.

Mitigation Measure: None required.

Impact 4.14-4: Implementation of the HEU would not result in inadequate emergency access to development sites. (*Less than Significant Impact*)

There are no specific development projects associated with the HEU; and thus, specific housing sites developed under the HEU cannot be analyzed for adequacy of emergency access at this time. However, the City maintains the roadway network which would provide access to new development sites in accordance with industry design standards, including the City of Lafayette Standard Specifications (2013), which ensures that the physical network would be free of obstructions to emergency responders. Emergency access to new development sites proposed under the HEU would be subject to review by the City of Lafayette and responsible emergency service agencies, thus ensuring the projects would be designed to meet all emergency access and design standards. The City also requires the preparation of construction management plans that minimize temporary obstruction of traffic during site construction.

Additional vehicles associated with new development sites could increase delays for emergency response vehicles during peak commute hours. However, emergency responders maintain response plans which include use of alternate routes, sirens and other methods to bypass congestion and minimize response times. In addition, California law requires drivers to yield the right-of-way to emergency vehicles and remain stopped until the emergency vehicle passes to ensure the safe and timely passage of emergency vehicles.

Based on the above considerations, adequate emergency access would be provided to new development sites, and the impact would be **less than significant**.

Mitigation Measure: None required.

4.14.5 References

- California Governor's Office of Planning and Research (OPR), 2018. *Technical Advisory on Evaluating Transportation Impacts in California*. 2018. Available online: Accessed October 1, 2021.
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4.15 Tribal Cultural Resources

4.15.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects on tribal cultural resources. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to tribal cultural resources. Further below, existing plans and policies relevant to tribal cultural resources associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to tribal cultural resources that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. The City received scoping comments from the Native American Heritage Commission (NAHC) which recommended, pursuant to AB 52, that the County conduct consultation with tribes that are affiliated with the City of Lafayette. The NAHC also recommended that the City conduct a cultural resources records search of the California Historical Resources Information System (CHRIS) and that an archaeological inventory survey report be prepared along with a search of the NAHC's Sacred Lands File (SLF).

The primary sources of information referenced in this section included the following:

- City of Lafayette General Plan (2002).
- City of Lafayette Downtown Specific Plan EIR (2010).
- City of Lafayette Downtown Specific Plan (2012).

4.15.2 Environmental Setting

Tribal Cultural Resources are sites, features, places, cultural landscapes, sacred places or objects, which are of cultural value to a tribe or tribes. These resources may also be on, or eligible for, listing in the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHP), or be determined by the lead agency to be considered tribal cultural resources. Tribal cultural resources also include pre-contact archaeological sites and human remains as discussed in Section 3.6, *Cultural Resources*, ethnographic sites, and historic-age landscapes and sites occupied, used, or spiritually and culturally valued by Native Americans.

Section 4.4, *Cultural Resources*, contains a description of pre-contact, ethnographic, and historic-age settings in the project area.

Tribal Cultural Resources Identified within the HEU Planning Areas

Native American Consultation

In accordance with the requirements of Senate Bill 18 (SB 18) and AB 52 (Public Resources Code Section 21074(a)), City staff conducted Native American outreach and consultation efforts. The City sent a local government tribal consultation list request to the Native American Heritage Commission (NAHC) on July 20, 2021. The request included a request for a search of the NAHC Sacred Lands File and a list of contacts for tribes with traditional lands or cultural places within or near the HEU Planning Areas. The NAHC responded on July 26, 2021 with a letter that indicated the results of the search of the Sacred Lands File were positive. The letter included a list of Native American contacts. On July 30, 2021, the City sent tribal outreach letters to the 13 Native American representatives from 9 tribes that were identified by the NAHC to consult on the HEU.

The City received one response, on August 31, 2021, from Wilton Rancheria, who stated that they had no concerns about the project (Wilton Rancheria, 2021). No other responses were received within 90 days of receipt of the consultation letters.

Identification of Tribal Cultural Resources and Indigenous Cultural Resources

The results of the records search undertaken at the Northwest Information Center (NWIC) is detailed in Section 4.4, *Cultural Resources*. Four pre-contact resources have been identified within the HEU Planning Areas, specifically within the downtown-based Planning Areas 3, 4, and 13. No additional cultural resources were identified as a result of tribal consultation.

4.15.3 Regulatory Setting

Federal

American Indian Religious Freedom Act

The American Indian Religious Freedom Act of 1978 protects the rights of Native Americans to freedom of expression of traditional religions (24 U.S.C. §1996). This act established “the policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions... including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.”

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act provides for increased involvement of Native Americans in archaeology and historic preservation. The Native American Graves Protection and Repatriation Act addresses the rights of lineal descendants and Indian tribes to recover Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are held by the federal government (25 U.S.C. §3001). These parties are to be consulted when such items are inadvertently discovered or intentionally excavated on federal or tribal lands.

State

California Environmental Quality Act Statute and Guidelines

CEQA and the CEQA Guidelines include special procedures for identifying, analyzing, and disclosing significant impacts on Tribal Cultural Resources, which include all resources listed in or formally determined eligible for listing in the NRHP, the California CRHR, or local registers.

California Register of Historical Resources

As with TCPs in the NRHP, identification of Tribal Cultural Resources for the CRHR emphasizes a place or feature's value and significance to living communities. AB 52, summarized in Section 3.6.1.2, *Regulatory Setting*, and discussed in more detail below, further clarified this designation process.

Native American Heritage Commission

The Native American Heritage Commission (NAHC) identifies and manages a catalog of places of special religious or social significance to Native Americans. This database, known as the Sacred Lands File, is a compilation of information on known graves and cemeteries of Native Americans on private lands and other places of cultural or religious significance to the Native American community. The NAHC also performs other duties regarding the preservation and accessibility of sacred sites and burials and the disposition of Native American human remains and burial items.

Public Resources Code sections 5097.9 through 5097.991 describe the duties and role of the NAHC and requires the cooperation of State and local agencies in carrying out their duties with respect to Native American resources.

California Public Resources Code and California Health and Safety Code Provisions Regarding Human Remains

California Health and Safety Code section 7050.5 protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery. Public Resources Code section 5097.98 and CEQA Guidelines Section 15064.5(e) also identify steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery. Health and Safety Code section 7052 states that the disturbance of Native American, or any other, human remains is a felony, unless the disturbance has been lawfully authorized.

Public Resources Code Section 21074 (AB 52)

Assembly Bill 52 (AB52), enacted in September 2014, amended CEQA to explicitly recognize that California Native American tribes have expertise with regard to their tribal history and practices. AB 52 established a new category of cultural resources known as tribal cultural resources in order to consider tribal cultural values when determining impacts on cultural resources. Public Resources Code Section 21074(a) defines a tribal cultural resource as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - included or determined to be eligible for inclusion in the California Register; or
 - included in a local register of historical resources, as defined in Public Resources Code Section 5020.1(k).¹
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c).² In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.
- A cultural landscape that meets the criteria of CEQA Section 21074(a)³ also is a tribal cultural resource if the landscape is geographically defined in terms of the size and scope.
- An historical resource as described in CEQA Section 21084.1,⁴ a unique archaeological resource as defined in CEQA Section 21083.2,⁵ or a non-unique archaeological resource as defined in CEQA Section 21083.2⁶ may also be a tribal cultural resource if it meets the criteria of CEQA Section 21074(a).

AB 52 requires lead agencies to analyze project impacts on “tribal cultural resources” separately from archaeological resources (Public Resources Code §§21074, 21083.09), in recognition that archaeological resources have cultural values beyond their ability to yield data important to prehistory or history. AB 52 also defines “tribal cultural resources” in Public Resources Code Section 21074 (see above), and requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (Public Resources Code §§21080.3.1, 21080.3.2, 21082.3).

¹ Public Resources Code Section 5020.1(k) defines “local register of historical resources” as “a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.”

² The criteria set forth in Public Resources Code Section 5024.1(c) include whether a resource: “(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. (2) Is associated with the lives of persons important in our past. (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values. (4) Has yielded, or may be likely to yield, information important in prehistory or history.”

³ A cultural landscape meets the criteria of Public Resources Code Section 21074(a) if it either is “included or determined to be eligible for inclusion in the California Register of Historical Resources” or is “included in a local register of historical resources” pursuant to Section 5020.1(k).

⁴ Public Resources Code Section 21084.1 defines an “historical resource” as “a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources.”

⁵ Public Resources Code Section 21083.2(g) defines “unique archaeological resource” as “an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information. (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type. (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.”

⁶ Public Resources Code Section 21083.2(h) defines “nonunique archaeological resource” as “an archaeological artifact, object, or site which does not meet the criteria in subdivision (g).”

Assembly Bill 168 – Tribal Consultation under Streamlined Ministerial Approval Process (SB 35)

Assembly Bill 168 (AB 168), enacted in September 2020, amended the Government Code Sections 65400, 65913.4, and 65941.1, to add tribal consultation requirements to housing projects which would otherwise qualify for a streamlined ministerial approval process which was mandated by Senate Bill 35 (SB 35) in 2017. SB 35 requires cities who are not meeting their demand for housing (as per the Regional Housing Needs Assessments) to allow developers to avoid the requirement of a CEQA document if the proposed housing meeting specific requirements, such as the number of units, zoning, affordability, and avoidance of specific environmental impacts. AB 168 added a requirement to SB 35 prescribes that developers must submit a preliminary application with information about the project and the local government must conduct tribal consultation with tribes, similar to what is required by CEQA and AB 52, to identify if there are tribal cultural resources that may be impacted by the project. If impacts to tribal cultural resources are identified, the project is ineligible for SB 35 streamlining and is subject to CEQA.

Senate Bill 18 – Tribal Consultation During Planning Decisions

Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code section 65300 et seq.) and specific plans (defined in Government Code section 65450 et seq.). The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places.

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to tribal cultural resources are listed below.

Goal LU-22: Preserve archaeological and historic resources

Policy LU-22.1: Preserve Archaeological Resources. Protect archaeological resources

Policy LU-22.2: Historic Buildings, Sites and Districts. Identify, recognize and protect sites, buildings, structures and districts with significant cultural, aesthetic and social characteristics which are part of Lafayette's heritage.

Municipal Code

The Lafayette Municipal Code established procedures and regulations regarding the treatment of places, sites, buildings, structures, works of art, and other historically- or archaeologically-

valuable objects in Chapter 6-21, Historical Landmarks. The Municipal Code codifies the criteria and procedures for the designation of historical landmarks and includes regulations for modifications to landmarks. As per Article 3, any person making changes to landmarks must apply for and obtain a certificate from the City Council. The Lafayette Historical Society is also afforded 30 days to review historical landmark applications and make recommendations.

4.15.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to tribal cultural resources are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project could have a significant impact on the environment if it would:

- a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that: (i) is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1(k), or (ii) is determined at the discretion of the lead agency to be significant pursuant to criteria set forth Public Resources Code §5024.1(c).

Methodology and Assumptions

Impacts on tribal cultural resources are evaluated using the criteria listed above. Impacts are evaluated based on information included in the *City of Lafayette General Plan (2002)* and the *City of Lafayette Downtown Specific Plan (2012)*, as well as outreach and consultation efforts undertaken as part of the current HEU effort.

Impacts and Mitigation Measures

Impacts

Impact 4.15-1: Ground disturbing activities associated with implementation of the HEU could cause a substantial adverse change to previously unknown archaeological resources that are also tribal cultural resources, as defined in Public Resources Code Section 21074(a). (*Less than Significant Impact, with Mitigation*)

As described above in the *Environmental Setting* and in *Section 4.4.2 Environmental Setting for Cultural Resources*, the City includes indigenous or pre-contact cultural resources that are listed in or eligible for listing in the NRHP, and/or the CRHR, and resources that have not been evaluated for the NRHP or CRHR, but are potentially eligible. Additionally, there may be previously unknown buried archaeological resources and/or tribal cultural resources that have not been recorded. No tribal cultural resources have been identified during tribal consultation. However, the NAHC SLF search did have a positive result for sacred lands within the HEU Planning Areas.

While the City is largely a built-up urban environment, implementation of the HEU would result in gradual physical changes within the City, including a potential increase of multi-family residential dwelling units, primarily located in the planning areas within and surrounding downtown. These changes would comprise a substantial intensification or concentration of physical development, and could lead to the demolition of indigenous archaeological resources and/or tribal cultural resources. Additionally, associated infrastructure or other public works improvements could result in damage to or demolition of these kinds of resources.

As detailed in the *Regulatory Setting* above, there are federal, state, and local regulations in place to protect tribal cultural resources, including archaeological resources and human remains. CEQA requires lead agencies to determine, prior to approval, if a project would have a significant adverse effect on historical resources, tribal cultural resources, or unique archaeological resources and requires the lead agency to make provisions for the inadvertent discovery of historical or unique archaeological resources during construction, including tribal cultural resources.

As described previously in this section, SB 18 requires local governments to consult with tribes prior to making certain planning decisions and provides California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to cultural places. In accordance with the requirements of SB 18, City staff conducted Native American outreach and consultation efforts. As a part the SB 18 process for the proposed HEU, City staff sent tribal outreach letters to the 13 Native American representatives from nine tribes that were identified by the NAHC to consult on the HEU. The City received one response, on August 31, 2021, from Wilton Rancheria, who stated that they had no concerns about the project. No other responses were received within 90 days of receipt of the consultation letters.

Locally, the City's Municipal Code established a historic landmark designation, criteria for designation, and regulations for modifications to designated landmarks. In addition, the General Plan includes policies and implementation programs designed to identify and protect archaeological resources that could be adversely affected by development activities. For example, Program LU-22.1.1 and LU-22.1.7 requires that if archaeological material is identified, particularly during project construction, work must halt, and an archaeological investigation must be undertaken by a qualified archaeologist to evaluate the find. In addition, Program LU-22.1.6 prioritizes avoidance of valuable archaeological resources when identified and, if the resource cannot be avoided, archaeological investigation will occur, and a report is required prior to development of the area with the resource.

While the aforementioned regulations and policies to protect archaeological resources and human remains are substantially protective and require projects to identify and mitigate impacts to potential archaeological resources prior to ground disturbance, there remains the potential for impact to tribal cultural resources. Revisions to the Public Resources Code and the Government Code by AB 52 and AB 168 require local governments to consult with tribes during the review process for CEQA and for housing development projects that would otherwise be exempt from CEQA under changes made to the Government Code by SB 35. However, these policies and programs do not establish a project review process for cultural resources or a policy for

inadvertent discovery of archaeological resources during project construction and do not address tribal involvement during the inadvertent discovery of indigenous resources during project construction.

HEU with Distributed Sites

No tribal cultural resources have been identified within the HEU Distributed Sites Planning Areas as a result of the tribal consultation. However, there are indigenous archaeological resources that may be eligible for the CRHR and/or the NRHP within this area and the City as a whole. Additionally, there may be currently unknown tribal cultural resources within the HEU Planning Areas or the City as a whole. Construction of multifamily housing in these areas could involve substantial grading and excavation. Therefore, the HEU with Distributed Sites is considered to have a **potentially significant** impact on tribal cultural resources. Implementation of Measures 4.4-2A and 4.4-2B is prescribed below.

Downtown-Only Alternative

No tribal cultural resources have been identified within the HEU Downtown-Only Planning Areas as a result of the tribal consultation. However, there are indigenous archaeological resources that may be eligible for the CRHR and/or the NRHP within this area and in the City as a whole. Additionally, there may be currently unknown tribal cultural resources within the HEU Planning Areas and the City as a whole. While the planning areas in this alternative cover a smaller area than in the HEU with Distributed Sites, all of the previously recorded archaeological resources are within the Downtown-Only Alternative Planning Areas and the construction of multifamily housing in these areas could involve substantial grading and excavation. Therefore, this alternative is considered to have a **potentially significant** impact on tribal cultural resources. Implementation of Measures 4.4-2A and 4.4-2B is prescribed below.

Mitigation Measures

Mitigation Measure 4.4-2A: Cultural Resources Review Requirements.

See Section 4.4 of this Draft EIR, *Cultural Resources*, for the text of this measure.

Mitigation Measure 4.4-2B: Inadvertent Discovery of Cultural Resources and/or Human Remains.

See Section 4.4 of this Draft EIR, *Cultural Resources*, for the text of this measure.

Significance After Mitigation: Implementation of Measures 4.4-2A and 4.4-2B would establish protocol to identify, evaluate, and address any potential impacts to previously unknown tribal cultural resources. With implementation of these mitigation measures, any potential impacts to tribal cultural resources would be reduced to a **less than significant** level.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to tribal cultural resources could occur if the incremental impacts of the HEU combined with the incremental impacts of one or more of the cumulative projects identified in Section 4.0.3, *Cumulative Impacts*. The locations of the listed projects are shown in **Figure 4.0-1**.

Impact 4.15-2: Ground disturbing activities associated with implementation of the HEU in combination with other cumulative projects could cause a substantial adverse change to previously unknown archaeological resources that are also Tribal Cultural Resources, as defined in Public Resources Code Section 21074(a). (*Less than Significant Impact, with Mitigation*)

The geographic scope for cumulative impacts to tribal cultural resources comprises the entire City of Lafayette. This geographic scope of analysis is appropriate because the archaeological and tribal cultural resources within this radius are expected to be similar to those that occur on the HEU Planning Areas because their proximity, similar environments, landforms, and hydrology are expected to have resulted in similar land-uses over time. Based on the tribal consultation, the professional experience of the Draft EIR preparers, research, and the pre-contact context, the area within this area of analysis may contain tribal cultural resources that have not been documented or recorded. Therefore, this analysis conservatively assumes that the land within this area contains tribal cultural resources that are not yet known.

In this context, the incremental impacts of the HEU could combine with similar incremental impacts of other projects in the cumulative scenario to cause or contribute to a significant cumulative impact.

However, both the HEU with Distributed Sites and the Downtown-Only Alternative would contribute a negligible **less-than-significant** incremental impact after the implementation of Measures 4.4-2A and 4.4-2B, which would require an SOIS qualified archaeologist conduct a review of the project prior to construction, the cessation of activities and buffering of finds, and tribal consultation when indigenous resources are unexpectedly discovered during project construction. As a result, the project's incremental impact would not be cumulatively considerable and would not result in a significant cumulative effect.

4.15.5 References

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4.16 Utilities and Service Systems

4.16.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects on utilities and service systems. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to utilities and service systems. Further below, existing plans and policies relevant to utilities and service systems associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts to utilities and service systems that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relating to utilities and service systems were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- City of Lafayette General Plan (2002).
- City of Lafayette Downtown Specific Plan EIR (2010).
- East Bay Municipal Utility District Urban Water Management Plan 2020 (2021).
- Central Contra Costa Sanitary District Comprehensive Wastewater Master Plan (2017).

4.16.2 Environmental Setting

Water

Water Supply

The East Bay Municipal Utility District (EBMUD) is a publicly owned utility that owns, operates, and maintains the water distribution system within the City of Lafayette. EBMUD facilities collect snowmelt and runoff at the Pardee Reservoir in the Mokelumne River watershed and farther downstream in the Camanche Reservoir. EBMUD has water rights for up to 325 million gallons per day (MGD) from the Mokelumne River watershed and can store up to a 10--month supply for the 1.4 million water customers in EBMUD's service area. Runoff within the Bay Area is stored in several local reservoirs to provide emergency supplies. On average, EBMUD stores approximately a six-month emergency reserve in local reservoirs. EBMUD also has rights to up to 100 MGD from the Sacramento River in dry years through a contract with the U.S. Bureau of Reclamation that is pumped at the Freeport Regional Water Facility owned by EBMUD and Sacramento County (EBMUD, 2021b).

EBMUD has six water treatment plants for potable water supplies located in the EBMUD service area, with one located in the City of Lafayette. The Lafayette Water Treatment Plant receives water directly from the Pardee Reservoir. The Lafayette Water Treatment Plant together with the

Walnut Creek Water Treatment Plant serve primarily the area east of Oakland-Berkeley Hills. There are also five local water supply reservoirs (referred to as the terminal reservoirs): Briones, Chabot, Lafayette, San Pablo, and Upper San Leandro. The terminal reservoirs serve multiple functions that include: (1) regulating EBMUD's Mokelumne River supply in winter and spring; (2) augmenting EBMUD's Mokelumne River water supply with local runoff; (3) providing emergency supply during extended drought or in the event of interruption in Mokelumne River supply delivery; (4) providing local supply during high turbidity events in the Mokelumne River reservoirs; (5) providing environmental and recreational benefits to East Bay communities; and (6) providing some stream flow regulation. The Lafayette Reservoir is not connected to the potable water distribution system but can be available as emergency standby supplies.¹ The Lafayette Reservoir is primarily used for recreation and is only filled from local runoff (EBMUD, 2021a).

The 2020 Urban Water Management Plan (UWMP), adopted on June 22, 2021 by EBMUD's Board of Directors, is a long-range planning document used to assess current and projected water usage, water supply planning, and conservation and recycling efforts. In addition to its Mokelumne River rights, EBMUD has a Long-Term Renewal Contract (Contract No. 14-06-200-5183A-LTR1) with the U.S. Bureau of Reclamation to receive water from the Central Valley Project (CVP) through the Freeport Regional Water Facility in years when EBMUD's water supplies are relatively low. During some dry years, EBMUD may purchase water transfers to help meet customer demands. EBMUD maintains a biennial budget and five-year capital improvement program to optimize investments and maximize drinking water quality, and the reliability, safety, flexibility, and overall efficiency of the water supply system (EBMUD, 2021a).

