

**City of Clayton
6th Cycle Housing Element Update and Associated
Land Use Element and Zoning Code Amendments**

**Draft Environmental Impact Report
(State Clearinghouse # 2022030086)**

Lead Agency:

City of Clayton
Community Development Department
6000 Heritage Trail
Clayton, California 94517



Consultant to the City:

MIG, Inc.
1650 Spruce Street, Suite 106
Riverside, California 92507
www.migcom.com



**PUBLIC REVIEW DRAFT
August 2022**

- This document is designed for double-sided printing -

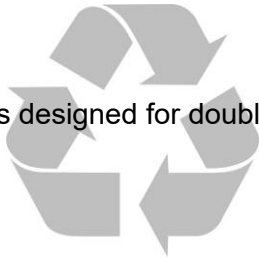


TABLE OF CONTENTS

	Page
1 INTRODUCTION	1-1
1.1 CEQA AND THE PURPOSE OF AN EIR	1-1
1.2 PURPOSE AND SCOPE	1-3
1.3 SCOPING AND PUBLIC REVIEW	1-4
1.4 CITATION	1-7
2 EXECUTIVE SUMMARY	2-1
2.1 PROJECT LOCATION	2-1
2.2 CLAYTON HOUSING ELEMENT UPDATE (2023-2031)	2-1
2.3 CLAYTON 6 TH CYCLE REGIONAL HOUSING NEEDS ALLOCATION	2-2
2.4 GENERAL PLAN AND ZONING CODE AMENDMENTS	2-2
2.5 ENVIRONMENTAL ISSUES	2-2
2.6 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES	2-3
2.7 ALTERNATIVES TO THE PROPOSED PROJECT	2-17
2.8 AREAS OF CONTROVERSY	2-20
3 PROJECT DESCRIPTION	3-1
3.1 BACKGROUND	3-1
3.2 LOCATION	3-1
3.3 EXISTING CONDITIONS	3-2
3.4 PROJECT CHARACTERISTICS/HOUSING ELEMENT UPDATE	3-10
3.5 PROJECT OBJECTIVES	3-16
3.6 HOUSING ELEMENT UPDATE GOALS AND POLICIES	3-16
3.7 GENERAL PLAN AND ZONING CODE AMENDMENTS	3-16
3.8 INTENDED USES OF THIS EIR	3-16
4.1 AESTHETICS	4.1-1
4.2 AGRICULTURAL AND FORESTRY RESOURCES	4.2-1
4.3 AIR QUALITY	4.3-1
4.4 BIOLOGICAL RESOURCES	4.4-1
4.5 CULTURAL RESOURCES	4.5-1
4.6 ENERGY	4.6-1
4.7 GEOLOGY AND SOILS	4.7-1
4.8 GREENHOUSE GAS EMISSIONS AND ENERGY	4.8-1
4.9 HAZARDS AND HAZARDOUS MATERIALS	4.9-1
4.10 HYDROLOGY AND WATER QUALITY	4.10-1
4.11 LAND USE AND PLANNING	4.11-1
4.12 MINERAL RESOURCES	4.12-1
4.13 NOISE	4.13-1
4.14 POPULATION AND HOUSING	4.14-1
4.15 PUBLIC SERVICES	4.15-1
4.16 RECREATION	4.16-1
4.17 TRANSPORTATION	4.17-1
4.18 TRIBAL CULTURAL RESOURCES	4.18-1
4.19 UTILITIES AND SERVICE SYSTEMS	4.19-1
4.20 WILDFIRE	4.20-1
5 ALTERNATIVES	5-1
6 MANDATED CEQA SECTIONS	6-1