Water Distribution System

EBMUD owns and maintains the water distribution mains that provide potable water service in the City of Lafayette. After the water is treated at one of the water treatment plants, it is then distributed throughout EBMUD's service area, which is divided into 125 pressure zones. A pressure zone is an area within a specified elevation range (e.g., 250 to 450 feet) where storage and distribution facilities are designed to deliver water at a pressure range suitable for customer use. The major pressure zones serving the City of Lafayette are Leland, Bryant, and Colorados.

EBMUD continually improves the water supply and water distribution system to ensure reliable and secure water service for each new connection. The System Capacity Charge funds the capital cost of the water system and pays for the cost of providing additional long-term water supply for new water service applicants. The charge is collected from all applicants who request a new water service connection or a larger water meter, and varies depending on geographic region. The System Capacity Charge pays for the applicant's share of the capital facilities including those that serve the entire water system such as the aqueducts and raw water facilities, regional facilities such as treatment plants and distribution facilities, and future water supply upgrades needed to meet long-term increases in water demand created by new customers. The amount of the System Capacity Charge is based on the applicant's expected water use, which is determined by the

¹ Of the five terminal reservoirs, only Briones, San Pablo, and Upper San Leandro provide water supply throughout the year to EBMUD customers.

location and type of service (e.g., single-family residential, multi-family residential, or non-residential), and the meter size or number of multi-family units to be served (EMBUD, 2021c).

Wastewater

The Central Contra Costa Sanitary District (Central San) collects and treats wastewater from over 480,000 residents and approximately 3,000 businesses covering approximately 147 square miles in central Contra Costa County, including the City of Lafayette. In addition to collecting and treating wastewater, Central San provides recycled water for parks, medians, school fields, and golf courses and manages both commercial and residential recycled water programs. Central San also operates a household hazardous waste collection facility.

Central San's treatment plant, located at the intersection of Interstate 680 and State Route 4 in Martinez, has a permitted capacity of 53.8 MGD and cleans an average of 38.6 MGD, 2.5 MGD of which can be further treated into recycled water and reused within the treatment plant and distributed to customers for non-potable uses (Central San, 2020a). The treatment plant has managed peak flows as high as 230 MGD during extreme winter storms. Central San uses over 1,500 miles of piping with over 35,000 manholes and 19 pump stations to convey wastewater to the treatment plant in Martinez. The Via Roble pump station is located within the City of Lafayette. The average age of the collection system pipes is approximately 40 years. Some pipe segments are over 100 years old, and some of the most critical pump stations are over 55 years old. Since its original construction in 1948, the treatment plant has been modified through successive projects, including a major expansion to secondary treatment in the 1970s. Although other improvements have been made since then, most of the treatment plant remains unchanged. Despite their age, the collection system and treatment plant are generally in good condition. However, repairs and upgrades are required to maintain reliable operation (Central San, 2017).

Central San charges a Capacity Fee when properties first connect to the public sewer or when there is an expansion or change of use for non-residential properties. Each year, this fee is updated based on changes to the value of Central San's assets and the number of Central San customers. The purpose of the Capacity Fee Program is to equalize the investment in Central San's assets among current and new users, thus ensuring that new users pay their fair share for facilities and other assets (Central San, 2020b).

Stormwater Drainage

The City of Lafayette owns and maintains 57 miles of municipal separate storm sewer system (MS4), which consists of over 3,000 pipe segments. The City has developed a schematic map of the entire storm sewer system in Lafayette including all creeks and streams. These systems were hydraulically analyzed as part of the 1998 Drainage Master Plan. The 1998 Drainage Master Plan indicated that the storm sewer system is comprised of storm drain pipes, ditches, and creeks. Some creek segments, primarily in the downtown, have been rerouted into large underground storm drain pipes or channelized. The 1998 Drainage Master Plan determined that 248 publicly-owned storm drain pipes were in need of repair or replacement due to either deteriorated

condition or deficiencies in capacity. Since the adoption of this plan the majority of the deficient pipe segments have been replaced or repaired (City of Lafayette, 2019).

Energy Systems

Pacific Gas and Electric

Pacific Gas and Electric Company (PG&E) provides electric and natural gas service in the City of Lafayette. In the City, there are overhead and underground PG&E electric distribution systems, and overhead and underground secondary distribution and service system. Two major electric transmission lines (100-161 kV and 220-287 kV) also run east to west across the central-southern portion of Lafayette (PG&E, 2021a). In the City, there are also underground natural gas distribution systems, with major natural gas transmission lines running east to west generally along Mount Diablo Boulevard and from Mount Diablo Boulevard running north generally along Oak Hill and Orchard Roads (PG&E, 2021b).

MCE

MCE is a community-governed, local power supplier that provides low-carbon electricity to Lafayette residents and businesses under a community choice energy (CCE) program at rates that are lower or comparable to PG&E's rates. In 2002, the State of California passed legislation (Assembly Bill 117) that permits local agencies to form CCE programs for their communities. Under a CCE program, the utility company (in this case PG&E) continues to operate and service the transmission and delivery system and provides billing and customer service (MCE, 2021).

Telecommunications

The telecommunications system serving the City of Lafayette consists of aboveground and buried telecommunications circuits from several providers, primarily AT&T and Comcast.

Solid Waste

The Central Contra Costa Solid Waste Authority (RecycleSmart) provides solid waste services for Central Contra Costa County residents and businesses, including the City of Lafayette. RecycleSmart has contracted with Republic Services for the collection, transfer and disposal of residential and commercial garbage, recycling, and organics, and Mt. Diablo Recycling for the processing of residential and commercial recyclable materials (RecycleSmart, 2021).

The Keller Canyon Landfill (901 Bailey Road, Pittsburg, CA) is the approved disposal site for all solid waste collected by Republic Services that is not diverted (RecycleSmart, 2014). Keller Canyon Landfill receives a maximum of 3,500 tons per day of solid waste for disposal (including construction/demolition, and municipal waste), and is estimated to reach permitted disposal capacity by the year 2050 (CalRecycle, 2021). As of December 31, 2020, the Keller Canyon Landfill had 49,441,787 cubic yards of remaining capacity (Contra Costa County, 2021).

4.16.3 Regulatory Setting

Federal

National Pollutant Discharge Elimination System

The NPDES is a nationwide program for permitting of surface water discharges, including from municipal and industrial point sources. In California, NPDES permitting authority is delegated to and administered by the nine regional water quality control boards (regional water boards). The San Francisco Bay Regional Water Board has set standard conditions for each permittee in the Bay Area, including effluent limitation and monitoring programs. In addition to issuing and enforcing compliance with NPDES permits, each regional water board prepares and revises the relevant basin plan (refer to the following discussion of state regulations).

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), Subtitle D, contained in Title 42 of the United States Code Section 6901 et seq. contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills. The U.S. EPA waste management regulations are codified in 40 CFR 239–282. The RCRA Subtitle D is implemented by Title 27 of the PRC, approved by the U.S. EPA.

State

Urban Water Management Planning Act

California Water Code Section 10610 et seq. requires all public water systems that provide water for municipal purposes to more than 3,000 customers, or that supply more than 3,000 acre-feet per year (AFY), to prepare an Urban Water Management Plan (UWMP). UWMPs are key water supply planning documents for municipalities and water purveyors in California, and often form the basis of Water Supply Assessments (WSAs) (refer to the following discussion of Senate Bill [SB] 610 and SB 221) prepared for individual projects. UWMPs must be updated at least every 5 years on or before December 31, in years ending in 5 and 0. EBMUD adopted its 2020 UWMP and an associated Water Shortage Contingency Plan in June 2021 (EMBUD, 2021a).

Senate Bills 610 and 221

The purpose and legislative intent of SB 610 and SB 221, enacted in 2001, is to preclude the approval of certain development projects without specific evaluations performed and documented by the local water provider that indicate that water is available to serve the project. SB 610 requires the local water provider for a large-scale development project to prepare a

WSA.² The WSA evaluates the water supply available for new development based on anticipated demand. The WSA must be included in the environmental document. The lead agency may evaluate the information presented in the WSA, and then must determine whether the projected water supplies would be sufficient to satisfy the project's demands in addition to existing and planned future uses.

SB 221 requires the local water provider to provide “written verification” of “sufficient water supplies” to serve subdivisions involving more than 500 residential units per Government Code Section 66473.7. Sufficiency is different under SB 221 than under SB 610. Under SB 221, sufficiency is determined by considering:

- The availability of water over the past 20 years;
- The applicability of any urban-water shortage contingency analysis prepared in compliance with Water Code Section 10632;
- The reduction in water supply allocated to a specific use by an adopted ordinance; and
- The amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer.

As a result of the information contained in the written verification, as part of the tentative map approval process, a city or county may attach conditions to ensure that an adequate water supply is available to serve the proposed plan. Typically, following project certification, an additional water supply verification must be completed at the tentative map stage, prior to adoption of the final map, for certain tentative maps. In most cases, a WSA prepared under SB 610 would meet the requirement for proof of water supply under SB 221.

Assembly Bill 325

Assembly Bill (AB) 325, the Water Conservation in Landscaping Act of 1990, directs local governments to require the use of low-flow plumbing fixtures and the installation of drought-tolerant landscaping in all new development. Pursuant to the Water Conservation in Landscaping Act, the California Department of Water Resources developed a Model Water Efficient Landscape Ordinance.

California Health and Safety Code Section 116555

Under California Health and Safety Code Section 116555, a public water system must provide a reliable and adequate supply of pure, wholesome, healthful, and potable water.

² All projects that meet any of the following criteria require a WSA: (1) A proposed residential development of more than 500 dwelling units; (2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; (3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; (4) a proposed hotel or motel, or both, having more than 500 rooms; (5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; (6) a mixed-use project that includes one or more of the projects specified in SB 610; or (7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

Water Code Section 10608 et seq. (Senate Bill 7 or Senate Bill X7-7)

Water Code Section 10608 et seq. required urban retail water suppliers to set and achieve water use targets that would help the state achieve a 20 percent per capita reduction in urban water use by 2020. SB X7-7 required each urban retail water supplier to develop urban water use targets and an interim urban water use target, in accordance with specified requirements. The bill is intended to promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in California Water Code Section 10631 as part of UWMPs.

Senate Bill 7 (2016)

In September 2016, Governor Jerry Brown signed into law SB 7, which requires new multi-family residential rental buildings in California constructed after January 1, 2018, to include a sub-meter for each dwelling unit and to bill tenants in apartment buildings accordingly for their water use to encourage water conservation.

Executive Orders B-29-15 and B-37-16

In April 2015, Governor Brown issued Executive Order B-29-15, which called for mandatory water use reductions. The executive order required cuts for public landscaping and institutions that typically use large amounts of water (e.g., golf courses), banned new landscape irrigation installation, and required municipal agencies to implement conservation pricing, subsidize water-saving technologies, and implement other measures to reduce the state's overall urban water use by 25 percent. The order also required local water agencies and large agricultural users to report their water use more frequently.

In May 2016, Governor Brown issued Executive Order B-37-16, which made the mandatory water use reduction of 25 percent permanent and directed the California Department of Water Resources and State Water Resources Control Board (State Water Board) to strategize further water reduction targets. The order also made permanent the requirement that local agencies report their water use monthly. Additionally, certain wasteful practices such as sidewalk hosing and runoff-causing landscape irrigation were permanently outlawed, while local agencies must prepare plans to handle droughts lasting 5 years.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act (Division 7 of the California Water Code) provides the basis for water quality regulation in California. The Porter-Cologne Act defines water quality objectives as the limits or levels of water constituents that are established for reasonable protection of beneficial uses of surface, ground, and saline waters of the state. The State Water Board administers water rights, water pollution control, and water quality functions throughout California, while the San Francisco Bay Regional Water Board conducts regional planning, permitting, and enforcement activities. For additional requirements, refer to Section 4.9, *Hydrology and Water Quality*.

Water Quality Order No. 2004-12-DWQ

In July 2004, the State Water Board adopted Water Quality Order No. 2004-12-DWQ (General Order) which incorporates the minimum standards established by the Part 503 Rule and expands upon them to fulfill obligations to the California Water Code. However, since California does not have delegated authority to implement the Part 503 Rule, the General Order does not replace the Part 503 Rule. The General Order also does not preempt or supersede the authority of local agencies to prohibit, restrict, or control the use of biosolids subject to their jurisdiction, as allowed by law.

California Green Building Standards Code

Water and Wastewater

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code is intended to encourage more sustainable and environmentally friendly building practices, conserve natural resources, and promote the use of energy-efficient materials and equipment. Since 2011, the CALGreen Code has been mandatory for all new residential and non-residential buildings constructed in the state. Mandatory measures related to water conservation include water-conserving plumbing fixture and appliance requirements, including flow rate maximums, compliance with state and local water-efficient landscape standards for outdoor potable water use in landscape areas, and recycled water systems, where available. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and non-residential uses; the 2019 amendments to the CALGreen Code became effective January 1, 2020. Updates include more stringent requirements for residential metering faucets, and a requirement that all residential and non-residential developments adhere to a local water efficient landscape ordinance or to the State of California's Model Water Efficient Landscape Ordinance, whichever is more stringent.

Solid Waste

As amended, the CALGreen Code (California Code of Regulations Title 24, Part 11) requires that readily accessible areas be provided for recycling by occupants of residential. The CALGreen Code also requires that residential building projects recycle and/or salvage for reuse a minimum of 65 percent of their non-hazardous construction and demolition waste, or comply with a local construction and demolition waste management ordinance, whichever is more stringent (Section 5.408.1). The 2016 version of the code increased the minimum diversion requirement for non-hazardous construction and demolition waste to 65 percent from 50 percent (in the 2013 and earlier versions) in response to AB 341, which declared the policy goal of the state that not less than 75 percent of solid waste generated would be source reduced, recycled, or composted by 2020.

Assembly Bill 939 (California Integrated Waste Management Act)

AB 939, enacted in 1989 and known as the Integrated Waste Management Act (Public Resources Code Section 40050 et seq.), requires each city and county in the state to prepare a Source Reduction and Recycling Element to demonstrate a reduction in the amount of waste being disposed to landfills. The act required each local agency to divert 50 percent of all solid waste generated within the local agency's service area by January 1, 2000. Diversion includes waste

prevention, reuse, and recycling. SB 1016 revised the reporting requirements of AB 939 by implementing a per capita disposal rate based on a jurisdiction's population (or employment) and its disposal.

The Integrated Waste Management Act requires local agencies to maximize the use of all feasible source reduction, recycling, and composting options before using transformation (incineration of solid waste to produce heat or electricity) or land disposal. The act also resulted in the creation of the state agency now known as the California Department of Resources Recycling and Recovery (CalRecycle). Under the Integrated Waste Management Act, local governments develop and implement integrated waste management programs consisting of several types of plans and policies, including local construction and demolition ordinances. The act also set in place a comprehensive statewide system of permitting, inspections, and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types and amounts of waste generated.

In 2011, AB 341 amended AB 939 to declare the policy goal of the state that not less than 75 percent of solid waste generated would be source reduced, recycled, or composted by the year 2020, and annually thereafter.

Assembly Bills 341 and 1826

AB 341, signed into law in 2012, requires multi-family dwellings to recycle. AB 1826 (2014) furthered diversion and recycling requirements by requiring that multi-family dwellings with more than five units also divert organic material. AB 1826 does not require multi-family dwellings to divert organic food waste.

Senate Bill 1383

SB 1383 established targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. SB 1383 granted CalRecycle the regulatory authority required to achieve the organic-waste disposal reduction targets. It also established a target of recovering not less than 20 percent of currently disposed edible food for human consumption by 2025.

Regional

National Pollutant Discharge Elimination System Waste Discharge Regulations

Discharges of stormwater runoff from municipal separate storm sewer systems (MS4s) are regulated by the Municipal Regional Stormwater NPDES permit, under Order No. R2-2015-0049; NPDES Permit No. CAS612008, issued by the San Francisco Bay Regional Water Board.

Under CWA Section 402(p), stormwater permits are required for discharges from MS4s that serve populations of 100,000 or more. The Municipal Regional Permit (MRP) manages the Phase I Permit Program (serving municipalities of more than 100,000 people), the Phase II Permit Program (for municipalities of fewer than 100,000 people), and the Statewide Storm Water Permit for the California Department of Transportation.

The State Water Board and the individual water boards implement and enforce the MRP. Multiple municipalities, including the City of Lafayette, along with Contra Costa County, are co-permittees.

Municipal Regional Permit Provision C.3

Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 10,000 square feet or more of impervious surface area, or 5,000 square feet or more of impervious surface area for regulated projects involving special land use categories (i.e., auto service, retail gasoline station, restaurant, and/or uncovered parking), are required to implement site design, source control, and Low Impact Development–based stormwater treatment controls to treat post-construction stormwater runoff. Low Impact Development–based treatment controls are intended to maintain or restore the site’s natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and for using stormwater as a resource (e.g., rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures be properly installed, operated, and maintained.

In addition, the MRP requires new development and redevelopment projects that create or replace 1 acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, generate silt pollutants, or cause other impacts on local rivers, streams, and creeks. Projects may be deemed exempt from these requirements if they do not meet the minimum size threshold, drain into tidally influenced areas or directly into San Francisco Bay, or drain into hardened channels, or if they are infill projects in sub-watersheds or catchment areas that are at least 65 percent impervious.

Local

City of Lafayette Green Infrastructure Plan

The City of Lafayette has prepared a Green Infrastructure Plan in compliance with San Francisco Bay MRP Provision C.3.j.i that details how Provision C.3 of the MRP and Low-Impact Development methods (described above) will be incorporated to retrofit existing storm drainage infrastructure using Green Infrastructure facilities constructed on public and private parcels and within the public right-of-way. Green Infrastructure refers to the construction and retrofit of storm drainage to reduce runoff volumes, disperse runoff to vegetated areas, harvest and use runoff where feasible, promote infiltration and evapotranspiration, and use bioretention and other natural systems to detain and treat runoff before it reaches our creeks and Bay. Green infrastructure facilities include, but are not limited to, pervious pavement, infiltration basins, bioretention facilities or “rain gardens”, green roofs, and rainwater harvesting systems. Green infrastructure can be incorporated into construction on new and previously developed parcels, as well as new and rebuilt streets, roads, and other infrastructure within the public right-of-way (City of Lafayette, 2019).

Municipal Code

Section 5-405: Stormwater Control Plan Required. In accordance with thresholds and effective dates in the City’s NPDES Permit, every application for a development project, including but not

limited to a rezoning, tentative map, parcel map, conditional use permit, variance, site development permit, design review, or building permit that is subject to the development runoff requirements in the City's NPDES permit is required to be accompanied by a stormwater control plan that meets the criteria in the most recent version of the Contra Costa Clean Water Program Stormwater C.3. Guidebook.

Section 5-602: Waste diversion requirement for all covered projects. All covered projects requiring a building or demolition permit are required to divert at least 75 percent or more of construction and demolition (C&D) debris for purposes of reuse or recycling.

Chapter 8-17: Drainage Impact Fee. New development is required to pay to the City a drainage impact fee based upon the proposed increase in impervious surface of the new development.

Solid Waste Plans

The City has adopted three additional plans relevant to solid waste services: the Source Reduction and Recycling Element (SRRE), the Household Hazardous Waste Element (HHWE), and the Non-Disposal Facility Element (NDFE). These three plans were prepared on the City's behalf, in compliance with the requirements of AB 939. The plans are distinct from the General Plan and were adopted separately. They are part of the County-wide Integrated Waste Management Plan and EIR approved by the California Integrated Waste Management Board in December 1993.

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to utilities and service systems are listed below.

Growth Management Element

Goal LU-18: Coordinate with other jurisdictions to protect and restore environmental resources and to provide public services.

Policy LU-18.2: Coordination of Public Services. Coordinate water supply, flood control, wastewater and solid waste disposal, soil conservation, and open space preservation with other jurisdictions to create the greatest public benefit and the least degree of environmental impact.

Goal LU-19: Maintain the existing infrastructure essential to the public health and safety of the community.

Goal LU-20: Match the demand for public facilities and infrastructure generated by new development with the capacity of existing facilities, capital improvement programs and development mitigation programs.

Policy LU-20.6: Sewage Treatment and Disposal. Coordinate planning with the Central Contra Costa Sanitary District to ensure the continued availability of adequate sewage

collection, treatment, and disposal facilities to meet the needs of future development. The standard for review shall be the capability to transport and treat to standards of the Regional Water Quality Control Board average daily effluent for all residential and nonresidential projects.

Policy LU-20.7: Water. Coordinate planning with the East Bay Municipal Utility District (EBMUD) to ensure the availability of an adequate potable water supply to meet the needs of the future population. The standard for development review shall be the capacity to provide sufficient water to all residents and businesses in the City, as indicated by EBMUD.

Policy LU-20.9: Solid Waste. Review all development projects for their impacts on the City's goals contained in the *Source Reduction and Recycling Element and Household Hazardous Waste Element*.³ Require fair share payments and/or mitigation measures to ensure that these standards are not jeopardized.

Policy LU-20.14: Storm Drainage. Require new development to mitigate its impact on the storm drainage system.

Goal LU-21: Encourage the availability of high-quality telecommunications services to Lafayette's citizens, schools, government and businesses.

Policy LU-21.1: Telecommunications. Provide improved telecommunications infrastructure.

Goal OS-8: Reduce per capita water consumption.

Policy OS-8.1: Water Conservation. Develop a water conservation program.

Goal OS-9: Reduce the volume of solid waste generated in the City.

Policy OS-9.1: Recycling and Reuse of Solid Waste. Comply with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste.

Policy OS-9.2: Recycling Drop-off Areas. Encourage on-site drop-off areas for recycling in commercial, office and multifamily residential developments.

Policy OS-9.3: Solid and Hazardous Wastes. Comply with State and Federal requirements regarding reduction of solid and hazardous wastes.

Housing Element

The City's current Housing Element, adopted March 2015, includes the following housing-related goals policies:

Goal H-1: Conserve and improve the existing housing supply to provide adequate, safe, and decent housing for all residents, with emphasis on maintaining the semirural character of the City.

Policy H-1.7: Capital Improvements. Ensure that existing neighborhoods' capital improvement needs are addressed.

³ This element is not a part of the General Plan but a separately adopted plan.

Goal H-2: Facilitate and encourage the development of diverse housing types and additional affordable housing units to accommodate a diversity of Lafayette citizens in terms of age and socio-economic background and to meet regional housing needs as quantified in this chapter.

Policy H-2.7: Infill Housing. Encourage private housing development on existing infill sites in order to efficiently utilize existing infrastructure.

4.16.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

The thresholds used to determine the significance of impacts related to utilities and service systems are based on Appendix G of the *CEQA Guidelines*. Implementation of the proposed project could have a significant impact on the environment if it would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Methodology and Assumptions

Potential impacts to utilities and service systems are discussed based on the CEQA Significance Thresholds included in Appendix G of the CEQA Guidelines as listed above. Impacts are evaluated largely based on information included in the City of Lafayette General Plan, the EBMUD 2020 UWMP, Central San's Comprehensive Wastewater Master Plan and wastewater generation rates, and the Lafayette Municipal Code, as identified in the local regulatory setting of this section.

Residential development projects that could result from the HEU's implementation would be regulated by the various laws, regulations, and policies summarized above in Section 4.16.3, *Regulatory Setting*. Compliance with applicable federal, state, and local laws and regulations is assumed in this analysis and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the regulations is a condition of permit approval.

After considering the implementation of the HEU as described in Chapter 3, *Project Description*, and compliance with the required regulatory requirements, the environmental analysis below identifies if the defined significance thresholds would be exceeded and, therefore, a significant impact would occur.

Impacts and Mitigation Measures

Impacts

Impact 4.16-1: Implementation of the HEU would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (*Less than Significant Impact*)

HEU with Distributed Sites

Implementation of the HEU with Distributed Sites would provide for the development of additional housing units in the City and a subsequent increase in demand for water, wastewater treatment, storm water drainage, electric power, natural gas, and telecommunications facilities. Much of the developable area of the City is already developed, and nearly all of the parcels identified for upzoning as part of the HEU with Distributed Sites scenario are already developed with some sort of active use, be it residential or commercial uses, or some sort of other active use (e.g. the BART parking lots) and are served by existing utilities. Others would require minor tie-ins to utilities that are already present in adjacent roadways, the construction of which would not result in significant environmental impacts. Future development projects and infrastructure projects subject to CEQA would be required to undergo site-specific environmental review when proposed.

Water

EBMUD owns and maintains the water distribution mains that provide water service in the City of Lafayette. As discussed above, future development projects would be required to undergo environmental review when proposed. As part of that process, project applicants would be required to ensure that EBMUD has sufficient capacity to provide water as specific development projects are proposed, in accordance with GP Policy LU-20.7. Projects would also be subject to EBMUD's System Capacity Charge, which pays for each project's share of the capital facilities including those that serve the entire water system such as the aqueducts and raw water facilities, regional facilities such as treatment plants and distribution facilities, and future water supply upgrades needed to meet long-term increases in water demand created by new customers.

Development under the HEU with Distributed Sites scenario would also be required to comply with the CALGreen Code, which requires that new construction use high-efficiency plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. For outdoor water use, the CALGreen Code requires that irrigation controllers be weather- or soil moisture-based and automatically account for rainfall, or be attached to a rainfall sensor. Implementation of water conservation and efficiency measures would minimize the potable water demand generated and lessen the need for capacity or other improvements to the water system.

Wastewater

Central San collects and treats wastewater in the City of Lafayette. As discussed in Section 4.16.2, despite their age, the collection system and treatment plant are generally in good condition. However, repairs and upgrades are required to maintain reliable operation. As discussed above, future development projects would be required to undergo environmental review when proposed. The City will also ensure that there is adequate sewage collection, treatment, and disposal facilities at the time specific development projects are proposed, in accordance with General Plan Policy LU-20.6. Capacity fees are collected by Central San from new construction which result in an added wastewater burden. Residential parcels are charged a flat per-unit fee, and the amounts due are collected before plans are approved. A specific type of capacity fees are Pumped Zone Fees for new developments or expansion in areas where pump stations are required to move wastewater to the Central San treatment plant. These developments would pay an additional capacity fee to cover pumping infrastructure costs.

Development under the HEU with Distributed Sites scenario would be required to comply with the CALGreen Code, which requires that new construction use high-efficiency plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. Implementation of water conservation and efficiency measures would reduce the wastewater generated.

Stormwater

The City of Lafayette owns and maintains the storm water system in Lafayette. As discussed in Section 4.16.2, since the adoption of the City's 1998 Drainage Master Plan, the majority of identified deficient pipe segments have been replaced or repaired (City of Lafayette, 2019). As discussed above, future development projects would be required to undergo environmental review when proposed. This process would ensure that impacts due to new development on the storm drainage system are considered, in accordance with General Plan Policy LU-20.14. Projects under the HEU with Distributed Sites would also be subject to the City's Drainage Impact Fee (Municipal Code Chapter 8-17), which funds improving currently-existing drainage facilities and infrastructure and designing and constructing future drainage facilities and infrastructure as a result of the demand on the system created by new development.

As part of the review process for individual development projects which create or replace 10,000 square feet of impervious surface area, preparation of a stormwater control plan would be required. In addition, projects recreating or replacing an acre or more of impervious area (unless exempted) must also provide flow controls (or hydromodification management measures) so that post-project runoff does not exceed estimated pre-project rates and durations. Regulated projects for which building or grading permits are issued must include Low Impact Development (LID) design measures (such as pervious paving or bioretention areas) for stormwater capture and pretreatment.

Lafayette Municipal Code Chapter 5-4 contains regulatory requirements for stormwater management and discharge control. Project development proposed under the HEU with Distributed Sites would be required to demonstrate that stormwater capacity exceedances would not occur by completing and implementing a stormwater management and control plan for the projects complete with hydromodification area calculations and LID measures, as applicable. The

stormwater management plans submitted for projects would be subject to City engineering review and approval.

Electricity, Natural Gas, and Telecommunications Facilities

PG&E and MCE provide electric service in the City of Lafayette, and PG&E provides natural gas service. The telecommunications system serving the City of Lafayette consists of aboveground and buried telecommunications circuits from several providers, primarily AT&T and Comcast. As discussed above, future development projects would be required to undergo environmental review when proposed. This process would ensure that there are adequate electricity, natural gas, and telecommunications facilities at the time specific development projects are proposed, in accordance with General Plan Goal LU-20 and Policy LU-21.1. New meter and service connections would be coordinated with the provider at the time new development is proposed. As discussed in Section 4.5, *Energy*, future development would also be subject to a suite of programs and regulations that would reduce energy use.

Summary

Overall, compliance with General Plan Goal LU-19, Goal LU-20, and Goal LU-21 (and their underlying policies) related to the maintenance and demand for new or expanded utilities and service systems would avoid a significant effect to utilities and service systems. Aside from short-term construction disturbance, No further environmental impacts would be generated beyond those identified elsewhere in this Draft EIR for overall construction activity for the project. As such, the implementation of the HEU with Distributed Sites scenario would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. The impact would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City, and therefore would concentrate the increased demand for water, wastewater treatment, storm water drainage, electric power, natural gas, and telecommunications facilities in the Downtown area. As with the HEU with Distributed Sites scenario discussed above, development projects would be required to comply with the same standards as identified for the HEU with Distributed Sites scenario as described above. Therefore, the impact of the HEU with the Downtown-Only Alternative regarding utilities and service systems would be **less than significant**.

Mitigation Measure: None required.

Impact 4.16-2: Implementation of the HEU would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. (*Less than Significant Impact*)

HEU with Distributed Sites

While no specific development proposals are directly associated with the HEU, theoretical development would result in an increase in population and thus an increased demand for potable water. Water would be provided by EBMUD, which has multiple sources of water, as discussed in Section 4.16.2, *Environmental Setting*.

While there are sources of uncertainty associated with EBMUD's water supply reliability from year to year due to natural hydrological variability, EBMUD has in place policies and procedures to forecast and then adaptively manage operations as well as contingency plans to address water shortage situations. Additionally, while the number of EBMUD accounts has increased steadily since 1970, the average daily water demand has not increased correspondingly; outside of droughts, demand remains relatively stable, and currently lower than peak 1970s demand. Several factors have contributed to keeping the overall water demand from rising as might otherwise be anticipated, including: EBMUD's water recycling and conservation programs; droughts and customer rationing; changes in customer usage patterns; and legislative changes related to water efficiency and conservation (EBMUD, 2021a).

EBMUD adopted its 2020 UWMP and an associated Water Shortage Contingency Plan in June 2021 (EBMUD, 2021a). In adopting its 2020 UWMP, EBMUD has committed to managing water demand efficiently using its water supplies to protect both its customers and its water and natural resources, and making every effort to ensure the appropriate level of water service reliability is met given varied water demands during normal, dry, and multiple dry years. Additionally, project applicants would be required to demonstrate that EBMUD has sufficient capacity to provide water as specific development projects are proposed, in accordance with GP Policy LU-20.7.

As described under Section 4.16.3 above, all projects that include development of more than 500 residential units require a WSA pursuant to SB 610. Development under the HEU with Distributed Sites, could yield more than 500 units on the BART properties, and individual projects in the Downtown area could also surpass this 500-unit threshold, and therefore a WSA would be required when development of over 500 units is proposed.

Projects under the HEU with Distributed Sites would also be subject to EBMUD's System Capacity Charge, which pays for each project's share of future water supply upgrades needed to meet long-term increases in water demand created by new customers.

Development under the HEU with Distributed Sites scenario would be required to comply with the CALGreen Code, which requires that new construction use high-efficiency plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. For outdoor water use, the CALGreen Code requires that irrigation controllers be weather- or soil moisture-based and automatically account for rainfall, or be attached to a rainfall sensor. Implementation of water conservation and efficiency measures would minimize the potable water demand generated.

Overall, because EBMUD manages its water supply to be sufficient to satisfy the demand during normal, single dry, and multiple dry years, any future project containing more than 500 units would require a WSA, and development under the HEU with Distributed Sites scenario would minimize its water demand through conservation measures, the impact related to water supply would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. As such, development projects would be required to comply with the same standards as identified for the HEU utilizing the Distributed Sites scenario as described above. Therefore, the impact of the HEU with the Downtown-Only Alternative regarding water supply would be **less than significant**.

Mitigation Measure: None required.

Impact 4.16-3: Implementation of the HEU would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (*Less than Significant Impact*)

HEU with Distributed Sites

While no specific development proposals are directly associated with the HEU, theoretical development would result in an increase in population and thus an increased demand for wastewater treatment. Central San collects and treats wastewater from residents of the City of Lafayette, as discussed in Section 4.16.3, *Regulatory Setting*.

Central San's treatment plant has a permitted capacity of 53.8 million gallons per day (MGD) and treat an average of 38.6 MGD (Central San, 2020a). The treatment plant has also managed peak flows as high as 230 MGD during an extreme winter storm. Central San's collection system and treatment plant are generally in good condition; however, repairs and upgrades are required to maintain reliable operation (Central San, 2017). Central San collects capacity fees from new construction projects which result in an added wastewater burden to ensure that new users pay their fair share for facilities and necessary capacity upgrades. Residential parcels are charged a flat per-unit fee, and the amounts due are collected before plans are approved (Central San, 2020a). As such, there is excess capacity of approximately 15.2 MGD at Central San's wastewater treatment plant and capacity fees would be collected by Central San to address the new wastewater demand. Assuming a design flow of 105 gallons per day per unit for residential multifamily dwellings, the 2,714 units under the Distributed Sites scenario in Planning Areas 1-9 and 13 would generate approximately 284,970 gallons of wastewater per day or approximately 0.285 MGD.⁴ The 642 units included as Scattered Sites are assumed to generate an additional 125,190 gallons per day or 0.125 MGD, conservatively based on a design flow of 195 gallons per

⁴ Based on Central San's 105 gallons per day estimate for multifamily units (Central San, 2010).

day for residential single family dwellings.⁵ Therefore, the HEU with Distributed Site's estimated wastewater generation of approximately 0.41 MGD would not exceed the excess capacity of approximately 15.2 MGD at the wastewater treatment plant. Also, in accordance with General Plan Policy LU-20.6, project applicants would be required to ensure that adequate treatment capacity is available at the time specific development projects are proposed.

Development under the HEU with Distributed Sites scenario would be required to comply with the CALGreen Code, which requires that new construction use high-efficiency plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. Implementation of water conservation and efficiency measures would reduce the wastewater generated. Therefore, the HEU with Distributed Sites would not result in wastewater treatment capacity issues. This impact would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. Assuming a design flow of 105 gallons per day per unit for residential multifamily dwellings, the 2,611 units under the Distributed Sites scenario in Planning Areas 1-6 would generate approximately 274,155 gallons of wastewater per day or approximately 0.274 MGD.⁶ The 782 units included as Scattered Sites are assumed to generate an additional 152,490 gallons per day or 0.152 MGD, conservatively based on a design flow of 195 gallons per day for residential single family dwellings.⁷ Therefore, the HEU with Distributed Site's estimated wastewater generation of approximately 0.426 MGD would not exceed the excess capacity of approximately 15.2 MGD at the wastewater treatment plant. Development projects under the Downtown-Only Alternative would be required to comply with the same standards and capacity fees as identified for the HEU utilizing the Distributed Sites scenario as described above. Therefore, the impact of the HEU with the Downtown-Only Alternative regarding wastewater treatment capacity would be **less than significant**.

Mitigation Measure: None required.

Impact 4.16-4: Implementation of the HEU would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (*Less than Significant Impact*)

While no specific development proposals are directly associated with the HEU, theoretical development would generate solid waste during both construction and operation. During construction, construction-related debris would be generated. During operation, the additional residential uses would result in an increase in the demand for solid waste services.

⁵ Based on Central San's 195 gallons per day estimate for single family units (Central San, 2010).

⁶ Based on Central San's 105 gallons per day estimate for multifamily units (Central San, 2010).

⁷ Based on Central San's 195 gallons per day estimate for single family units (Central San, 2010).

HEU with Distributed Sites

Construction

As described in Section 4.16.3, *Regulatory Setting*, the City of Lafayette requires development projects to achieve 75 percent diversion under the CALGreen Code and create and maintain a construction waste management plan. The diversion requirement may be met through direct facility recycling, reuse of the materials on site, or donation to reuse and salvage businesses. The Keller Canyon Landfill serves the City and accepts mixed construction and demolition waste. The remaining residue from the materials that could not be recovered are landfilled. The Keller Canyon Landfill has an estimated 49,441,787 cubic yards of remaining capacity (69,218,502 tons) and an expected closure date of 2050, including enough capacity to serve the solid waste stream from development under the HEU utilizing the Distributed Sites scenario. To comply with City of Lafayette and CALGreen requirements, development projects under the HEU would be required to develop a construction waste management plan and divert at least 75 percent of the solid waste generated during construction. Therefore, construction associated with development under the HEU utilizing the Distributed Sites scenario would not generate solid waste in excess of local infrastructure and would not impair the attainment of state-level or local waste reduction goals. This impact would be **less than significant**.

Operation

The Distributed Sites scenario could provide for development of up to 3,356 new housing units in the City which would generate solid waste. Conservatively using the maximum number of residents 8,390 calculated in Section 4.12, *Population and Housing*, the residential uses would generate up to approximately 4,078 tons of waste per year.⁸ The Keller Canyon Landfill has approximately 49,441,787 cubic yards of remaining capacity (69,218,502 tons) and an expected closure date of 2050. Therefore, operation under the HEU utilizing the Distributed Sites scenario would not generate solid waste in excess of the local infrastructure, and would not impair the attainment of state-level or local waste reduction goals. This impact would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. Under such a scenario, up to 3,393 new housing units could be developed. As with the HEU with Distributed Sites scenario discussed above, development under the Downtown-Only Alternative, development projects under the HEU would be required to develop a construction waste management plan and divert at least 75 percent of the solid waste generated during construction. If development under were to occur at the maximum densities specified, with a resultant population increase of approximately 8,483 persons (as calculated in Section 4.12, *Population and Housing*), the residential uses would generate up to approximately 4,123 tons of waste per year.⁹ The Keller Canyon Landfill has approximately 49,441,787 cubic yards of remaining capacity (69,218,502 tons) and an expected closure date of

⁸ Based on the generation rate of 0.419 tons of solid waste per resident from the Downtown Lafayette Specific Plan EIR (City of Lafayette, 2010).

⁹ Based on the generation rate of 0.419 tons of solid waste per resident from the Downtown Lafayette Specific Plan EIR (City of Lafayette, 2010).

2050. Therefore, construction and operation under the HEU with the Downtown-Only Alternative would not generate solid waste in excess of the local infrastructure, and would not impair the attainment of state-level or local waste reduction goals. This impact would be **less than significant**.

Mitigation Measure: None required.

Impact 4.16-5: Implementation of the HEU would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. (*Less than Significant*)

HEU with Distributed Sites

During construction and operation associated with development under the HEU utilizing the Distributed Sites scenario, development projects would be required to comply with federal, state, and local solid waste standards identified in Section 3.16.3, *Regulatory Setting*, such as the California Integrated Waste Management Act, AB 939, the CALGreen Code, AB 341 and AB 1826, SB 1383, and the City of Lafayette Municipal Code. RecycleSmart oversees the collection, transfer, and disposal of residential garbage, recycling, and organics in the City keeps the City compliant with state-mandated recycling requirements (AB 341 and AB 1826), including recycling of organics. As a result, development under the HEU utilizing the Distributed Sites scenario would not conflict with applicable waste reduction policies. Therefore, the impact of the HEU utilizing the Distributed Sites scenario regarding compliance with solid waste regulations would be **less than significant**.

Downtown-Only Alternative

Implementation of the Downtown-Only Alternative would concentrate the development of new housing in the Downtown area of the City. As such, development projects would be required to comply with the same standards as identified for the HEU utilizing the Distributed Sites scenario as described above. Therefore, the impact of the HEU with the Downtown-Only Alternative regarding compliance with solid waste regulations would be **less than significant**.

Mitigation Measure: None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively considerable impacts. Significant cumulative impacts related to utilities and service systems could occur if the incremental impacts of the HEU combined with the incremental impacts of the cumulative development described in 4.0. of this EIR.

Impact 4.16-6: The HEU, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity, would not contribute considerably to cumulative impacts on utilities and service systems. (*Less than Significant*)

The project, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity would incrementally increase the demand for utilities and service systems. As described in Section 4.0, there are numerous other housing developments proposed to be constructed, or under review approval consideration with the City. As discussed above, implementation of the HEU project would have less than significant impacts with regard to utilities and service systems. Similar to the HEU, cumulative development would be subject to capacity fees and other regulations that contribute to long-term utilities planning and capacity improvements. Project applicants would also be required to demonstrate compliance with General Plan Goal LU-19, Goal LU-20, and Goal LU-21 (and their associated policies) related to the maintenance and demand for new or expanded utilities and service systems. Therefore, when considered in the cumulative context, the HEU's utilities and service system-related impacts would not be cumulatively considerable. Cumulative impacts would therefore be **less than significant**.

Mitigation Measure: None required.

4.16.5 References

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- Marin Clean Energy, 2021. Member Communities. Available online: <https://www.mcecleanenergy.org/member-communities/>. Accessed October 22, 2021.
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4.17 Wildfire

4.17.1 Introduction

This section evaluates the potential for the Housing Element Update (HEU) to result in substantial adverse effects related to wildfire. Below, the Environmental Setting portion of this section includes descriptions of existing conditions relevant to wildfire. Further below, existing plans and policies relevant to wildfire associated with implementation of the HEU are provided in the Regulatory Setting section. Finally, the impact discussion evaluates potential impacts related to wildfire that could result from implementation of the HEU in the context of existing conditions.