TABLES

Table 1-1 Brief Summary of Comment on the NOP	1-5
Table 1-2 Summary of Scoping Meeting Comments	1-6
Table 2-1 Summary of Potentially Significant Impacts and Recommended Mitigation Measures	2-7
Table 2-2 Alternatives' Impacts Compared to Project Impacts	2-29
Table 3-1 Existing Land Use	3-13
Table 3-2 Projected Land Uses	3-13
Table 3-3 Existing and Projected Land Use Comparison	3-15
Table 4.3-1 Ambient Air Quality Standards and SFBAAB Basin Attainment Status.....	4.3-5
Table 4.3-2 Local Air Quality Conditions (2017 – 2019)	4.3-7
Table 4.3-3 Potentially Applicable BAAQMD Rules and Regulations	4.3-12
Table 4.3-4 BAAQMD Plan-Level Thresholds of Significance.....	4.3-14
Table 4.3-5 BAAQMD Project-Level Thresholds of Significance.....	4.3-15
Table 4.3-6 BAAQMD 2017 Clean Air Plan Control Measure Sectors	4.3-18
Table 4.3-7 BAAQMD 2017 Clean Air Plan Control Measure Consistency.....	4.3-19
Table 4.3-8 Project Trip Generation, VMT, and Population Increases	4.3-20
Table 4.3-9 HEU Site Consistency with BAAQMD Construction Screening Criteria	4.3-23
Table 4.3-10 HEU Site Consistency with BAAQMD Operational Screening Criteria.....	4.3-25
Table 4.3-11 Summary of BAAQMD Stationary Source Screening Data	4.3-27
Table 4.4-1 Federal- and State-Listed Species and Other Special Status Species	4.4-5
Table 4.4-2 Vegetation Communities and Landcover (Conservation Land Network).....	4.4-19
Table 4.6-1 Estimated Vehicle Fuel Consumption (2020)	4.6-2
Table 4.6-2 Estimated HEU Electricity Consumption	4.6-8
Table 4.6-3 Estimated HEU Natural Gas Consumption.....	4.6-9
Table 4.6-4 Estimated HEU Vehicle Fuel Consumption	4.6-11
Table 4.8-1 Global Warming Potential (GWP) of Common GHG (100-Year Horizon)	4.8-3
Table 4.8-2 2008-2019 Statewide GHG Emissions (Million MTCO ₂ e)	4.8-5
Table 4.8-3 Existing (2020) and Future (2040) Land Use GHG Emissions.....	4.8-7
Table 4.8-4 BAAQMD Plan-Level GHG Thresholds of Significance	4.8-16
Table 4.8-5 BAAQMD Project-Level GHG Thresholds of Significance	4.8-1
Table 4.8-6 2040 GHG Emissions With and Without Project	4.8-18
Table 4.11-1 Existing Land Uses	4.11-9
Table 4.11-2 2040 ABAG Demographic Projections-City of Clayton and Contra Costa County	4.11-25
Table 4.11-3 2050 ABAG Projections for RHNA Process	4.11-25
Table 4.11-4 Consistency with Plan Bay Area 2050 Strategies	4.11-27
Table 4.13-1 Typical Noise Levels	4.13-3
Table 4.13-2 Existing Baseline (2020) and Future (2040) Baseline Traffic Noise Levels	4.13-6
Table 4.13-3 FTA Ground-Borne Vibration Impact Criteria for General Assessment.....	4.13-8
Table 4.13-4 Caltrans' Vibration Threshold Criteria for Building Damage	4.13-9
Table 4.13-5 Caltrans' Vibration Threshold Criteria for Human Response	4.13-9
Table 4.13-6 Clayton Municipal Code Noise Prohibitions.....	4.13-11
Table 4.13-7 Typical Construction Equipment Noise Levels (dBA)	4.13-16
Table 4.13-8 Future Traffic Noise Contour Distances (2040)	4.13-20
Table 4.13-9 Year 2040 Traffic Noise Levels With and Without the HEU	4.13-21
Table 4.13-10 Ground-borne Vibration and Noise from Typical Construction Equipment	4.13-25
Table 4.14-1 2040 ABAG Demographic Projections-City of Clayton and Contra Costa County	4.14-3
Table 4.14-2 2050 ABAG Projections for RHNA Process	4.14-3
Table 4.15-1 City Parks and Recreation Facilities	4.15-5
Table 4.16-1 City Parks and Recreation Facilities	4.16-1
Table 4.16-2 Recreation Buildings and Public Facilities	4.16-2
Table 4.17-1 Primary Street Descriptions	4.17-2
Table 4.17-2 HEU Land Use	4.17-29