The Notice of Preparation (NOP) for the EIR was circulated on August 2, 2021 and a scoping meeting was held on August 16, 2021. The NOP and the comments received during the public comment period can be found in **Appendix A** of this EIR. No comments relating to wildfire were received during the NOP comment period.

The primary sources of information referenced in this section included the following:

- City of Lafayette. 2009. *City of Lafayette General Plan, Safety Element*. May, 2009.
- City of Lafayette. 2010. *Downtown Lafayette Specific Plan EIR, Volume I: Draft EIR*. January 26, 2010.
- City of Lafayette. 2018. *Emergency Operations Plan, Wildland Fire Evacuation Plan*. July, 2018.
- Contra Costa County Fire Protection District, *Fire District Annexation Feasibility Study* (2021).

4.17.2 Environmental Setting

The City of Lafayette is a mix of developed and undeveloped lands east of the Berkeley Hills. Most of the land area within the corporate boundaries of the City is developed with urban and suburban development of differing types and densities. However, substantial areas of the City are either undeveloped or managed as some form of open space. These same conditions are also present in the areas surrounding the City, with wildland areas interspersed with developed areas. Generally speaking, most of the undeveloped areas are covered with the oak woodland and grassland vegetation communities that are characteristic of the area.

Fire Protection Responsibility

The entirety of the City is designated as a Local Responsibility Area (LRA) by the California Department of Forestry and Fire Protection (CalFire). The same is true for the surrounding incorporated communities of Orinda, Moraga, Walnut Creek, and Pleasant Hill. The unincorporated area to the north of the City is a State Responsibility Area (SRA), with CalFire or its designee providing fire protection services.

The City and much of the larger area is provided with fire protection services by the Contra Costa County Fire Protection District (CCCFPD). The CCCFPD's primary service area comprises approximately 306 square miles, and covers many of the incorporated communities of Contra Costa County. The CCCFPD maintains 26 staffed fire stations located throughout the District. Two other stations are currently closed due to lack of funding, and are projected to be reopened in the near future; an additional station is utilized for the District's reserve firefighters and is staffed on a rotational basis. The District operates a wide variety of fire apparatus and ambulances (CCCFPD, 2021). Two stations are located within the City of Lafayette:

- Station #15 at 3338 Mount Diablo Boulevard. The station houses one crew of three people (Captain, Engineer and Firefighter, one of which is a Paramedic) operating two pieces of equipment, a Type 1 Engine (the main piece of equipment) and a Type 3 4-wheel drive unit designed to fight fires in the hills in the adjoining areas (United Professional Firefighters, 2021).¹
- Station #16 at 4007 Los Arabis Drive.
- Station #17 (reserve fire station) at 620 St. Mary's Road.

Other District stations are located nearby in the communities of Walnut Creek, Pleasant Hill, and other communities. In addition to its own fire protection services, CCCFPD has entered into various cooperative and fire assistance agreements with other federal, state, and local jurisdictions within the region and state. Based upon these agreements, most wildfire events and other large-scale incidents are responded to by multiple agencies operating under the varying levels of the incident command structure, which is a standardized approach to the command, control, and coordination of emergency response providing a common hierarchy within which responders from multiple agencies can be effective. In such instances, CCCFPD personnel and equipment could respond to incidents outside of the District's formal area of responsibility. Conversely, other emergency services organizations throughout the region and state could respond to incidents within CCCFPD's area of responsibility if needed.

Fire Hazard Severity and Wildfire Risk

As part of its Fire and Resources Assessment Program (FRAP), CalFire has mapped areas of significant fire hazards throughout the state. The maps classify lands into fire hazard severity zones, based on a hazards scoring system that takes into account localized factors such as fuel loading, slope, fire weather, and other relevant considerations, including areas where winds have been identified as a major cause of wildfire spread.

¹ A Type 1 fire engine is designed for structural firefighting. It will typically include a pump that operates at 1,000 gpm, a 400 gal/tank, 1,200 ft. of 2 1/2" hose, 400 ft. of 1 1/2" hose, 200 ft. of 1" hose, 20 + feet of ladder, a 500 gpm Master Stream, and minimum staffing of four firefighters. A Type 3 fire engine is typically four-wheel-drive, and is designed for rapid deployment, pick up, and relocation during wildfires. Technically, a Type 3 fire engine includes a pump operating at 120 gpm, a large 500 gal/tank, 1,000 ft. of 1 1/2" hose, 800 ft. of 1" hose, and a minimum of four firefighters. These standards can vary slightly depending on the needs of the community where they are deployed. (California Fire Prevention Organization, 2021)

Substantial areas of the City have been designated by the FRAP as a Very High Fire Hazard Severity Zone (VHFHSZ) (CalFire, 2007). **Figure 4.17-1** shows the location of fire hazard severity zones in the area. In general, nearly all areas of the City north of SR-24 are within a designated VHFHSZ, as is an area south of SR-24 on the west side of the City adjacent to the Lafayette Reservoir. HEU planning areas that fall within a VHFHSZ include Planning Area 8 (Deer Hill Corridor), Planning Area 7 (BART parking lots), and Planning Area 9 (DeSilva Sites). **Table 4.17-1** describes the extent of VHFHSZ's within the HEU's planning areas, with those areas where VHFHSZ's are present shown in **bold**.

**TABLE 4.17-1
 FIRE HAZARD SEVERITY ZONES**

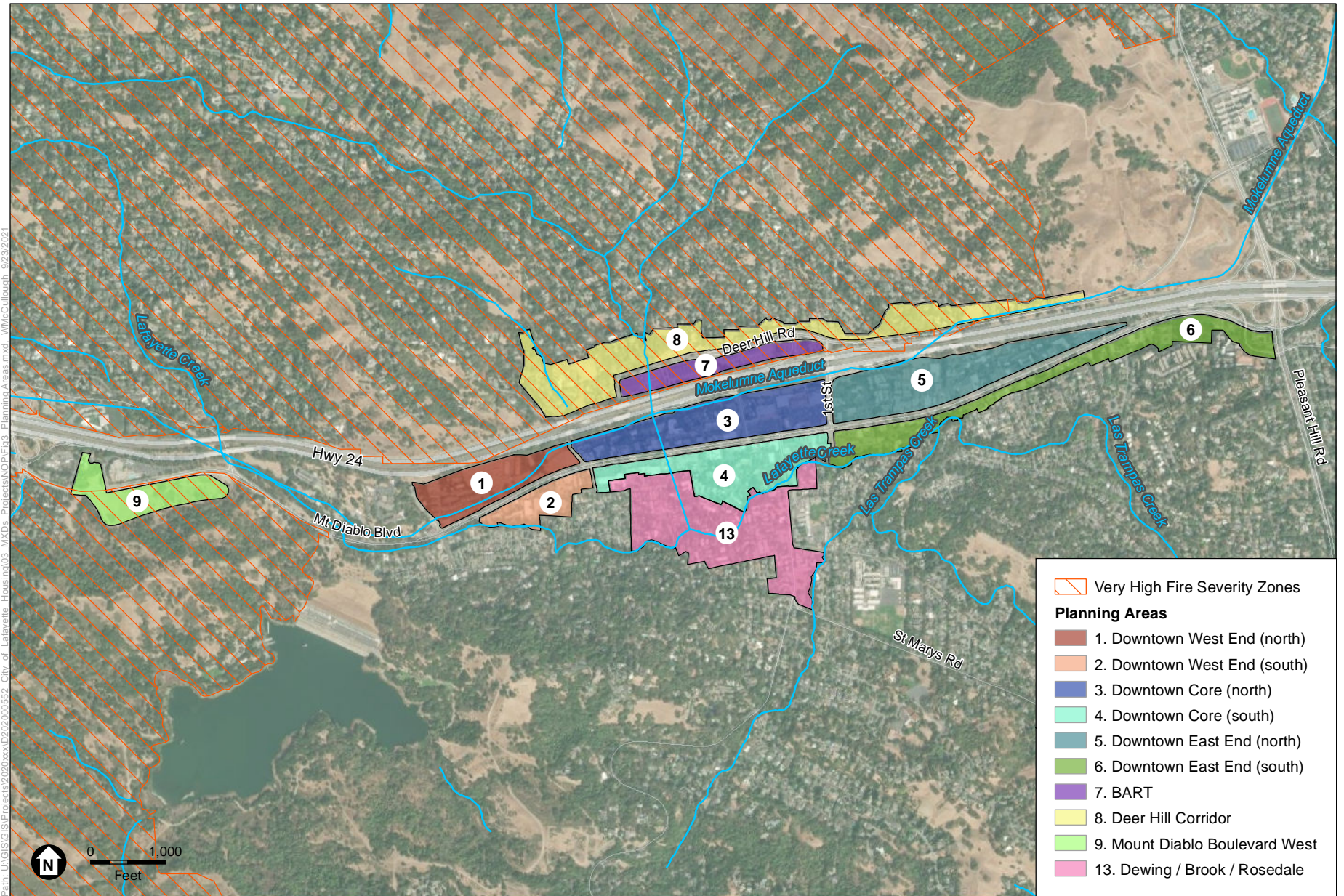
HEU Planning Area	Very High Fire Hazard Severity Zones in Planning Area
1 – Downtown West End (North)	No designated VHFHSZ's in planning area
2 – Downtown West End (South)	No designated VHFHSZ's in planning area
3 – Downtown Core (North)	No designated VHFHSZ's in planning area
4 – Downtown Core (South)	No designated VHFHSZ's in planning area
5 – Downtown East End (North)	No designated VHFHSZ's in planning area
6 – Downtown East End (South)	No designated VHFHSZ's in planning area
7 – BART	Very High throughout entire planning area
8 – Deer Hill Corridor	Very High throughout entire planning area
9 – DeSilva Sites	Very High for areas south of Mount Diablo Boulevard
13 – Dewing/Brook/Rosedale	No designated VHFHSZ's in planning area

SOURCE: Calfire, 2009.

Emergency Response and Evacuation Plans

The City of Lafayette has an Emergency Operations Plan that would be implemented in the event of a disaster or emergency (City of Lafayette, 2011). Although the Emergency Operations Plan does not identify designated evacuation or emergency response routes, State Route 24 (SR-24) is identified as a main arterial. In addition, the Lafayette Police Department at 3675 Mount Diablo Boulevard is identified as an emergency operations center. SR-24 passes east-west through the City; the police department is located in the Downtown West End (South) HEU planning area.

The City of Lafayette also has an Emergency Operations Plan/Wildland Fire Evacuation Plan, which would be implemented in the event of a wildland fire or other large emergency (City of Lafayette, 2018). The plan defines command and control based on the standardized Incident Command System (ICS), establishes communication protocols, identifies staging areas and evacuation routes, and defines evacuation triggers and emergency response to those triggers. The plan breaks up the City into 17 zones, and describes each zone within the context of emergency response and known hazards, and identifies special concerns within each zone. The plan identifies evacuation routes and collection areas within each zone, and notes which routes must remain unblocked and open to ensure clear routes of travel during an emergency. **Table 4.17-2** lists the roads that are designated as evacuation routes through the various HEU planning areas.



SOURCE: City of Lafayette, 2021; CalFire, 2009

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Figure 4.17-1
Very High Fire Hazard Severity Zones

**TABLE 4.17-2
 DESIGNATED ROUTES FOR EMERGENCY EVACUATION IN THE HEU PLANNING AREAS**

Planning Area	Designated Routes
1 – Downtown West End (North)	Mount Diablo Boulevard, Dolores Drive, and Mountain View Drive
2 – Downtown West End (South)	None designated
3 – Downtown Core (North)	Mount Diablo Boulevard, Dolores Drive, Happy Valley Road, and Oak Hill Road
4 – Downtown Core (South)	Mount Diablo Boulevard, Mountain View Drive, and Moraga Road
5 – Downtown East End (North)	Mount Diablo Boulevard and School Street
6 – Downtown East End (South)	Happy Valley Road
7 – BART	Happy Valley Road and Deer Hill Road
8 – Deer Hill Corridor	Happy Valley Road and Deer Hill Road
9 – DeSilva Sites	Mount Diablo Boulevard
13 – Dewing/Brook/Rosedale	St. Marys Road, Brook Street, and Moraga Road

SOURCE: City of Lafayette 2018

The City is currently revisiting its Emergency Operations Plan/Wildfire Fire Evacuation Plan as it updates its General Plan Safety Element. Recent changes to State law (see Section 4.17.3, *Regulatory Setting*, below) require local jurisdictions to evaluate parcels with only one point of ingress/egress (SB 99) and to address evacuation routes related to hazards in updated Safety Elements (AB 747).

4.17.3 Regulatory Setting

Federal

There are no federal regulations pertaining to wildfire that are applicable to the proposed HEU.

State

California Department of Forestry and Fire Protection

Title 14 of the California Code of Regulations (CCR), Division 1.5, establishes regulations for CalFire in SRAs where CalFire is responsible for wildfire protection. These regulations constitute the basic wildland fire protection standards of the California Board of Forestry and Fire Protection. They have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in SRAs. Additionally, Title 14, Division 1.5, Chapter 7, Subchapter 2 sets forth the minimum standards for emergency access and egress (Article 2), signage (Article 3), water supply (Article 4), and fuel modification standards (Article 5) for lands within SRAs.

While the project site is located within a LRA, areas north of the City are within a SRA. For LRA lands where the CCCFPD is the fire protection service provider (i.e., all lands within the City’s

corporate boundaries), the District has its own requirements for fire protection, as described later in this section.

Emergency Services Act

Under the Emergency Services Act, Government Code Section 8550, et seq., the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving wildfire and other natural and/or human-caused incidents is an important part of the plan, which is administered by the Governor's Office of Emergency Services (OES). The office coordinates the responses of other agencies, including the California Environmental Protection Agency (CalEPA), the California Highway Patrol (CHP), regional water quality control boards, air quality management districts, and county disaster response offices.

California Public Resources Code

Fire Hazards Severity Zones – Public Resources Code Sections 4201-4204

California Public Resources Code Sections 4201 through 4204 require CalFire to prepare fire hazard severity zone maps for all lands within State Responsibility Areas, and to make recommendations for such zones in Local Responsibility Areas. Each zone is to embrace relatively homogeneous lands and is to be based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified as a major cause of wildfire spread. CalFire adopted a Fire Hazard Severity Zone map for the City of Lafayette in 2009. In general, nearly all areas of the City north of SR-24 are within a designated VHFHSZ, as is an area south of SR-24 on the west side of the City adjacent to the Lafayette Reservoir.

California Building Code

In January of 2008, California officially switched from the Uniform Building Code to the International Building Code. The International Building Code specifies construction standards to be used in urban interface and wildland areas where there is an elevated threat of fire.

Assembly Bill 747

AB 747 was adopted in 2019, and requires safety elements to be reviewed and updated as necessary to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. The law authorizes a city or county that has adopted a local hazard mitigation plan, emergency operations plan, or other document that fulfills commensurate goals and objectives to use that information in the safety element to comply with this requirement by summarizing and incorporating by reference that other plan or document in the safety element.

Senate Bill 99

SB 99 was adopted in 2019, and requires a city or county, upon the next revision of the housing element on or after January 1, 2020, to review and update the safety element to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes.

Local

Lafayette General Plan

The Lafayette General Plan is a comprehensive long-range general plan for the physical development of the City of Lafayette (City of Lafayette, 2002). The General Plan contains the current City of Lafayette Housing Element, which was adopted in 2015. The various elements within the General Plan include goals and policies for the physical development of the City. Goals and policies related to wildfire and emergency response in general are listed below.

Land Use Element

Goal LU-20: Match the demand for public facilities and infrastructure generated by new development with the capacity of existing facilities, capital improvement programs and development mitigation programs.

Policy LU-20.4: Fire. Review all development projects for their impacts on standards for fire service specified in the General Plan: fire stations three miles apart in urban areas, six miles apart in rural areas, with a five-minute response time. Require fair share payments and/or mitigation measures to ensure that these standards or their equivalent are maintained.

Safety Element

Goal S-4: Minimize risks to Lafayette residents and property from fire hazards.

Policy S-4.1: Adequate Fire Protection. Enforce regulations and standards which contribute to adequate fire protection.

Policy S-4.2: Reduce Fire Risk from Development. Take measures to reduce fire risks from new and existing development as well as natural fire hazards.

Policy S-4.3: Development and Mitigation Fees. Maintain development and mitigation fees at a level to adequately finance fire protection costs.

Policy S-4.4: Mutual Aid Agreements. Participate in mutual aid agreements with the County and State firefighting agencies.

Policy S-4.5: Vegetation Management Plan. Require development in a high fire risk area to have an approved vegetation management plan that includes native, drought tolerant, and fire resistant species.

Lafayette Fire Safety Ordinance

Chapter 3-5 of the City's Code of Ordinances contains the City's Fire Safety Ordinance (Title 3, Building Regulations; Chapter 3-5, Fire Safety). The ordinance contains specific requirements for construction standards, mitigation requirements, vegetation management, landscaping, and other requirements in high fire hazard areas. All building projects located within high fire hazard areas of the City are required to comply with the ordinance's standards as a condition of permit issuance.

Lafayette Emergency Operations Plan/Wildland Fire Evacuation Plan

The City of Lafayette has an Emergency Operations Plan that would be implemented in the event of a disaster or emergency (City of Lafayette, 2011). The City of Lafayette also has an Emergency Operations Plan/Wildland Fire Evacuation Plan, which would be implemented in the event of a wildland fire or other large emergency (City of Lafayette, 2018). The plan defines command and control based on the standardized Incident Command System (ICS), establishes communication protocols, identifies staging areas and evacuation routes, and defines evacuation triggers and emergency response to those triggers. The plan breaks up the City into 17 zones, and describes each zone within the context of emergency response and known hazards, and identifies special concerns within each zone. The plan identifies evacuation routes and collection areas within each zone, and notes which routes must remain unblocked and open to ensure clear routes of travel during an emergency.

City of Lafayette Encroachment Permit Requirements

Section 3-2 of the City's building regulations outlines requirements for encroachment permits when development projects encroach into public rights-of-way during construction. Examples of encroachment could include temporary use of public rights-of-way for staging, construction, or traffic control purposes. Projects with high volumes of truck traffic are also required to take out an encroachment permit to ensure that trucks do not create undue damage to public roadways. For larger projects, preparation and implementation of a construction traffic control/traffic management plan is also required to manage construction traffic in a manner that would ensure adequate traffic flow and to keep key routes open.

The requirements generally apply to all projects in the downtown area and in all residential areas of the City. Section 3-202 defines those areas requiring an encroachment permit during construction to include the Downtown area with boundaries as defined by the planning area established in Downtown Specific Plan and all public roadways with average daily traffic in excess of 5,000 vehicles, including but limited to (roadways marked with an asterisk pass through or adjoin one or more of the HEU planning areas):

- Acalanes Road, north of Hidden Valley Road
- Deer Hill Road*
- Glenside Drive, from Reliez Station Road extending south to St. Mary's Road
- Moraga Road*
- Mount Diablo Boulevard*
- Olympic Boulevard
- Reliez Station Road, south of Olympic Boulevard
- St. Mary's Road*
- Pleasant Hill Road

The requirements can be waived for projects in single family residential neighborhoods with adequately large properties on which materials can be stored and staged, and for those projects with limited truck trips as identified in the project scope.

Contra Costa County Fire Protection District Fire Code

The CCCFPD has adopted its own Fire Code, which is based on the 2019 California Fire Code (CCCFPD, 2019). As relates to wildfire and general emergency access, the code provides regulations related to road design standards to ensure access, defensible space, vegetation and flammable fuels abatement.

The Fire Prevention Bureau within the CCCFPD provides fire prevention services through inspections and code enforcement, plan review and engineering services, public education, fire investigations, and exterior hazard control to ensure properties are properly constructed in accordance with local and state codes. The Fire Prevention Bureau is comprised of five main units:

- The Code Enforcement Unit is primarily responsible for inspecting of existing occupancies for compliance with Fire Code, CCR Title 19, Health & Safety Code, Fire District Ordinance, and applicable NFPA standards. There are approximately 8,000 occupancies assigned to the bureau for inspections to ensure compliance with Fire Code operational permit requirements or based on a statutory requirement to conduct annual life safety inspections in certain occupancy types.
- The Engineering Unit is primarily responsible for plan review, new construction inspections, and fire and life safety systems acceptance testing to ensure compliance with the California Fire and Building Codes, Fire District Ordinance and Standards, and applicable National Fire Protection Association (NFPA) standards. Plan review services are provided through traditional plan submittal and review processes, as well as, “over the counter” plan review of minor projects and small fire protection system modifications.
- The Exterior Hazard Control Unit inspects both public and private properties for compliance with Fire District weed abatement standards, which were established through local ordinance. The Unit primary purpose is to limit the potential sources of fuel for fire through abatement of combustible rubbish and vegetation to create “defensible space” around properties to would allow firefighters to effectively stop fires from spreading from open space areas to homes and properties. The Unit works proactively with other agencies throughout the County, including the Diablo Fire Safe Council, to reduce the threat of wildfire in the communities we service.
- The Public Education Unit provides programs to the public to promote and teach fire safety to all ages through a variety of delivery methods. The Unit’s programs range from teaching kindergarteners how to “Stop, Drop and Roll” to assisting senior citizens how to recognize and eliminate hazards in their home.
- The Fire Investigation Unit is responsible for determining origin and cause of fires and the investigations of fire related incidents of both criminal and accidental nature, pursuant to the mandate for fire origin and cause determination as outlined in the Fire Code and California Health and Safety Code. The Unit works closely with other law enforcement personnel from County and City agencies to effect the successful investigation, arrest, prosecution, and conviction of arsonists.

4.17.4 Environmental Impacts and Mitigation Measures

Significance Thresholds

Significance thresholds within Appendix G of the *CEQA Guidelines* related to wildfire focus primarily on lands that are located in or near State Responsibility Areas and/or lands classified as Very High Fire Hazard Severity Zones. These conditions apply to portions of the City and to several of the HEU's planning areas. For those HEU areas where those conditions apply, implementation of the HEU would have a significant impact on the environment if it would:

- Substantially impair an adopted emergency response plan or emergency evacuation plan.
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Methodology and Assumptions

Impacts associated with wildfire are evaluated within the context of the effectiveness of standard wildfire risk abatement methods as they relate to the development of any additional housing in the City that could result from implementation of the HEU. The general rule employed in this analysis is that if wildfire risk can be effectively lessened through implementation of standard regulatory requirements (e.g., compliance with the Lafayette Fire Safety Ordinance, Lafayette Emergency Operations Plan/Wildland Fire Evacuation Plan, CCCFPD Fire Code, other adopted plans, etc.), then the impact would be less than significant.

Impacts and Mitigation Measures

Impacts

Impact 4.17-1: Implementation of the HEU would not substantially impair an adopted emergency response plan or emergency evacuation plan. (*Less than Significant Impact*)

HEU with Distributed Sites and Downtown-Only Alternative

Construction

The construction of residences as part of residential development projects that could result from implementation of the HEU would include the transportation and movement of equipment, materials, and construction workers. If located along designated evacuation routes or in areas subjected to limited or constrained access, these construction activities could impair or interfere with adopted emergency response plans or emergency evacuation plans, and could be **potentially significant**.

As discussed in Section 4.17.3, *Regulatory Setting*, Section 3-2 of the City’s building regulations outlines requirements for encroachment permits when development projects encroach into public rights-of-way during construction. Examples of encroachment could include temporary use of public rights-of-way for staging, construction, or traffic control purposes. Projects with high volumes of truck traffic are also required to take out an encroachment permit to ensure that trucks do not create undue damage to public roadways. For larger projects, preparation and implementation of a construction traffic control/traffic management plan is also required to manage construction traffic in a manner that would ensure adequate traffic flow and to keep key routes open. The requirements generally apply to all projects in the downtown area and in all residential areas of the City. Section 3-202 defines those areas requiring an encroachment permit during construction to include the Downtown area with boundaries as defined by the planning area established in Downtown Specific Plan and all public roadways with average daily traffic in excess of 5,000 vehicles.

Further, the City’s Emergency Operations Plan/Wildland Fire Evacuation Plan identifies key routes within the City that must remain open for purposes of emergency response and evacuation. During the permit review process, the proposed project’s potential impacts to those routes would be identified and addressed through compliance with Section 3-2 of the City’s building regulations. In this manner, construction of residential projects that might arise as a result of the HEU’s implementation would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The impact would therefore be **less than significant**.

Mitigation Measure: None required.

Operations

Once constructed, the residential projects would not restrict or interfere with the flow of emergency vehicles or evacuation. While additional traffic volumes could be expected with the construction of more housing, the City would be required to periodically update its emergency response and evacuation plan(s) as required under AB 747 and the City’s General Plan. This periodic reevaluation would address these changed conditions, and would adjust the evacuation plans accordingly, thus rendering this impact **less than significant**.

Mitigation Measure: None required.

Impact 4.17-2: For those HEU areas that are located in or near State Responsibility Areas and/or lands classified as Very High Fire Hazard Severity Zones, implementation of the HEU would not exacerbate wildfire risks and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (*Less than Significant Impact*)

HEU with Distributed Sites

Three of the HEU planning areas are located within a Calfire-designated VHFHSZ (see Figure 4-17.1). These planning areas include Planning Area 7 (BART), Planning Area 8 (Deer Hill

Corridor), and the southerly portion of Planning Area 9 (DeSilva Sites). All other HEU planning areas in the downtown area are not designated as VHFHSZ's, and there would therefore be no impact to those areas.

For those HEU planning areas that are within a VHFHSZ, the development of housing in those areas could increase the risk of wildfire by introducing new sources of ignition (i.e., vehicles and residents) into those areas. However, as a condition of approval, and pursuant to the Lafayette Fire Safety Ordinance and the Contra Costa County Fire Protection District Fire Code (see Section 4.17.3, above), all development projects would be required to comply with requirements relating to emergency planning and preparedness, fire service features, building services and systems, access requirements, water supply, fire and smoke protection features, building materials, construction requirements, defensible space and vegetation management, and specific requirements for specialized uses involving flammable and hazardous materials.

Each of the code requirements outlined above have been developed over many decades to reduce the risks associated with wildfire. As a condition of approval for any project that may arise from implementation of the HEU, the implementation of these standard requirements would reduce impacts associated with accidental ignitions emanating from project sites, and would also reduce impacts associated with wildfires encroaching onto project sites from adjacent areas. The impact would therefore be **less than significant**.

Mitigation Measure: None required.

Downtown-Only Alternative

The HEU planning areas associated with the Downtown-Only Alternative are not included within a State Responsibility Area or a Calfire-designated VHFHSZ. There would therefore be **no impact** to those areas.

Mitigation Measure: None required.

Impact 4.17-3: Implementation of the HEU would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (*Less than Significant Impact*)

HEU with Distributed Sites and Downtown-Only Alternative

All of the HEU planning areas are developed and urbanized, with the exception of the southerly portion of the DeSilva Sites Planning Area (Planning Area #9, see Figure 3-3). Construction of roads, fuel breaks, emergency water sources, power lines, or other utilities would not be required for future development in an already urbanized area, and in most cases would neither be practical or necessary. The extent to which these types of facilities could be required for development on the DeSilva Sites Planning Area is unknown at this time, but the environmental effects of such facilities, if required, would be evaluated at the time of project application, and would follow

established regulations and development protocols as defined in City regulation and General Plan policy. Based on these considerations, the effect of the HEU's implementation would be **less than significant**.

Mitigation Measure: None required.

Impact 4.17-4: Implementation of the HEU would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (*Less than Significant Impact*)

HEU with Distributed Sites and Downtown-Only Alternative

All of the HEU planning areas are developed and urbanized, with the exception of limited portions of the Deer Hill Corridor Planning Area (Planning Area #8, see Figure 3-3) and the southerly portion of the DeSilva Sites Planning Area (Planning Area #9,). Post-fire impacts such as slope instability and downstream flooding are more typically associated with steep wildland areas that burn and then erode or slide onto downslope area. With the exception of those areas so mentioned above, these conditions do not apply to the HEU planning areas.

The DeSilva Sites Planning Area is backed by hilly areas on its southerly side that slope onto the planning area. Similarly, several small areas within the Deer Hill Corridor Planning Area are also undeveloped and are covered with woody and grassy slopes. If these sites were developed and the hilly areas behind them were to burn, those sloped areas could potentially erode onto the developed areas and create adverse effects. However, any development proposed in these areas would be subject to engineering and permit review as part of the City's approval process, and potential constraints associated with upslope areas or other factors would be evaluated at the time of application and appropriate design standards implemented prior to issuance of building permits. Based on these considerations, the effect of the HEU's implementation would be **less than significant**.

Mitigation Measure: None required.

Cumulative Impacts

This section presents an analysis of the cumulative effects of the HEU in combination with other past, present, and reasonably foreseeable future projects that could cause cumulatively significant impacts. Significant cumulative impacts related to wildfire could occur if the incremental impacts of the HEU combined with the incremental impacts of one or more of the cumulative projects and/or growth projections identified in Section 4.0.3, *Cumulative Impacts* would be significant and if the HEU's contribution would be cumulatively considerable. The locations of the listed projects are shown in **Figure 4.0-1** in Section 4.0 of this EIR, *Introduction to Environmental Analysis*.

Impact 4.17-5: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, would/would not result in a cumulative impact related to wildfire. (*Less than Significant Impact*)

Emergency Response and Evacuation

Construction for two or more projects that occur at the same time and use the same roads could interfere with an adopted emergency response plan or emergency evacuation plan. As discussed previously under Impact 4.17-1, the City has standard requirements in place to address potential impacts to emergency evacuation routes and traffic flow in general during the construction process. As with projects that could arise from the HEU's implementation, cumulative projects would be required to receive an encroachment permit and to prepare and implement similar traffic management plans to maintain traffic flow and prevent interference with emergency access. As such, as with development projects resulting from the HEU, any cumulative projects would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The cumulative impact would therefore be **less than significant**.

Very High Fire Hazard Severity Zones

For cumulative projects that are within a VHFHSZ, the development of housing in those areas could increase the risk of wildfire by introducing new sources of ignition (i.e., vehicles and residents) into those areas. However, as a condition of approval, and pursuant to the Lafayette Fire Safety Ordinance and the Contra Costa County Fire Protection District Fire Code (see Section 4.17.3, above), all development projects would be required to comply with requirements relating to emergency planning and preparedness, fire service features, building services and systems, access requirements, water supply, fire and smoke protection features, building materials, construction requirements, defensible space and vegetation management, and specific requirements for specialized uses involving flammable and hazardous materials.

Each of the code requirements outlined above have been developed over many decades to reduce the risks associated with wildfire. As a condition of approval for any cumulative project that may be developed in addition to those that might be developed as part of the HEU's adoption, the implementation of these standard requirements would reduce impacts associated with accidental ignitions emanating from project sites, and would also reduce impacts associated with wildfires encroaching onto project sites from adjacent areas. There would therefore be no cumulatively considerable effect, and the cumulative impact would therefore be **less than significant**.

Wildfire-Related Infrastructure

With the exception of the Terraces project at the intersection of Deer Hill Road and Pleasant Hill Road, all of the cumulative projects shown in Figure 4.0-1 are located within areas that are already developed and urbanized. The Terraces project site is located adjacent to existing arterial roadways, with utilities and other infrastructure also adjacent. Construction of roads, fuel breaks, emergency water sources, power lines, or other utilities would not be required for future development in these already urbanized area, and in most cases would neither be practical or necessary.

The situation is similar with the various planning areas associated with the HEU. Only the DeSilva Sites planning area is not already urbanized, and the DeSilva Sites are also adjacent to an arterial roadway with required infrastructure also adjacent.

Regardless, the environmental effects of installing such facilities, if required, would be evaluated at the time of project application, and would follow established regulations and development protocols as defined in City regulation and General Plan policy. Based on these considerations, the combined effect of the HEU and the other cumulative projects would be **less than significant**.

Post-Fire Effects

With the exception of the Terraces project at the intersection of Deer Hill Road and Pleasant Hill Road, all of the cumulative projects shown in Figure 4.0-1 are located within flat areas that are already developed and urbanized. Similarly, all of the HEU planning areas are developed and urbanized, with the exception of limited portions of the Deer Hill Corridor Planning Area (Planning Area #8, see Figure 3-3) and the southerly portion of the DeSilva Sites Planning Area (Planning Area #9.). Post-fire impacts such as slope instability and downstream flooding are more typically associated with steep wildland areas that burn and then erode or slide onto downslope area. With the exception of those areas so mentioned above, these conditions do not apply to the HEU planning areas or the cumulative projects shown in Figure 4.0-1.

If these identified sites were developed and the hilly areas behind them were to burn, those sloped areas could potentially erode onto the developed areas and create adverse effects. However, any development proposed in these areas would be subject to engineering and permit review as part of the City's approval process, and potential constraints associated with upslope areas or other factors would be evaluated at the time of application and appropriate design standards implemented prior to issuance of building permits. Based on these considerations, the effect of the cumulative projects and the HEU's implementation would be **less than significant**.

Mitigation Measure: None required.

4.17.5 References

California Department of Forestry and Fire Protection (CalFire). 2009. *Fire Hazard Severity Zones in LRA, Lafayette*. Adopted January 7, 2009. Available: <https://osfm.fire.ca.gov/media/5779/lafayette.pdf>. Accessed August 18, 2021.

California Fire Prevention Organization. 2021. *Apparatus Descriptions*. Available at: <https://www.calfireprevention.org/fire-apparatus/>. Accessed August 18, 2021.

City of Lafayette. 2021. *City of Lafayette Fire Safety Ordinance*. Title 3, Building Regulations; Chapter 3-5, Fire Safety. Available: https://library.municode.com/ca/lafayette/codes/code_of_ordinances?nodeId=TIT3BURE_CH3-5FISA. Accessed August 19, 2021.

City of Lafayette. 2018. *Emergency Operations Plan, Wildland Fire Evacuation Plan*. Available: <https://www.lovelafayette.org/home/showpublisheddocument/4054/637098545091870000>. Accessed August 19, 2021.

City of Lafayette. 2015. *City of Lafayette Housing Element, 2014-2022*. Available online: <https://www.lovelafayette.org/Home/ShowDocument?id=1929>. Accessed July 20, 2021.

City of Lafayette. *City of Lafayette General Plan*. 2002. Available online: <https://www.lovelafayette.org/city-hall/city-departments/planning-building/general-master-specific-plans/general-plan>. Accessed July 20, 2021.

Contra Costa County Fire Protection District (CCCFPD). 2021. *Fire District Annexation Feasibility Study*. Available: <https://www.cccfpd.org/annexation-study>. Accessed August 18, 2021.

Contra Costa County Fire Protection District (CCCFPD). 2019. *Fire Code: Ordinance No. 2-019-37*. Available: <https://www.cccfpd.org/pdfs/110116%20D5%20Ord%202016-23.pdf>. Accessed August 18, 2021.

United Professional Firefighters of Contra Costa County. 2021. *Fire Station Bios*. Available: <https://www.conracostafirefighters.org/fire-station-bios>. Accessed August 18, 2021.

4.18 Environmental Topics Not Subjected to Detailed Analysis

Pursuant to CEQA Guidelines Section 15128, this subsection describes the reasons that various possible effects of the Housing Element Update (HEU) were determined not to be significant, or to have no impact, and, therefore, were not discussed in detail in this EIR. These determinations were generally made because the identified environmental resources are not present within or around the project or because development of the project would clearly have no effect with respect to the topic issue area. These issue areas are described in this section with an explanation of why they are not evaluated further in this EIR.

4.18.1 Agricultural and Forestry Resources

Appendix G of the CEQA *Guidelines* specifies that an impact to agricultural and forestry resources would occur if a project would: 1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; 2) conflict with existing zoning for agricultural use, or a Williamson Act contract; 3) conflict with existing zoning, or cause rezoning of, forest land or timberland; 4) result in loss of forest land or conversion of forest land to non-forest use; or; 5) involve other changes that could result in conversion or farmland of forest land to non-agricultural use.

With respect to agricultural resources in the City, the bulk of the City is mapped as “Urban and Built-Up Land” by the California Farmland Mapping and Monitoring Program (FMMP), and non-urbanized areas are mapped as “Grazing Land.” According to the FMMP map for Contra Costa County, there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance designated on any portion of the planning areas (California Department of Conservation, 2016).

No existing farming or forestry operations are present within any area of the City. No areas of the City are specifically designated or zoned for agricultural use. While the City’s Zoning Code does provide for two agricultural zoning designations, General Agriculture (A-2) and Heavy Agriculture (A-3), no areas of the City are so zoned (City of Lafayette, 2013). Lands designated as “Open Space” in the City’s General Plan can be utilized for agricultural use, alongside other used such as preservation of natural resources and habitats, passive outdoor recreation, visual amenities such as view corridors and scenic vistas, and the maintenance of public health and safety (City of Lafayette, 2002).

With respect to forestry resources, no existing timber-harvest uses are located on or in the vicinity of the City. No areas of the City are designated or zoned for such use.

Based on these considerations, implementation of the HEU would result in no impacts to agricultural and forestry resources. Accordingly, this issue was not subjected to detailed analysis in the EIR.

4.18.2 Mineral Resources

For the purposes of this analysis, mineral resources are defined as any non-fuel mineral resource that is obtained from the ground, including sand and gravel, cement, boron, crushed stone, gold, limestone, and other important excavated resources. Appendix G of the CEQA *Guidelines* specifies that an impact to mineral resources would occur if a project would: 1) result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or 2) result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

No areas of the City are known to contain existing mineral resources, and there are no mineral resources extraction activities currently occurring in the City. Neither the State of California, Contra Costa County, nor the City have designated mineral resource recovery areas or preservation sites in any portion of the City (City of Lafayette, 2002). Implementation of the HEU would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Based on these considerations, implementation of the HEU would have no impact on mineral resources. Accordingly, this issue was not subjected to detailed analysis in the EIR.

4.18.3 References

California Department of Conservation. 2016. *Contra Costa County Important Farmland 2016*. Available: <https://www.conservation.ca.gov/dlrp/fmmp/Pages/ContraCosta.aspx>. Accessed August 20, 2021.

City of Lafayette. 2021. *Zoning Regulations*. Available online: <https://www.lovelafayette.org/city-hall/city-departments/planning-building/zoning-regulations-handouts/download-zoning-regulations>. Accessed August 20, 2021.

City of Lafayette. 2013. *City of Lafayette Zoning Map*. July, 2013. Available online: <https://www.lovelafayette.org/home/showpublisheddocument/1640/635561390008430000>. Accessed January 3, 2022.

City of Lafayette. 2002. *City of Lafayette General Plan*. Available online: <https://www.lovelafayette.org/city-hall/city-departments/planning-building/general-master-specific-plans/general-plan>. Accessed July 20, 2021.

CHAPTER 5

Alternatives

Pursuant to the provisions of CEQA, this chapter describes and evaluates alternatives to the proposed Housing Element Update (HEU) project, including a “No Project” alternative, and identifies an “environmentally superior” alternative. The primary purpose of this section is to provide decision-makers and the public with a qualitative review of project alternatives that eliminate or substantially reduce any of a project’s adverse environmental impacts while, at the same time, attaining most of the project objectives.

5.1 CEQA Requirements

CEQA requires that an EIR describe and evaluate a range of reasonable alternatives to the proposed project, and evaluate the comparative merits of the alternatives (*CEQA Guidelines* Section 15126.6(a), (d)). The “range of alternatives” is governed by the “rule of reason,” which requires the EIR to set forth only those alternatives necessary to foster informed decision-making and public participation (Section 15126.6(a), (f)).

The range of alternatives shall include alternatives that would feasibly attain most of the basic objectives of the project and would avoid or substantially lessen any of the significant effects of the project (*CEQA Guidelines* Section 15126.6(a)-(c)). CEQA generally defines “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors. In addition, the following may be taken into consideration when assessing the feasibility of alternatives: site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and the ability of the proponent to attain site control (Section 15126.6(f)(1)). The EIR should briefly describe the rationale for selecting the alternatives to be discussed and identify any alternatives that were rejected as infeasible, briefly explaining the reasons (15126.6(c)).

The description or evaluation of alternatives does not need to be exhaustive, and an EIR need not consider alternatives for which the effects cannot be reasonably determined and for which implementation is remote or speculative. An EIR need not describe or evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project (*CEQA Guidelines* Section 15126.6(d)).

The “no project” alternative must be evaluated. This analysis shall discuss the existing conditions, as well as what could be reasonably expected to occur in the foreseeable future if the project were

not approved, based on current plans and consistent with available infrastructure and community services (*CEQA Guidelines* Section 15126.6(e)(2)).

CEQA also requires that an environmentally superior alternative be selected from among the alternatives. The environmentally superior alternative is the alternative with the fewest or least severe adverse environmental impacts. When the “no project” alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives (*CEQA Guidelines* Section 15126.6(e)(2)).

5.1.1 Project Objectives

CEQA Guidelines Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project.

“A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.”

In keeping with this requirement, the City’s project objectives are as follows:

- Update the General Plan’s Housing Element to comply with State-mandated housing requirements and to address the maintenance, preservation, improvement, and development of housing in the City between 2023 and 2031.
- Include an inventory of housing sites and rezone the sites as necessary to meet the required Regional Housing Needs Allocation and to provide an appropriate buffer.
- Up-zone BART-owned properties in the vicinity of the Lafayette Bart Station to meet the minimum 75 dwelling units per-acre requirements of AB 2923, or up-zone alternate properties to provide an equivalent number of units elsewhere in order to meet the City’s RHNA.
- Amend land use designations in the Land Use Element of the City’s General Plan as needed to maintain internal consistency between the elements, and update the Safety Element to improve consistency with the City’s Local Hazard Mitigation Plan and comply with recent changes in State law.
- Make necessary General Plan amendments and zoning changes in a manner that affirmatively furthers fair housing while preserving the character of Lafayette and perpetuating the safety and welfare of both existing and future residents.

5.1.2 Elimination and/or Reduction of Identified Significant Impacts

CEQA Guidelines § 15126.6(b) states that “Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the

project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.”