Table 4.17-3 Home-Based VMT Summary: 2020	4.17-30
Table 4.17-4 Home-Based VMT Summary: 2040	4.17-30
Table 4.17-5 Cumulative VMT Analysis	4.17-31
Table 4.19-1 Population Data (CCWD UWMP v. ABAG Plan Bay Area)	4.19-12
Table 4.19-2 CCWD Projected Water Supply/Demand (AFY).....	4.19-13

Table 5-1 Alternatives' Impacts Compared to Project Impacts	5.1-1
---	-------

Exhibits

Exhibit 3-1 Regional Location	3-3
Exhibit 3-2 Planning Area.....	3-5
Exhibit 3-3 Topography and Slope.....	3-7
Exhibit 3-4 Preliminary 6 th Cycle Housing Inventory Sites	3-17
Exhibit 4.2-1 Williamson Act Contract Lands	4.2-5
Exhibit 4.4-1 Biological Resources Constraints Map	4.4-3
Exhibit 4.5-1 Historic Landmarks	4.5-3
Exhibit 4.7-1 Regional Faults and Historic Earthquakes.....	4.7-3
Exhibit 4.7-2 Local Seismic Hazards	4.17-5
Exhibit 4.10-1 FEMA Flood Zones	4.10-3
Exhibit 4.11-1 Existing Land Uses	4.11-3
Exhibit 4.11-2 Current Zoning Map	4.11-5
Exhibit 4.11-3 Current General Plan Land Use Map	4.11-7
Exhibit 4.11-4 Preliminary 6 th Cycle Housing Inventory Sites	4.11-11
Exhibit 4.12-1 Mineral Resources	4.12-3
Exhibit 4.15-1 Existing Public Facilities.....	4.15-3
Exhibit 4.16-1 Trails, Greenways and Open Space	4.16-3
Exhibit 4.17-1 Roadway Network	4.17-7
Exhibit 4.17-2 Local Transit Network	4.17-9
Exhibit 4.17-3 Local Bicycle Network.....	4.17-11
Exhibit 4.19-1 Contra Costa County Water District (CCWD) Service Area	4.19-3
Exhibit 4.20-1 High Fire Hazard Severity Zones.....	4.20-3
Exhibit 4.20-2 Preliminary 6 th Cycle Sites Wildfire Overlay	4.20-5

APPENDICES

- A. Notice of Preparation (NOP), NOP Distribution List, and Public Comments Received
- B. Housing Element Update Goals and Policies
- C. Air Quality, Energy and Greenhouse Gas Analysis Technical Data
- D. Biological Constraints Analysis
- E. Noise Analysis Technical Data

This Page Intentionally Left Blank

1 – INTRODUCTION

1.1 CEQA and the Purpose of an EIR

The City of Clayton (City or Lead Agency) has prepared an update of its General Plan Housing and Land Use Elements, along with Zoning Code Amendments (“HEU” or “project”), to adequately plan to meet the existing and future projected housing needs of all economic segments of the community, guiding the physical development of the incorporated City (e.g., City limit) and any land outside City boundaries (e.g., unincorporated sphere of influence area) that has a relationship to the City’s future growth and development in the City’s “Planning Area.” The Planning Area includes the City’s corporate boundaries, areas within the City’s incorporated boundaries, as well as areas within the City’s Sphere of Influence (SOI).

The adoption and implementation of the Housing Element Update, Land Use Element Update, and Zoning Code Amendments is defined as a “project” and is subject to review under the California Environmental Quality Act (CEQA) 1970 (Public Resources Code, Section 21000 *et seq.*), and the State CEQA Guidelines (California Code of Regulations, Section 15000 *et seq.*). Accordingly, the City has prepared this environmental impact report (EIR) to assess the long range and cumulative environmental consequences that could result from adoption and implementation of the proposed project. This report has been prepared in accordance with the CEQA Statutes and Guidelines and with the City’s local rules and procedures for implementing CEQA. It was prepared by professional planning consultants under contract to the City. The City is the Lead Agency for the preparation of this EIR, as defined by CEQA (Public Resources Code, Section 21067, as amended), because it has primary discretionary authority with respect to adoption, amendment, and implementation of the proposed project. The content of this document reflects the independent judgment of the City.

The body of state law collectively known as “CEQA” was originally enacted in 1970 and has been amended since. The legislative intent of these regulations is established in Sections 21000 and 21001 of the California Public Resources Code, as follows:

The Legislature finds and declares as follows:

- (a) The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.
- (b) It is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.
- (c) There is a need to understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state.
- (d) The capacity of the environment is limited, and it is the intent of the Legislature that the government of the state take immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.
- (e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.

- (f) The interrelationship of policies and practices in the management of natural resources and waste disposal requires systematic and concerted efforts by public and private interests to enhance environmental quality and to control environmental pollution.
- (g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.

The Legislature further finds and declares that it is the policy of the state to:

- a) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.
- b) Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.
- c) Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.
- d) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.
- e) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.
- f) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.
- g) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment.

A concise statement of legislative policy, with respect to public agency consideration of projects for some form of approval, is found in Section 21002, quoted below:

The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.

1.2 Purpose and Scope

The proposed project is a long-range planning program to guide the development of housing within the City's Planning Area. It is intended to bring the document into compliance with California Government Code Article 5 and addresses changes to the demographic, economic, and environmental conditions in Clayton that are anticipated to occur through the year 2032. The City's Housing Element Update analyzed in this EIR has been tailored to address revised development and land use policy direction, reflect current vision regarding housing, circulation and mobility improvements, and to comply with current State law.

Although it would allow for an overall increase in development potential for the entire Planning Area, the Housing Element Update would not, by itself, authorize any specific development project or other form of land use approval or any kind of public facilities or capital facilities expenditures or improvements. As such, a Program EIR is the appropriate type of document to identify the geographic extent of sensitive resources and hazards, along with existing and planned services and infrastructure support systems that occur in the Planning Area. Further, the Program EIR is described in Section 15168 of the CEQA Guidelines as the appropriate analytical framework to assess the cumulative environmental effects of the full plan, in a first tier level of analysis, to identify broad concerns and sets of impacts, and to define/develop regulatory standards and programmatic procedures that reduce impacts and help achieve environmental goals and objectives.

Later activities proposed pursuant to the goals and policies of the project will be reviewed in light of this EIR and may focus on those site-specific and localized environmental issues that could not be examined in sufficient detail as part of this EIR. Advantages of a Program EIR include consideration of effects and alternatives that cannot practically be reviewed at the project-level, consideration of cumulative impacts that may not be apparent on a project-by-project basis, the ability to enact citywide mitigation measures, and subsequent reduction in paperwork.

Organization of the Draft Program EIR

The Draft Program EIR (DEIR or Draft EIR) contains the primary analysis of potential environmental impacts discussed in the following seven sections described below

Section 1.0	Introduction.
Section 2.0	Executive Summary: A brief discussion of the project and summary of project impacts, mitigation measures and alternatives.
Section 3.0	Project Description: Provides detailed description of the proposed project and the Environmental Setting/Existing Conditions and project objectives.
Section 4.0	Environmental Impact Analysis: Evaluates project impacts and identifies mitigation measures designed to reduce significant impacts, where applicable. This Section includes 20 chapters, each addressing different resource areas (Air Quality, Noise, etc.).
Section 5.0	Alternatives: Provides an analysis of the different alternatives to the proposed project.
Section 6.0	CEQA Conclusions: Provides an analysis of growth-inducing impacts, significant unavoidable environmental impacts, and irreversible environmental change.

The EIR appendices include:

- Appendix A: Notice of Preparation (NOP), NOP Distribution List, And Public Comments Received
- Appendix B: Housing Element Update Goals and Policies
- Appendix C: Air Quality, Energy and Greenhouse Gas Analysis Technical Data
- Appendix D: Biological Constraints Analysis
- Appendix E: Noise Analysis Technical Data

In compliance with Public Resources Code Section 21081.6, a mitigation monitoring reporting program (MMRP) will be prepared as a separately bound document that will be adopted in conjunction with the certification of the Final EIR. The MMRP, responses to public comments on the Draft EIR, and any revisions to the Draft EIR will be identified in the Final EIR.