Potentially significant environmental impacts that would result from the proposed HEU project are evaluated in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR. With implementation of standard conditions and requirements, as well as mitigation measures identified for each resource area significantly impacted, many of the potentially significant impacts resulting from the proposed project would be reduced to a less-than-significant level. The proposed project impacts listed below would remain significant and unavoidable even after mitigation, and the alternatives evaluated in this EIR have been selected because they are anticipated to reduce and/or eliminate one or more of the significant impacts associated with the proposed project.

Aesthetics Impact 4.1-1: Implementation of the HEU could have a substantial adverse effect on a scenic vista. *(Significant and Unavoidable Impact)*

Aesthetics Impact 4.1-3: Implementation of the HEU could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. *(Significant and Unavoidable Impact)*

Aesthetics Impact 4.1-5: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could result in a substantial adverse effect on a scenic vista. *(Significant and Unavoidable Impact)*

Aesthetics Impact 4.1-7: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. *(Significant and Unavoidable Impact)*

Air Quality Impact 4.2-3: Construction and operation of individual development projects following adoption of the HEU could result in a cumulatively considerable net increase in criteria pollutants for which the region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard. *(Significant and Unavoidable Impact, with Mitigation)*

Cultural Resources Impact 4.4-1: Implementation of the HEU could cause a substantial adverse change in the significance of an architectural historic resource pursuant to CEQA Guidelines Section 15064.5. *(Significant and Unavoidable Impact, with Mitigation)*

Cultural Resources Impact 4.4-3: Implementation of the HEU, in combination with other cumulative development, could cause a substantial adverse change in the significance of architectural historic resources pursuant to CEQA Guidelines Section 15064.5. *(Significant and Unavoidable Impact, with Mitigation)*

Transportation Impact 4.14-2: Implementation of the HEU could generate home-based VMT per resident that is greater than 85 percent of the Countywide average home-based VMT per resident. *(Significant and Unavoidable Impact, with Mitigation)*

5.2 Factors in the Selection of Alternatives

The nature and scope of the range of alternatives to be discussed is governed by the “rule of reason.” The CEQA *Guidelines* recommend that an EIR should briefly describe the rationale for selecting the alternatives to be discussed (Section 15126.6[c]). This alternatives analysis considers the following factors:

- The extent to which the alternative would accomplish most of the basic objectives of the proposed project;
- The extent to which the alternative would avoid or lessen the identified significant, or less-than-significant with mitigation, environmental effects of the proposed project;
- The feasibility of the alternative, taking into account site suitability, availability of infrastructure, general plan consistency, and consistency with other applicable plans and regulatory limitations;
- The extent to which an alternative contributes to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
- The requirement of the CEQA *Guidelines* to consider a “No-Project” alternative, and to identify an “environmentally superior” alternative in addition to the no-project alternative (Section 15126.6[e]).

5.2.1 Alternatives Considered but Rejected from Further Evaluation

A number of alternatives were considered for analysis and determined not to be feasible for the reasons explained in this section. These alternatives were not carried forward for analysis in the EIR.

Off-Site Alternative

The primary objective of the Housing Element Update is to ensure the City’s conformance with State law. There would be no way to meet this objective with an alternative that did not focus on the City itself, and therefore this alternative was not analyzed further.

Less Intensive HEU

Consideration was given to developing an HEU with substantially less density and a correspondingly fewer number of housing units, either by simply not meeting the Regional Housing Needs Allocation (RHNA) or incorporating a substantially reduced buffer. However, the City’s obligations to provide for additional housing are determined by State law, and are manifested through the RHNA, as promulgated by the State Department of Housing and Community Development (HCD) and the Association of Bay Area Governments (ABAG). The City’s RHNA allocation, as presented in Table 3-1 of Chapter 3 of this EIR, *Project Description*, allocates 2,114 residential units to the City, distributed among four income categories. These are presented below in **Table 5-1**. Of note are the number of units designated for lower income levels. In the Bay Area, housing for these income categories can typically be accommodated only through higher density development.

**TABLE 5-1
CITY OF LAFAYETTE RHNA ALLOCATIONS BY INCOME CATEGORIES**

Income Group				Total
Very Low Income (VLI)	Low Income (LI)	Moderate Income (MOD)	>Moderate Income (>MOD)	
599	344	326	845	2,114

SOURCE: Association of Bay Area Governments, *Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031*, November, 2021, adopted December 16, 2021.

In addition to the 2,114 units allocated to the City, the City must also plan for a “buffer” of potential housing sites to ensure that an adequate supply of housing sites remains available in the event that housing sites are developed with non-residential uses or at lower densities than provided for in the HEU. While the requirement for a specific buffer is not codified in State law, a buffer of at least 15% - 30% is recommended by HCD, especially for the lower income allocations, and is a practical necessity if the City wishes to avoid having to identify and potentially rezone additional sites during the eight year housing cycle.

Preparation of an HEU that does not meet the City’s RHNA allocation or provide a suitable buffer would run counter to the requirements of State law, and the City does not have the option of considering alternatives that are not legally feasible. Meeting the State-mandated housing requirements as manifested in the RHNA is the foremost objective of the HEU. Based upon these considerations, this alternative was rejected from further consideration and was not carried forward for detailed analysis.

Additional Planning Areas

Readers of the EIR may have noticed that the planning areas under consideration for the HEU (Planning Areas 1 through 9, and 13) are not consecutively numbered. Early in the planning process, additional areas south of the downtown area (Planning Areas 10 through 12 and 14 and 15) were considered for upzoning and inclusion as part of the HEU. These areas included the following:

- **No. 10, Village Center:** A 35.3-acre area south of Mount Diablo Boulevard and below Lafayette Reservoir. This area is fully built-out, primarily with multi-family and single-family units at relatively high densities. Zoning in the area is primarily D-1 (two-family residential) with several smaller pockets of MRP (multi-family residential/professional office, one-story).
- **No. 11, West Road:** A 7.3-acre area south of Mount Diablo Boulevard and west Mountain View Drive. This area is fully built-out, primarily with multi-family and single-family units at relatively high densities. Zoning in the area is MRT (multi-family residential townhouse).
- **No. 12, Bickerstaff/Crescent:** An 8.4-acre area lying one block south of Mount Diablo Boulevard and east of Mountain View Drive. This area is fully built-out, primarily with medium-density single-family units, as prescribed by the area’s R-6 zoning designation (6 residential units per acre).

- **No. 14, Almanor Lane:** A 6.5-acre area lying south of Mount Diablo Boulevard and lying astride Almanor Lane. The area is fully built-out at a relatively high density, and is zoned as D-1 (two-family residential).
- **No. 15, The Orchards:** A 28.5-acre area south of Mount Diablo Boulevard and west of Carol Lane. The area is fully built-out with single-family residential units at a relatively high density, and is zoned R-6 (6 residential units per acre).

These areas were ultimately eliminated from consideration, partly due to the fact that they are already developed at relatively high densities, but also due to circulation constraints and their distance from transit (BART), which would have created adverse environmental effects related to VMT and increased pollutant emissions. Based upon each of these considerations, these alternative planning areas were rejected from further consideration and were not carried forward for detailed analysis and inclusion in the HEU.

5.2.2 Alternatives to Lessen Identified Significant Effects

As noted in several of the topical sections of Chapter 4 of this EIR, a number of significant and unavoidable effects were identified that would result from the HEU's implementation. These impacts are listed above in Section 5.1.2, and generally relate to four broad categories: 1) aesthetics; 2) air quality; 3) cultural resources; and 4) transportation. CEQA Guidelines Section 15126.6(b) notes that a principal purpose of alternatives is to identify alternatives to a project or its location that are capable of avoiding or substantially lessening the significant effects of a project. To that end, the City contemplated feasible alternatives that could avoid or lessen the effects identified in the four categories listed above.

Aesthetics

In Section 4.1 of this EIR, *Aesthetics*, Impacts 4.1-1, 4.1-3, 4.1-5, and 4.1-7 made the conservative conclusion that the visual changes that could result from implementation of the HEU would be substantial, and that those changes would be the result of increased density, greater scale, and increased height of residential structures. These substantial changes would occur under both the HEU with Distributed Sites and the Downtown-Only Alternative, though with the Downtown-Only Alternative the impact would both affect a smaller area and be more intense because the degree of densification would be even greater and in a smaller area than the HEU with Distributed Sites.

Based on these considerations, the City contemplated an alternative that could potentially lessen these identified visual effects. The only manner in which the increased density, greater scale, and increased height of residential structures would be effectively reduced could only occur under two scenarios: 1) A substantial decrease the number of targeted residential units (i.e., the City's RHNA plus a suitable buffer); or 2) spread the increased density to larger areas of the City and thus dilute the effects of more concentrated densities in more centralized locations.

The first scenario, essentially a less-intensive HEU with substantially fewer residential units, has been explored under the "Less Intensive HEU" discussion above. This potential alternative was rejected from further consideration since it would run counter to the requirements of State law, and the City does not have the option of considering alternatives that are not legally feasible.

The second scenario, which would essentially spread the HEU's densification over a larger area was partially explored under the "Additional Planning Areas" discussion above. In addition to the additional planning areas discussed there, it is theoretically possible that even more areas of the City could be considered for upzoning and greater densification. Doing so could lessen the HEU's visual effects, but it would also result in adverse effects in other areas. For instance, the further development occurs from high-quality transit (BART) and commercial services (Downtown), the more vehicle miles are travelled, with resultant increases in VMT and pollutant emissions.

For each of these reasons, an alternative that would lessen the HEU's aesthetic impacts by lessening the intensity of densification or by spreading it across the City were not carried forward for further analysis.

Air Quality

In section 4.2 of this EIR, *Air Quality*, Impact 4.2-3 found that construction and operation of individual development projects following adoption of the HEU could result in a cumulatively considerable net increase in criteria pollutants for which the region is in nonattainment status, even with prescribed mitigations. This impact is most closely associated with larger projects and the analysis conservatively found that since the type and extent of larger residential development projects cannot currently be known, the potential impact must be considered significant and unavoidable until those projects are actually proposed and further analysis is conducted to determine if they would, in fact, exceed applicable emissions thresholds.

Developing an alternative that would avoid this impact is problematic because prescribing mitigation measures or other restrictions that require individual development projects to be small in scale would constrain the development of housing and run counter to the goals of the Housing Element. For instance, if the City were to adopt an alternative that would limit the size of developments in order to keep them below emissions screening thresholds, such an alternative could have the effect of discouraging developers from pursuing projects since required economies-of-scale might not be possible. This is particularly true for housing projects in the lower income ranges, where the scale of the project can have a direct bearing on the economic feasibility of a given project.

Further, an insistence on smaller projects would also limit the City's ability to effectively meet its RHNA requirements, since it is likely that one or more larger projects would be required to meet the unit goals articulated in the RHNA and the subsequent HEU. Adoption of such an alternative would therefore be disingenuous and would run counter to the requirements of State housing law, in that it would create direct obstacles to realization of the HEU's intent. Meeting the State-mandated housing requirements as manifested in the RHNA and applicable State law is the foremost objective of the HEU.

For each of these reasons, an alternative that would lessen the HEU's air quality impacts associated with larger projects was not carried forward for further analysis.

Cultural Resources

In Section 4.4 of this EIR, Cultural Resources, Impacts 4.4-1 and 4.4-3 determined that implementation of the HEU could result in a significant and unavoidable impact to historic architectural resources (i.e., historic buildings), even with prescribed mitigations. This was a conservative conclusion, and was based on the fact that the exact locations and types of future housing development is not currently known, and since potentially historic architectural resources occur through much of the City,¹ then it cannot be conclusively stated that an impact to those resources would not occur with the HEU's implementation. For instance, if a structure meeting the definition of a historic resource were to be demolished to make way for development of housing, then that impact would be significant. While the prescribed mitigation measures would require identification and documentation of the resource, they would not fully mitigate the impact to a less-than-significant level if that resource were permanently lost. Again, this is a conservative conclusion, and does not suggest that such impacts or that the demolition of historic structures are proposed. Rather, the conclusion is based on the fact that such impacts cannot be entirely ruled out when considering any and all projects that could arise in the City with implementation of the HEU.

As with the previous discussion on significant and unavoidable impacts related to air quality, developing an alternative that would avoid this impact by guaranteeing that no impacts could occur is problematic. For this topic, the only manner in which a significant impact could be guaranteed to not occur would be to disallow entirely any demolition of any structure that could be deemed historic. An alternative that would forbid any impacts to historic structures would place substantial limitations on the development of housing intended to meet the goals of the Housing Element.

Accordingly, consideration of an alternative that would impose such a condition was not carried forward for further analysis. Rather, this impact will be dealt with in the manner prescribed in Section 4.4 of this EIR, by requiring structures of eligible age to be assessed for eligibility as an historic resource, per federal and State criteria, and for prescribed actions to be taken prior to removal in the event that an affirmative finding is made.

Transportation

In Section 4.14 of this EIR, *Transportation*, Impact 4.14-2 determined that future development projects located more than a half-mile from the BART station could generate home-based vehicle-miles-traveled (VMT) per resident that would be greater than 85 percent of the Countywide average home-based VMT per resident. VMT reduction mitigation measures were prescribed, but the analysis conservatively determined that the effectiveness of those measures in reducing an individual project's VMT impact to a less-than-significant level could not be conclusively determined. Accordingly, the impact was found to be significant and unavoidable, even with mitigation.

In considering an alternative to avoid this impact, consideration was given to an alternative that would concentrate all upzoning associated with the HEU to those areas of the City that lie within the Lafayette BART Station Transit Priority Area (TPA). Generally, the TPA is comprised of the

¹ The definition of what constitutes an historic resource follows specific criteria as defined in federal, state, and City laws and regulations. For a description of those criteria, please see Section 4.4.3 of this EIR.

half-mile surrounding the BART station, which takes into account travel distance based on the circulation network (as opposed to “as the crow flies”). As stated in the EIR’s transportation analysis, projects within designated TPAs are generally presumed to have a less-than-significant impact to VMT, assuming certain conditions are met. By concentrating all HEU development within the TPA, the City could meet its RHNA obligations and also reduce the identified adverse VMT impacts of the HEU.

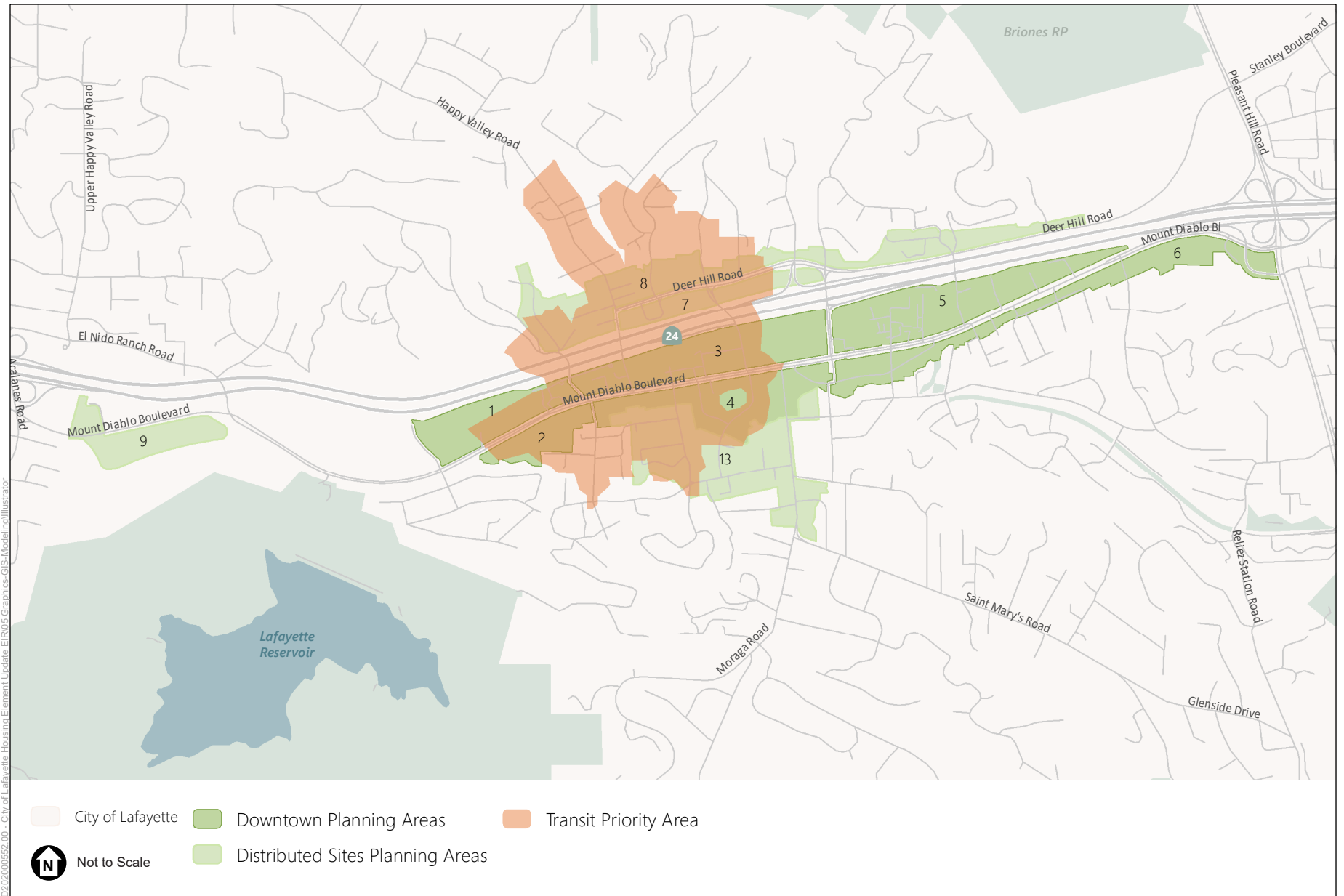
This alternative is potentially feasible. Implementing this alternative would require upzoning in certain areas of the City that are currently not a part of any of the HEU Planning Areas, particularly areas north of Deer Hill Road. This alternative would also presumably require greater densification within the TPA than is currently envisioned under either the HEU with Distributed Sites or the Downtown-Only Alternative. Regardless, this alternative was determined to be suitable for further analysis, and is therefore presented as Alternative 3 in Section 5.3, below.

5.3 Description of Alternatives Selected for Analysis

The following alternatives were selected for analysis based on the CEQA requirement for a No Project Alternative and the alternatives’ ability to attain the basic objectives of the project while reducing one or more significant environmental impact. These alternatives are described in further detail and analyzed below.

- **Alternative 1: No Project.** This alternative assumes that the HEU would not be adopted and that the goals and policies within the existing Housing Element would remain unchanged. Further, the City’s existing land use and zoning designations would also remain unchanged. Upzoning within portions of the City would not occur, however reasonably foreseeable development listed in Table 4.0-1 could still proceed, and residential development within the City would continue to be directed and governed in the manner that it is currently.
- **Alternative 2: Downtown-Only Alternative.** This alternative would accommodate the HEU’s multifamily housing sites within the existing limits of the Downtown commercial districts. The BART sites north of SR-24 would not be upzoned by the City, and the increased densities and associated units that would have been accommodated there would be met by increased allowable densities in the Downtown area. To do this, sites included in the City’s existing Housing Element that have not been developed would be retained, additional sites added, and allowable densities would increase from 35 units per acre to approximately 115 units per acre (although the densities could be somewhat lower if additional sites are identified). This alternative has already been evaluated at the same level of detail as the HEU Project with Distributed Sites in each of the topical sections of this EIR.
- **Alternative 3: Transit Priority Area Alternative.** This alternative would concentrate all of the HEU’s multifamily housing sites in those areas of the City that lie within the Lafayette BART Station Transit Priority Area (TPA), as defined by the Contra Costa Transportation Authority (CCTA).² Generally, the TPA is comprised of the half-mile surrounding the BART station. The boundaries of the TPA are shown in **Figure 5-1**. Portions of HEU Planning Areas 1, 2, 3, 4, 7, 8 and 13 fall within this boundary.

² The TPA boundary represents the half-mile around the BART Station based on walking distance to the station. The TPA is shown in Figure 4.14-4 of this EIR, and CCTA’s map of the TPA can be found at: <https://ccta1.maps.arcgis.com/apps/webappviewer/index.html?id=4135020bb272458f824152fedb78a088>. Jurisdictions also have the discretion to use a simple half-mile radius or “as the crow flies” measurement to define a TPA. CCTA guidelines don’t prohibit cities from choosing the more generous definition. For this analysis, the more realistic walking distance option was chosen.



SOURCE: Fehr & Peers, 2022

Lafayette Housing Element Update EIR



Figure 5-1
Lafayette BART Transit Priority Area

Further details on these alternatives, and an evaluation of environmental effects relative to the project, are provided below.

5.3.1 Alternative 1: No Project Alternative

CEQA requires consideration of the No Project Alternative, which addresses the impacts associated with not moving forward with the project. The purpose of analyzing the No Project Alternative is to allow decision-makers to compare the impacts of the project versus no project. Under the No Project Alternative, the HEU would not be adopted and the goals and policies within the City's existing Housing Element would remain unchanged. The land use and zoning designations currently in place would continue the land use decisions and development parameters that currently exist in the City. Development of additional housing would still occur in the City, including the projects listed in Table 4.0-1 of this EIR, but most development would occur at lower densities than would be accommodated under the HEU.

This alternative would not meet any of the objectives of the HEU as defined above in Section 5.2.1. The No Project Alternative would not update the City's Housing Element to comply with State-mandated housing requirements and to address the maintenance, preservation, improvement, and development of housing in the City between 2023 and 2031. The alternative would not include an inventory of housing sites, nor would it rezone the sites as necessary to meet the required RHNA and to provide an appropriate buffer. The alternative would not up-zone BART-owned properties in the vicinity of the Lafayette Bart Station to meet the minimum 75 dwelling units per-acre requirements of AB 2923.

5.3.2 Alternative 2: Downtown-Only Alternative

This alternative has already been described fully in Section 3.6.2 in Chapter 3 of this EIR, *Project Description*. It has also been evaluated at the same level of detail as the HEU Project with Distributed Sites in each of the topical sections of the EIR.

This alternative would accommodate almost all of the HEU's growth within the existing limits of the Downtown commercial districts. The BART sites north of SR-24 would not be upzoned by the City, and the increased densities and associated units that would have been accommodated there would be met by increased allowable densities in the Downtown area.³ To do this, sites included in the City's existing Housing Element that have not been developed would be retained, additional sites added, and allowable densities would increase from 35 units per acre to approximately 115 units per acre (although densities could be somewhat lower if additional sites are identified), as shown below in **Table 5-2**.

This alternative would meet the objectives of the HEU, in that it would update the City's Housing Element to comply with State-mandated housing requirements and to address the maintenance, preservation, improvement, and development of housing in the City between 2023 and 2031. The alternative would include an inventory of housing sites, and it would rezone the sites as necessary

³ Per the provisions of AB 2923, the City's not taking action to upzone the BART properties would not preclude BART from developing the sites at up to 75 dwelling units per acre.

to meet the required RHNA and to provide an appropriate buffer. The alternative would not upzone the BART sites, but would provide an equivalent number of units by increasing allowable densities in the Downtown area.

**TABLE 5-2
DOWNTOWN ONLY ALTERNATIVE**

Area Name	Opportunity Sites Acreage ¹	Existing Zoning	Allowable Density		Unit Yield ²
			Existing	Proposed	
1. Downtown West End (north)	5.29	MRA, C, P-1	35	115	456
2. Downtown West End (south)	2.75	C	35	115	237
3. Downtown Core (north)	4.73	RB, SRB, P-1	35	115	408
4. Downtown Core (south)	0.78	RB, SRB, P-1	35	115	67
5. Downtown East End (north)	12.53	C-1	35	115	1,081
6. Downtown East End (south)	4.1	C-1	35	115	361
Total Units					2,611
Scattered Sites ²					782
Total Inventory					3,393
Effective Buffer					61%

NOTES:

¹ The estimated combined acreage of opportunity parcels within each sub-area as shown in Figure 3-5.

² Assumes parcels would be built out at 85 percent of the maximum mathematical capacity, except those along Mt. Diablo Blvd, in which 75 percent of maximum capacity is assumed to accommodate mixed use development.

³ Scattered sites includes anticipated Citywide development of single-family units, anticipated accessory dwelling units, and housing sites outside of the study areas.

5.3.3 Alternative 3: Transit Priority Area Alternative

This alternative would concentrate all upzoning associated with the HEU to those areas of the City that lie within the Lafayette BART Station Transit Priority Area (TPA). Generally, the TPA is comprised of the half-mile surrounding the BART station, as defined by the CCTA.⁴ The boundaries of the TPA are shown in Figure 5-1. Portions of HEU Planning Areas 1, 2, 3, 4, 7, 8 and 13 fall within this boundary. Under this alternative, the upzoning that would occur in the TPA would presumably yield about the same number of housing units and required buffer as the HEU with Distributed Sites and the Downtown-Only Alternative.

This alternative was selected for analysis because it would lessen the HEU's impacts to vehicle-miles-traveled (VMT), which were determined in Impact 4.14-2 of this EIR to be significant and unavoidable, even with mitigation. As stated in that analysis, projects within designated TPAs are generally presumed to have a less-than-significant impact to VMT, assuming certain conditions

⁴ The TPA boundary represents the half-mile around the BART Station based on walking distance to the station. CCTA's map of the TPA can be found at: <https://ccta1.maps.arcgis.com/apps/webappviewer/index.html?id=4135020bb272458f824152fedb78a088>. Jurisdictions also have the discretion to use a simple half-mile radius or "as the crow flies" measurement to define a TPA. CCTA guidelines don't prohibit cities from choosing the more generous definition. For this analysis, the more realistic walking distance option was chosen.

are met. By concentrating all HEU development within the TPA, the City could meet its RHNA obligations and also reduce the identified adverse VMT impact of the HEU.

Implementing this alternative would require upzoning in certain areas of the City that are currently not a part of any of the HEU Planning Areas, particularly areas north of Deer Hill Road. This alternative would also presumably require greater densification within the TPA than is currently envisioned under either the HEU with Distributed Sites or the Downtown-Only Alternative. This is because the alternative would concentrate development within a smaller area than the other two alternatives.

5.4 Comparative Analysis of the Alternatives

This section presents a discussion of the comparative environmental effects of each alternative. This EIR analyzed the Downtown-Only Alternative (Alternative 2) at the same level of detail as the HEU with Distributed Sites. Therefore, this section summarizes the results of that analysis for Alternative 2, and a summary qualitative analysis is also provided for Alternative 3, the Transit Priority Area Alternative. The analysis also provides a summary qualitative assessment of impacts associated with the No Project Alternative (Alternative 1).

In this analysis, the HEU with Distributed Sites, the Downtown-Only Alternative, and the Transit Priority Area Alternative are referred to as the “build” alternatives. This is in contrast to the No Project (i.e., “No Build”) Alternative. The analysis assumes that each of the mitigation measures identified in the EIR for the HEU with Distributed Sites and the Downtown-Only Alternative would be applied to all of the “build” alternatives.

5.4.1 Comparison of Impacts Identified for the HEU with Distributed Sites and the Alternatives

Alternative 1: No Project Alternative

Under the No Project Alternative, the HEU would not be adopted and the goals and policies within the City’s existing Housing Element would remain unchanged. The land use and zoning designations currently in place would continue and development would be subject to policies and standards that currently exist in the City. This alternative would include development of projects listed in Table 4.0-1 and would not preclude additional development in the City under existing land use and zoning regulations.

Impacts

Aesthetics

The No Project Alternative would result in less-than-significant effects to aesthetics, compared to the significant and unavoidable impacts identified with the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. The City’s existing land use and

zoning designations would remain as they are currently, as would the City's development standards. While development would still occur, it would conform to existing development patterns and no adverse visual changes would occur.

Air Quality

The No Project Alternative would likely result in less-than-significant effects to air quality, compared to the significant and unavoidable impacts identified with the other alternatives.

Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. This lesser-intensity development would presumably emit fewer emissions, although larger projects could still potentially surpass applicable regulatory criteria. Overall, however, the impact would be less than the other alternatives.

Biological Resources

The No Project Alternative would result in less-than-significant impacts to biological resources, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Regardless, potential impacts to biological resources would be subject to the same standards and regulatory requirements as the other alternatives, and the impacts of the No Project Alternative would therefore be similar to that of the other alternatives.

Cultural

The No Project Alternative would result in the same significant and unavoidable impacts to cultural resources as the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. However, since the location and extent of that development is not currently known, there is no guarantee that individual projects proposed under the existing Housing Element would not adversely affect cultural resources during development, particularly historic buildings. Such an effect and loss of those resources would be significant and unavoidable, similar to the other alternatives.

Energy

The No Project Alternative would result in less-than-significant impacts to energy, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Regardless, any development would still be held to the same energy standards, regardless of which alternative is adopted, and the impact would be less than significant.

Geology and Paleontological Resources

The No Project Alternative would result in less-than-significant impacts to geology and paleontological resources, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that

provided for under the other alternatives. Regardless, potential impacts related to geology and paleontological resources would be subject to the same standards and regulatory requirements as the other alternatives, and the impacts of the No Project Alternative would therefore be similar to that of the other alternatives.

Greenhouse Gas Emissions

The No Project Alternative would result in less-than-significant effects to greenhouse gas emissions, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. This lesser-intensity development would presumably emit fewer greenhouse emissions than the other alternatives. Overall, the impact would be less than the other alternatives.

Hazards and Hazardous Materials

The No Project Alternative would result in less-than-significant impacts to hazards and hazardous materials, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Regardless, potential impacts related to hazards and hazardous materials would be subject to the same standards and regulatory requirements as the other alternatives, and the impacts of the No Project Alternative would therefore be similar to that of the other alternatives.

Hydrology and Water Quality

The No Project Alternative would result in less-than-significant impacts to hazards and hazardous materials, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Regardless, potential impacts related to hydrology and water quality would be subject to the same standards and regulatory requirements as the other alternatives, and the impacts of the No Project Alternative would therefore be similar to that of the other alternatives.

Land Use and Planning

The No Project Alternative would result in significant and unavoidable impacts related to land use and planning, as compared to the less-than-significant impacts associated with the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Under the No Project Alternative, the HEU would not be adopted and the goals and policies within the City's existing Housing Element would remain unchanged. The land use and zoning designations currently in place would continue under the land use decisions and development parameters that currently exist in the City. However, this alternative would not provide housing to fulfill the requirements of State law or to meet the City's RHNA requirements, which would be a significant and unavoidable impact, as compared to the less-than-significant impacts associated with the other alternatives.

Noise and Vibration

The No Project Alternative would result in less-than-significant impacts to noise and vibration, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Regardless, potential impacts related to noise and vibration would be subject to the same standards and regulatory requirements as the other alternatives, and the impacts of the No Project Alternative would therefore be similar to that of the other alternatives.

Population and Housing

The No Project Alternative would result in a less than significant impact to population and housing, similar to the other alternatives. Under the No Project Alternative, the HEU would not be adopted and the goals and policies within the City’s existing Housing Element would remain unchanged. Resulting population growth would be less, and would be consistent with the City’s current General Plan and zoning, thus constituting “planned” growth.

Public Services and Recreation

The No Project Alternative would result in less-than-significant impacts to public services and recreation, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Regardless, potential impacts related to public services and recreation would be subject to the same standards and regulatory requirements as the other alternatives, and the impacts of the No Project Alternative would therefore be similar to that of the other alternatives.

Transportation

The No Project Alternative would result in less-than-significant impacts to transportation and traffic, compared to the significant and unavoidable (with mitigation) impacts identified with the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Per capita VMT would vary depending on the location and type of new development, and each project would require separate analysis. Total VMT would be less since there would be less development, and the impact would be less than the other alternatives.

Tribal Cultural Resources

The No Project Alternative would result in less-than-significant impacts to tribal cultural resources, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Regardless, potential impacts to tribal cultural resources would be subject to the same tribal consultation and regulatory requirements as the other alternatives, and the impacts of the No Project Alternative would therefore be similar to that of the other alternatives.

Utilities and Service Systems

The No Project Alternative would result in less-than-significant impacts to utilities and public services, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Regardless, potential impacts related to utilities and service systems would be subject to the same standards and regulatory requirements as the other alternatives, and the impacts of the No Project Alternative would therefore be similar to that of the other alternatives.

Wildfire

The No Project Alternative would result in less-than-significant impacts to wildfire, similar to the other alternatives. Under the No Project Alternative, residential development in the City could still take place, but at a lesser intensity than that provided for under the other alternatives. Regardless, potential impacts related to wildfire would be subject to the same standards and regulatory requirements as the other alternatives, and the impacts of the No Project Alternative would therefore be similar to that of the other alternatives.

Alternative 2: Downtown-Only Alternative

This alternative would accommodate the HEU's multifamily housing sites within the existing limits of the Downtown commercial districts. The BART sites north of SR-24 would not be upzoned, and the increased densities and associated units that would have been accommodated there would be met by increased allowable densities in the Downtown area. To do this, sites included in the City's existing Housing Element that have not been developed would be retained, additional sites added, and allowable densities would increase from 35 units per acre to approximately 115 units per acre (although the densities could be somewhat lower if additional sites are identified).

This alternative has already been described fully in Section 3.6.2 in Chapter 3 of this EIR, *Project Description*. It has also been evaluated at the same level of detail as the HEU with Distributed Sites in each of the topical sections in Chapter 4 of this EIR.

Impacts

Aesthetics

As discussed in Section 4.1 of this EIR, the Downtown-Only Alternative would result in significant and unavoidable aesthetic impacts, the same as the HEU with Distributed Sites and the Transit Priority Area Alternative. Development under this alternative would concentrate development in the Downtown area on either side of Mount Diablo Boulevard. The resulting densification would result in substantial changes to the area through increased density, greater scale, and increased height of residential structures. These changes would also occur under both the HEU with Distributed Sites and the Transit Priority Area Alternative, though with the Downtown-Only and the Transit Priority Area Alternatives, the impact would affect a smaller area and be more intense because the degree of densification would be greater than the HEU with Distributed Sites.

Air Quality

As discussed in Section 4.2 of this EIR, the Downtown-Only Alternative would result in a significant and unavoidable air quality impact, the same as the HEU with Distributed Sites and the Transit Priority Area Alternative. The analysis conservatively found that since emissions of larger residential development projects cannot currently be known, the potential criteria pollutant emissions must be considered significant and unavoidable despite required mitigation.

Conversely, exposure of sensitive receptors to particulate matter and TAC emissions were found to be less than significant with mitigation, similar to with the HEU with Distributed Sites and the Transit Priority Area Alternative.

Biological Resources

As discussed in Section 4.3 of this EIR, the Downtown-Only Alternative would result in less-than-significant biological resources impacts, the same as the HEU with Distributed Sites, and the other alternatives. Potential impacts to biological resources under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Cultural and Tribal Cultural Resources

As discussed in Section 4.4 of this EIR, the Downtown-Only Alternative would result in the same significant and unavoidable impacts to cultural resources as the HEU with Distributed Sites and the other alternatives. Development under this alternative would concentrate development in the Downtown area on either side of Mount Diablo Boulevard. However, since the location and extent of that development is not currently known, there is no guarantee that individual projects proposed under this alternative would not adversely affect cultural resources during development, particularly historic buildings. Such an effect and loss of those resources would be significant and unavoidable, similar to the HEU with Distributed Sites and each of the alternatives.

Energy

As discussed in Section 4.5 of this EIR, the Downtown-Only Alternative would result in less-than-significant energy impacts, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to energy under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Geology and Paleontological Resources

As discussed in Section 4.6 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to geology and paleontological resources, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to geology energy under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Greenhouse Gas Emissions

As discussed in Section 4.7 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to greenhouse gas emissions, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to greenhouse gas emissions under each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Hazards and Hazardous Materials

As discussed in Section 4.8 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to hazards and hazardous materials, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to hazards and hazardous materials under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Hydrology and Water Quality

As discussed in Section 4.9 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to hydrology and water quality, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to hydrology and water quality under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Land Use and Planning

As discussed in Section 4.10 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to land use and planning, the same as the HEU with Distributed Sites, and the Transit Priority Area Alternative. Potential impacts related to land use and planning under the HEU with Distributed Sites and each of the “build” alternatives would be less than significant because the City’s General Plan polices and zoning standards would be amended as needed to ensure consistency.

Noise and Vibration

As discussed in Section 4.11 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to noise and vibration, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to noise and vibration under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Population and Housing

As discussed in Section 4.12 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to population and housing, the same as the HEU with Distributed Sites and other alternatives. Potential population and housing growth under the HEU with Distributed Sites and each of the alternatives would be “planned” growth because it would be

consistent with General Plan polices and zoning standards (amended as needed), and the impacts under each would therefore be similar.

Public Services and Recreation

As discussed in Section 4.13 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to public services and recreation, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to public services and recreation under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Transportation

As discussed in Section 4.14 of this EIR, the Downtown-Only Alternative would result in significant and unavoidable transportation impacts, the same as the HEU with Distributed Sites, but not the Transit Priority Area Alternative. In Section 4.14 of this EIR, *Transportation*, Impact 4.14-2 determined that future development projects located more than a half-mile from the BART station could generate home-based vehicle-miles-traveled (VMT) per resident that would be greater than 85 percent of the Countywide average home-based VMT per resident. VMT reduction mitigation measures were prescribed, but the analysis conservatively determined that the effectiveness of those measures in reducing an individual project's VMT impact to a less-than-significant level could not be conclusively determined. Accordingly, the impact was found to be significant and unavoidable, even with mitigation. This same finding would apply to both the HEU with Distributed Sites and the Downtown-Only Alternative, but not the Transit Priority Area Alternative because that alternative would locate all sites within a half-mile of the BART station.

Tribal Cultural Resources

As discussed in Section 4.15 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to tribal cultural resources, the same as the HEU with Distributed Sites and other alternatives. Potential impacts to tribal cultural resources under the HEU with Distributed Sites and each of the "build" alternatives would be subject to the same regulatory requirements and mitigation, and the impacts under each would therefore be similar.

Utilities and Service Systems

As discussed in Section 4.16 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to utilities and service systems, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to utilities and service systems under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Wildfire

As discussed in Section 4.17 of this EIR, the Downtown-Only Alternative would result in less-than-significant impacts to wildfire, the same as the HEU with Distributed Sites and other alternatives. While the Downtown-Only Alternative would not include planning areas that are in

Very High Fire Severity Zones, and would therefore have no impact related to the potential for increased risk (Impact 4.17-2), other potential impacts related to emergency response and evacuation under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Alternative 3: Transit Priority Area Alternative

This alternative would concentrate all of the HEU's multifamily housing sites in those areas of the City that lie within the Lafayette BART Station Transit Priority Area (TPA). Generally, the TPA is comprised of the half-mile surrounding the BART station. The boundaries of the TPA are shown in Figure 4.14-4 in Section 4.14 of this EIR, Transportation. Portions of HEU Planning Areas 1, 2, 3, 4, 7, 8 and 13 fall within this boundary.

Impacts

Aesthetics

The Transit Priority Area Alternative would result in significant and unavoidable aesthetic impacts, the same as the HEU with Distributed Sites and the Downtown-Only Alternative, although like the Downtown-Only Alternative, it would affect a smaller area than the HEU with Distributed Sites, albeit with higher densities and more noticeable visual change.

Development under this alternative would concentrate development within those areas of the City lying within one-half mile of the Lafayette BART Station. The resulting densification would result in substantial changes to the area through increased density, greater scale, and increased height of residential structures. These changes would also occur under both the HEU with Distributed Sites and the Downtown-Only Alternative, although with the HEU with Distributed Sites, densities would be somewhat less and would be spread over a larger area.

Air Quality and Climate Change

The Transit Priority Area Alternative would result in a significant and unavoidable air quality impact, the same as the HEU with Distributed Sites and other alternatives. The analysis of the HEU with Distributed Sites and the Downtown-Only Alternative conservatively found that since emissions of larger residential development projects cannot currently be known, the potential criteria pollutant emissions must be considered significant and unavoidable despite required mitigation. Conversely, exposure of sensitive receptors to particulate matter and TAC emissions were found to be less than significant with mitigation. The Transit Priority Area Alternative would allow large residential development projects and would therefore result in the same impacts.

Biological Resources

The Transit Priority Area Alternative would result in less-than-significant biological resources impacts, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to biological resources under the HEU with Distributed Sites and each of the "build"

alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Cultural and Tribal Cultural Resources

The Transit Priority Area Alternative would result in the same significant and unavoidable impacts to cultural resources as the HEU with Distributed Sites and other alternatives.

Development under this alternative would concentrate development within those areas of the City lying within one-half mile of the Lafayette BART Station. However, since the location and extent of that development is not currently known, there is no guarantee that individual projects proposed under this alternative would not adversely affect cultural resources during development, particularly historic buildings. Such an effect and loss of those resources would be significant and unavoidable, similar to the HEU with Distributed Sites and each of the alternatives.

Energy

The Transit Priority Area Alternative would result in less-than-significant energy impacts, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to energy under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Geology and Paleontological Resources

The Transit Priority Area Alternative would result in less-than-significant impacts related to geology and paleontological resources, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to geology and paleontological resources under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Hazards and Hazardous Materials

The Transit Priority Area Alternative would result in less-than-significant impacts related to hazards and hazardous materials, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to hazards and hazardous materials under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Hydrology and Water Quality

The Transit Priority Area Alternative would result in less-than-significant impacts related to hydrology and water quality, the same as the HEU with Distributed Sites and other alternatives. Potential impacts related to hydrology and water quality under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Land Use and Planning

The Transit Priority Area Alternative would result in less-than-significant impacts to land use and planning, the same as the HEU with Distributed Sites and other “build” alternatives.

Potential impacts related to land use and planning under the HEU with Distributed Sites and each of the “build” alternatives would be less than significant because each would amend the City’s General Plan polices and zoning standards as needed to ensure consistency with City policies and standards, and the impacts under each would therefore be similar.

Noise and Vibration

The Transit Priority Area Alternative would result in less-than-significant impacts to noise and vibration, the same as the HEU with Distributed Sites and other alternatives.