Approach to EIR Analysis

The approach to the analysis presented in this EIR is programmatic in nature given the scope and nature of the project. Each environmental issue is analyzed in a similar manner, starting with a discussion of the existing environmental setting, including physical conditions and pertinent planning and regulatory framework. Thresholds of significance are then defined and are used to measure the proposed project's potential impact to the environment. Thresholds of significance are based on a broad list of questions and impact topics set forth in Appendix G of the State CEQA Guidelines.

The impact analysis provided for each the 20 resource areas examines the broad, long-term environmental effects resulting from implementation of the goals and policies contained in Housing Element Update, the updates to the Land Use Element, and the Zoning Code Amendments. Pursuant to CEQA Guidelines section 15130, this programmatic EIR analyzes both the individual impacts and the potential cumulative impacts of the proposed project when the project's individual incremental effects are determined to be cumulatively considerable, as defined in section 15065(a)(3). The assessment of impacts focuses on how the impact in question could occur and whether the goals, policies or some other aspect of the proposed Plan would reduce or ameliorate such impacts. The presence of sensitive environmental resources, hazards in specific areas, and the broad implications of the project throughout the Planning Area are considered in the determination of impact significance. If the analysis indicates that a significant impact could occur, even with the benefits of any proposed goals or policies, mitigation measures are specified.

1.3 Scoping and Public Review

Notice of Preparation

To define the scope of the investigation of the Program EIR, the City of Clayton distributed a Notice of Preparation (NOP) to local, county, state, and federal agencies along with interested private organizations and individuals. The NOP was delivered to the State Clearinghouse, and a State Clearinghouse number was issued (SCH No. 2022030086). The CEQA-required 30-day review period began on March 2, 2022 and ended on April 2, 2022. The purpose of the NOP is to provide agencies and private entities an opportunity to identify concerns regarding potential impacts of the proposed project, to recommend items to be analyzed in the DEIR, and to provide suggestions concerning ways to avoid significant impacts (Section 15082, CEQA Guidelines).

The NOP, copies of written comments received during the 30-day public review period for the NOP and the NOP distribution list are included in Appendix A of this EIR.

On March 8, 2022, the City conducted a CEQA scoping session on the NOP during the regular meeting of the Planning Commission. The minutes of the Planning Commission meeting are included in Appendix A. The written comments received on the NOP during the 30-day review period are summarized in Table 1-1, and comments made during the scoping session are included in Table 1-2. The comment letters are also included in Appendix A.

Table 1-1
Brief Summary of Comments on the NOP

Commenting Agency/Person	Summary of Comments	EIR Section(s) Where Addressed
Native American Heritage Commission (NAHC)	The commenter recommends consultation with California Native American Tribes, consistent with AB 52 and SB 18. <i>Note: The City is completing consultation with local tribes.</i>	Cultural Resources, and Tribal Cultural Resources
Native American Heritage Commission (NAHC)	The commenter recommends additional tribes with which the City should consult. <i>Note: The City sent out additional consultation letters to the additional tribes.</i>	Cultural Resources, and Tribal Cultural Resources
California Department of Transportation (Caltrans)	The commenter notes that Caltrans is focused on maximizing efficient development patterns, innovative travel demand reduction strategies, and multimodal improvements. The commenter requests projects within the City of Clayton to be consistent with California Government Code Section 65088-65089.10 (Congestion Management). The commenter also requests the City gain a determination of conformity from the Contra Costa Transportation Authority to determine that the project is consistent with and conforms to the Regional Transportation Plan Consistency Requirements of Contra Costa County's Congestion Management Plan. The commenter also encourages a sufficient allocation of fair share contributions toward multimodal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. Finally, the commenter notes that Caltrans strongly supports measures to increase sustainable mode shares, thereby reducing vehicle miles traveled (VMT).	Transportation