Potential impacts related to noise and vibration under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Population and Housing

The Transit Priority Area Alternative would result in less-than-significant impacts to population and housing, the same as the HEU with Distributed Sites and other alternatives.

Potential population and housing growth under the HEU with Distributed Sites and each of the alternatives would be “planned” growth because the growth would be consistent with General Plan polices and zoning standards (amended as needed), and the impacts under each would therefore be similar.

Public Services and Recreation

The Transit Priority Area Alternative would result in less-than-significant impacts to public services and recreation, the same as with the HEU with Distributed Sites and the other alternatives.

Potential impacts related to public services and recreation under the HEU with Distributed Sites and each of the alternatives would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar.

Transportation and Traffic

The Transit Priority Area Alternative would result in less-than-significant impacts to transportation, which would be less than either the HEU with Distributed Sites or the Downtown-Only Alternative, both of which were found to result in significant and unavoidable impacts.

In Section 4.14 of this EIR, *Transportation*, Impact 4.14-2 determined that future development projects located more than a half-mile from the BART station could generate home-based vehicle-miles-traveled (VMT) per resident that would be greater than 85 percent of the Countywide average home-based VMT per resident. VMT reduction mitigation measures were prescribed, but the analysis conservatively determined that the effectiveness of those measures in reducing an individual project’s VMT impact to a less-than-significant level could not be conclusively determined. Accordingly, the VMT impacts for both the HEU with Distributed Sites and the Downtown-Only Alternative were found to be significant and unavoidable, even with mitigation.

The Transit Priority Area Alternative, on the other hand, would concentrate development within those areas of the City lying within one-half mile of the Lafayette BART Station and, as stated in the EIR's transportation analysis, projects within designated TPAs are generally presumed to have a less-than-significant impact to VMT, assuming certain conditions are met. By concentrating all HEU development within the TPA, the City could meet its RHNA obligations and also reduce the identified adverse VMT impacts of the HEU to a less-than-significant level.

Tribal Cultural Resources

The Transit Priority Area Alternative would result in less-than-significant impacts to tribal cultural resources, the same as the HEU with Distributed Sites and other alternatives. Potential impacts to tribal cultural resources under the HEU with Distributed Sites and each of the alternatives would be subject to the regulatory requirements and mitigation, and the impacts under each would therefore be similar.

Utilities and Service Systems

The Transit Priority Area Alternative would result in potentially significant impacts to utilities and service systems, more than the HEU with Distributed Sites and other alternatives.

Development of the Transit Priority Area alternative into areas north of SR-24 would increase densities up into Happy Valley Road and into other areas north of Deer Hill Road, away from existing roadway and utility infrastructure. Extending this infrastructure into these areas would result in greater environmental effects, some of which could be significant. While the full extent of these improvements cannot be currently known, it can be assumed that they would be greater than both the HEU with Distributed Sites or the Downtown-Only Alternative, both of which are located adjacent to existing arterial roadways and utility pathways.

Wildfire

The Transit Priority Area Alternative would result in less-than-significant impacts to wildfire, but more than the HEU with Distributed Sites and other alternatives. Both the HEU with Distributed Sites and the Transit Priority Area Alternative would place housing within the Very High Fire Hazard Severity Zone (VHFHSZ) north of SR-24, but the Transit Priority Area Alternative would push development further into that zone and into areas further away from evacuation routes. Only the Downtown-Only Alternative would fully avoid the VHFHSZ, and would therefore have no impact related to the potential for increased risk (Impact 4.17-2). Other potential impacts related to emergency response and evacuation would be subject to the same standards and regulatory requirements, and the impacts under each would therefore be similar under the HEU with Distributed Sites and all alternatives.

5.4.2 Overall Comparison of the Alternatives

The analysis of the alternatives is summarized and compared in two tables: **Table 5-3** provides a summary of impact levels within all environmental topic areas. Overall, this table shows that some alternatives perform better or worse than others in reducing or avoiding the HEU with Distributed Sites' impacts.

**TABLE 5-3
ALTERNATIVE IMPACT SUMMARY AND COMPARISON**

Impact	HEU with Distributed Sites	Alternative 1: No Project	Alternative 2: Downtown-Only Alternative	Alternative 3: Transit Priority Area Alternative
Aesthetics	Significant and Unavoidable	Less than Significant ↓	Significant and Unavoidable ↑	Significant and Unavoidable ↑
Air Quality	Significant and Unavoidable	Less than Significant ↓	Significant and Unavoidable ↑/↓	Significant and Unavoidable ↑/↓
Biological Resources	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Less than Significant ↑/↓
Cultural Resources	Significant and Unavoidable	Significant and Unavoidable ↑/↓	Significant and Unavoidable ↑/↓	Significant and Unavoidable ↑/↓
Energy	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Less than Significant ↑/↓
Geology & Paleontological Resources	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Less than Significant ↑/↓
Greenhouse Gas Emissions	Less than Significant	Less than Significant	Less than Significant	Less than Significant
Hazards and Hazardous Materials	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Less than Significant ↑/↓
Hydrology and Water Quality	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Less than Significant ↑/↓
Land Use and Planning	Less than Significant	Significant and Unavoidable ↑	Less than Significant ↑/↓	Less than Significant ↑/↓
Noise	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Less than Significant ↑/↓
Population and Housing	Less than Significant	Significant and Unavoidable ↑	Less than Significant ↑/↓	Less than Significant ↑/↓
Public Services and Recreation	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Less than Significant ↑/↓
Transportation	Significant and Unavoidable	Less than Significant ↓	Significant and Unavoidable ↑/↓	Less than Significant ↓
Tribal Cultural Resources	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Less than Significant ↑/↓
Utilities and Service Systems	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Potentially Significant ↑
Wildfire	Less than Significant	Less than Significant ↓	Less than Significant ↑/↓	Less than Significant ↑

NOTES:

↓ - The impact is less than the proposed project.

↑ - The impact is greater than the proposed project.

↑/↓ - The impact is about the same as the proposed project.

5.5 Environmentally Superior Alternative

Based on the evaluation described in this section, both the No Project Alternative and the Transit Priority Area Alternative would be the most environmentally superior alternatives with the fewest environmental impacts. However, the No Project Alternative would not meet any of the basic objectives of the project, nor is it legally feasible to adopt and implement.

CEQA requires that a second alternative be identified when the “No Project” alternative is the environmentally superior alternative (CEQA *Guidelines*, Section 15126.6(e)). Therefore, the **Transit Priority Area Alternative** would be the Environmentally Superior Alternative for the purpose of this analysis.

Under the Transit Priority Area Alternative, the following significant and unavoidable impact would no longer occur:

Transportation Impact 4.14-2: Implementation of the HEU could generate home-based VMT per resident that is greater than 85 percent of the Countywide average home-based VMT per resident.

Under the Transit Priority Area Alternative, the following significant impacts would remain:

Aesthetics Impact 4.1-1: Implementation of the HEU could have a substantial adverse effect on a scenic vista. (*Significant and Unavoidable Impact*)

Aesthetics Impact 4.1-3: Implementation of the HEU could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. (*Significant and Unavoidable Impact*)

Aesthetics Impact 4.1-5: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could result in a substantial adverse effect on a scenic vista. (*Significant and Unavoidable Impact*)

Aesthetics Impact 4.1-7: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. (*Significant and Unavoidable Impact*)

Air Quality Impact 4.2-3: Construction and operation of individual development projects following adoption of the HEU could result in a cumulatively considerable net increase in criteria pollutants for which the region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard. (*Significant and Unavoidable Impact, with Mitigation*)

Cultural Resources Impact 4.4-1: Implementation of the HEU could cause a substantial adverse change in the significance of an architectural historic resource pursuant to CEQA Guidelines Section 15064.5. (*Significant and Unavoidable Impact, with Mitigation*)

Cultural Resources Impact 4.4-3: Implementation of the HEU, in combination with other cumulative development, could cause a substantial adverse change in the significance of

architectural historic resources pursuant to CEQA Guidelines Section 15064.5. (*Significant and Unavoidable Impact, with Mitigation*)

Even though the Transit Priority Area Alternative would still result in significant-and-unavoidable (with mitigation) temporary impacts associated with both the HEU with Distributed Sites and the Downtown-Only Alternative, it would eliminate the significant-and-unavoidable (with mitigation) impact related to home-based VMT while still meeting the objectives of the other two “build” alternatives.

However, the Transit Priority Area Alternative would also result in other effects that would not be present with the HEU with Distributed Sites and the Downtown-Only Alternative. Development of the Transit Priority Area alternative into areas north of SR-24 would increase densities up into Happy Valley Road and into other areas north of Deer Hill Road, away from existing roadway and utility infrastructure. Extending that infrastructure into these areas would result in greater environmental effects, some of which could be significant. While the full extent of these improvements cannot be currently known, it can be assumed that they would be substantially greater than both the HEU with Distributed Sites or the Downtown-Only Alternative, both of which are located adjacent to existing arterial roadways and utility pathways.

Further, both the HEU with Distributed Sites and the Transit Priority Area Alternative would place housing within the VHFHSZ north of SR-24, but the Transit Priority Area Alternative would push development further into that zone and into areas further away from evacuation routes. Only the Downtown-Only Alternative would fully avoid the VHFHSZ, and would therefore have no impact related to the potential for increased risk.

In addition, the Transit Priority Area Alternative would develop substantial quantities of housing north of SR-24, which is an area that is currently not served by commercial services like grocery stores and other shopping and services, nor is the area adjacent to Lafayette’s employment centers, the bulk of which are located south of SR-24. As such, persons residing in this area would be required to travel south of SR-24 to reach those services and places of employment, which could have the effect of diluting the alternative’s VMT benefits.

In summary, while the Transit Priority Area Alternative would potentially reduce VMT based on the alternative’s location within a transit priority area, the alternative’s VMT benefits might not be fully realized based on the location of the increased development that would occur north of SR-24 and its limited connections to commercial services and places of employment. Further, the alternative would result in additional impacts related to the provision of improved roadways and utility infrastructure, and some of those impacts could be significant, or at least greater than either the HEU with Distributed Sites or the Downtown-Only Alternative.

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CHAPTER 6

Other Statutory Considerations

Consistent with CEQA *Guidelines* Section 15126.2, this section discusses significant and unavoidable impacts, significant irreversible environmental changes, growth-inducing impacts, cumulative impacts, and impacts found to be less than significant.

6.1 Significant and Unavoidable Adverse Impacts

Potentially significant environmental impacts that would result from implementation of the HEU are evaluated in the various subsections of Chapter 4.0, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR. With implementation of standard conditions and requirements, and mitigation measures identified for each resource area significantly impacted, many of the potentially significant impacts resulting from implementation of the HEU would be reduced to a less than significant level. The impacts listed below would remain significant and unavoidable even after mitigation.

Aesthetics Impact 4.1-1: Implementation of the HEU could have a substantial adverse effect on a scenic vista. *(Significant and Unavoidable Impact)*

Aesthetics Impact 4.1-3: Implementation of the HEU could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. *(Significant and Unavoidable Impact)*

Aesthetics Impact 4.1-5: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could result in a substantial adverse effect on a scenic vista. *(Significant and Unavoidable Impact)*

Aesthetics Impact 4.1-7: Implementation of the HEU, when combined with other past, present, or reasonably foreseeable projects, could substantially degrade the existing visual character or quality of public views or conflict with applicable zoning and other regulations governing scenic quality. *(Significant and Unavoidable Impact)*

Air Quality Impact 4.2-3: Construction and operation of individual development projects following adoption of the HEU could result in a cumulatively considerable net increase in criteria pollutants for which the region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard. *(Significant and Unavoidable Impact, with Mitigation)*

Cultural Resources Impact 4.4-1: Implementation of the HEU could cause a substantial adverse change in the significance of an architectural historic resource pursuant to CEQA *Guidelines* Section 15064.5. *(Significant and Unavoidable Impact, with Mitigation)*

Cultural Resources Impact 4.4-3: Implementation of the HEU, in combination with other cumulative development, could cause a substantial adverse change in the significance of architectural historic resources pursuant to CEQA Guidelines Section 15064.5. (*Significant and Unavoidable Impact, with Mitigation*)

Transportation Impact 4.14-2: Implementation of the HEU could generate home-based VMT per resident that is greater than 85 percent of the Countywide average home-based VMT per resident. (*Significant and Unavoidable Impact, with Mitigation*)

6.2 Significant Irreversible Impacts

Pursuant to Section 15126.2(c) of the CEQA *Guidelines*, an EIR must consider any significant irreversible environmental changes that would be caused by a project should it be implemented. Section 15126.2(c) states:

“Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.”

Resources that would be permanently and continually consumed by implementation of the HEU include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources. Construction activities related to the various development projects that could result from implementation of the HEU, though analyzed in the applicable technical section of this EIR, would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline for automobiles and construction equipment. With respect to the operational activities associated with the HEU’s implementation, compliance with all applicable building codes, as well as EIR mitigation measures, would ensure that all natural resources are conserved to the maximum extent practicable. It is also possible that new technologies or systems would emerge, or would become more cost-effective or user-friendly, and would further reduce reliance upon nonrenewable energy resources.

The CEQA *Guidelines* also require a discussion of the potential for irreversible environmental damage caused by an accident associated with proposed projects. During the construction phase of the various development projects that could result from implementation of the HEU, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. Once constructed, the completed structures would use and store small quantities of chemicals typical in residences, such as household cleaning solutions, paints and thinners, and motor fuel (e.g., motor vehicles and lawn mowers). As stated in Section 4.8, *Hazards and Hazardous Materials*, of this EIR, these materials are regulated through a series of federal, state, and local laws and regulations. Compliance with these existing requirements would

ensure that the potential to cause significant irreversible environmental damage from an accident or upset of hazardous materials would be less than significant.

6.3 Growth-Inducing Impacts

The CEQA *Guidelines* require that an EIR evaluate the growth-inducing impacts of a proposed action (Section 15126.2[d]). A growth-inducing impact is defined by the CEQA *Guidelines* as:

[T]he ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth.... It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement could result if a project involved construction of new housing. A project can have indirect growth-inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Increases in population could tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. The CEQA *Guidelines* also require analysis of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The timing, magnitude, and location of land development and population growth is based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Because general plans define the location, type, and intensity of growth within a given jurisdiction, they are the primary means of regulating development and growth in California. Since the Housing Element is a part of the City's General Plan, any updates to that element would by definition provide a means to plan for and regulate development in the areas considered as part of the HEU.

The growth inducing impacts analysis addresses the potential of the HEU's implementation for unplanned growth inducement in the City of Lafayette and broader area. Under CEQA, a project is generally considered to be growth-inducing if it results in any one of the following:

1. Extension of urban services or infrastructure into a previously unserved area;
2. Extension of a transportation corridor into an area that may be subsequently developed; or
3. Removal of obstacles to population growth (such as provision of major new public services to an area where those services are not currently available).

6.3.1 Extension of Urban Services or Infrastructure

The City of Lafayette, particularly in the areas under consideration for both the HEU with Distributed Sites Alternative and the Downtown-Only Alternative, is essentially built out. Urban services and infrastructure like roadways, utilities, and public services police and fire protection are already established and have been in place for decades. The absence of these types of services is not a constraint to development in the various HEU planning areas. With the exception of the BART parking lots and the DeSilva Sites planning areas (Planning Areas 7 and 9, respectively), all of the HEU's planning areas are already developed with residential or commercial uses, and are served by existing urban infrastructure and services. For the BART and DeSilva Sites planning areas, urban infrastructure and services lie immediately adjacent. Although on-site infrastructure improvements would need to be constructed to facilitate development in those areas, development of those areas for residential uses would only require a connection to existing services. In other words, the absence of these types of services does not present a constraint to development in any of the HEU planning areas, and the HEU's implementation would not remove any obstacles to development of those areas. Consequently, implementation of the HEU would not induce unplanned growth in the City or broader area due to extension of urban services or infrastructure.

6.3.2 Extension of Transportation Corridors

As stated in the discussion above, the City is largely built out and is already served by existing transportation facilities and roadways that lie immediately adjacent to the various HEU planning areas. The established transportation network in the City and adjoining areas offers local and regional access to and from all of the HEU planning areas. Any onsite circulation that would be required in the HEU planning areas would be facilitated by construction of internal streets that would connect to existing and adjacent roadways. Consequently, implementation of the HEU would not induce unplanned growth in the City or broader area due to extension of transportation corridors.

6.3.3 Removal of Obstacles to Population Growth

Section 15126.2(d) of the CEQA *Guidelines* states that an EIR should discuss “the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” Growth can be induced in a number of ways, including through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through precedent-setting action. CEQA requires a discussion of how a project could increase population, employment, or housing in the areas surrounding the project site as well as an analysis of the infrastructure and planning changes that would be necessary to implement the project.

Projects that are characterized as having significant impacts associated with the inducement of growth are frequently those that would remove obstacles to additional growth, such as the expansion of sewer or water facilities that would permit construction of more development in the service area covered by the new facilities. The HEU's implementation would not remove obstacles

to additional growth in this manner, as it would be undertaken in an area that currently is served by all utilities and services. Similarly, if a project would overburden existing infrastructure so as to require construction of new facilities that could result in significant impacts, then the project may be deemed to have a significant growth-inducing impact. As discussed in the Section 4.16, *Utilities and Service Systems*, the project would not require such additional public service facilities.

Section 4.12, *Population and Housing*, analyzes the project's overall effect on population and housing, including growth-inducing considerations. In terms of housing, implementation of the HEU could theoretically provide for development of between 3,356 (HEU with Distributed Sites) and 3,393 (Downtown-Only Alternative) residential units. Under such a worst-case scenario, the population of the City would increase by approximately 8,390 persons under the HEU with Distributed Sites scenario, and 8,483 persons for the Downtown-Only Alternative, if the Contra Costa Transportation Authority's (CCTA) travel demand model's persons-per-household factor is used to make the calculation.¹

This planned population growth in the City has been projected and directed by the Association of Bay Area Governments (ABAG) as part of the 6th Housing Element Cycle to meet the region's housing needs allocation. Implementation of the HEU would require an amendment to the City's General Plan and Zoning Code to accommodate the projected growth. Because general plans define the location, type, and intensity of growth within a given jurisdiction, they are the primary means of regulating development and growth in California. Since the Housing Element is a part of the City's General Plan, any updates to that element would by definition provide a means to plan for and regulate development in the areas considered as part of the HEU. Additional new residential development that could derive from the HEU's implementation would therefore be consistent with the growth projections in the City's General Plan as well as applicable regional plans adopted by ABAG and other relevant entities, and would help the region meet its regional housing allocation requirements. Consequently, implementation of the HEU would not induce substantial unplanned population growth that was not previously anticipated.

6.3.4 Conclusions

Implementation of the HEU would facilitate increased development of residential uses in specific areas of the City. However, it is important to note that while the law requires the HEU to include an inventory of housing sites and requires the City to zone those sites for multifamily housing, the City is not required to actually develop housing on these sites. Future development on the identified sites will be up to the property owners and will be largely dependent on market forces and (in the case of affordable housing) available subsidies.

Regardless, any increased development that could arise in these areas following the HEU's implementation would be developed in compliance with the General Plan land use and zoning designations. Although on-site infrastructure improvements would occur as part of this development, these improvements would connect to existing infrastructure. No extensions or

¹ HEU with Distributed Sites: 3,356 housing units x 2.5 persons per household = 8,390 persons.
Downtown-Only Scenario: 3,393 housing units x 2.5 persons per household = 8,483 persons.

expansions of infrastructure systems or roads would be required beyond what is needed to serve project-specific demand. Consequently, the HEU's implementation would not induce unplanned growth in the City or broader area due to extension of urban services or infrastructure. For the above-described reasons, implementation of the HEU would not cause a new impact related to a substantial increase in population growth, and would be in line with the projected growth planned for the area as defined in the City's General Plan and applicable regional planning directives.

6.4 Cumulative Impacts

CEQA defines cumulative impacts as two or more individual impacts which, when considered together, are substantial or which compound or increase other environmental impacts. The cumulative analysis is intended to describe the "incremental impact of the project when added to other, closely related past, present, or reasonably foreseeable future projects" that can result from "individually minor but collectively significant projects taking place over a period of time." (CEQA Guidelines Section 15355) The analysis of cumulative impacts is a two-phase process that first involves the determination of whether a project, together with existing and reasonably foreseeable projects, would result in a significant impact. If there would be a significant cumulative impact of all such projects, the EIR must determine whether the project's incremental "contribution" is cumulatively considerable, in which case, the cumulative impact would be significant (CEQA Guidelines Section 15130).

The analysis of each environmental topic included in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR considers possible cumulative impacts and identifies circumstances in which the project would contribute to significant cumulative impacts.

Cumulative significant and unavoidable impacts to aesthetics (Impacts 4.1-5 and 4.1-7), air quality (Impact 4.2-3), cultural resources (Impact 4.4-3), and transportation (Impact 4.14-2) were identified in the analysis. These cumulative analyses assumed that the mitigation measures identified in this EIR would be implemented. Nonetheless, these identified impacts would be cumulatively considerable and not fully mitigable. No other cumulative impacts were determined to be significant after mitigation.

CHAPTER 7

Report Preparation

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