Commenting Agency/Person	Summary of Comments	EIR Section(s) Where Addressed
California Department of Fish and Wildlife (CDFW)	The commenter provides comments and recommendations to assist the City in adequately identifying and/or mitigating the project's potentially significant impacts on biological resources. The commenter lists regulatory requirements, including: requirements of the California Endangered Species Act and Native Plant Protection Act; requirements of the Lake and Streambed Alteration Agreement; regulations pertaining to migratory birds and raptors; and requirements of CEQA. The commenter notes that the draft EIR should provide sufficient information regarding the environmental setting. The commenter recommends the draft EIR provide baseline habitat assessments for special-status plant, fish, and wildlife species potentially located within the Planning Area. The commenter provides a list of special-status species and nesting birds of concern in the Planning Area. Finally, the commenter provides recommendations for impact analysis, avoidance, minimization, and mitigation measures.	Biological Resources, and Hydrology and Water Quality

**Table 1-2
Summary of Scoping Session Comments**

Commenting Agency/Person	Summary of Comments
Max Davis	Max Davis shared his observations that CEQA seemed dated in its focus on localized impacts. He referenced studies out of the University of California, Berkeley, and stated that there are regional and global environmental benefits of density with respect to increasing housing affordability and reducing vehicle miles and air emissions from vehicles. He suggested that providing affordability and protecting property values can be perceived to be at odds with each other. He encouraged facilitating development of more units than cities' regional housing needs allocations as a means to get out of the housing and climate crisis.
Nathan Burkhardt	Nathan Burkhardt requested confirmation that the EIR will include analysis of potential housing impacts on schools. Mr. Burkhardt referenced page 61 of the Mt. Diablo Unified School District report on student demographics, 10-year projections, prepared by Davis Demographics, where it was noted that Clayton's elementary school was projected to reach capacity based on historic development data. He noted that only past development data through 2014 was factored into that report.

Public Review of Draft EIR

Comments from all agencies and individuals are invited regarding the information contained in the Draft Program EIR. Such comments should explain any perceived deficiencies in the assessment of impacts or provide the information that is purportedly lacking in the Draft Program EIR or indicate where the information may be found. Following the 45-day period of circulation and public review of the Draft Program EIR, all comments and the City's responses to the comments will be incorporated into a Final Program EIR prior to certification of the document by the City of Clayton.

Availability of EIR Materials

All materials related to the preparation of this Program EIR, including information incorporated by reference, are available for public review. The Notice of Preparation and the Draft Program EIR are posted on the City's website:

<https://claytonca.gov/community-development/planning/environmental-review/>

<https://claytonca.gov/community-development/housing/housing-element/>

To request an appointment to view these materials, please contact the Clayton Community Development Department at 6000 Heritage Trail, Clayton, California, or by telephone at (925) 673-7300.

1.4 Citation

Preparation of this Program EIR and the Housing Element Update rely on information from many sources, including the appendix materials previously listed and numerous other references. Pursuant to Section 15148 of the State CEQA Guidelines, citations from the appendix materials and other sources are provided throughout the EIR. Citations are numbered sequentially and inclusive to each environmental impact topic (Sections 4.1 through 4.20). References are located at the end of each section of this DEIR.

This Page Intentionally Left Blank.

2 – EXECUTIVE SUMMARY

This chapter provides a summary description for the City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”), a list of associated environmental issues to be resolved, a summary of significant impacts and mitigation measures associated with the project, and a summary of feasible alternatives to the project, including identification of the environmentally superior alternative.

2.1 Project Location

The Planning Area is located in north-central Contra Costa County, approximately 20 miles east of downtown Oakland. The City of Clayton is located at the base of the north slope of Mt. Diablo. The City is bordered by the unincorporated ghost town of Nortonville to the northeast. The City of Concord lies to the west, and Walnut Creek lies to the southwest.

2.2 Clayton Housing Element Update (2023-2031)

The housing element is one of the required components of a jurisdiction’s general plan and must be consistent with all other elements of the general plan. The housing element identifies ways in which the housing needs of existing and future residents can be met. State law describes in great detail the necessary contents of the housing element: 1) identifying housing needs; 2) analyzing constraints to housing production; 3) examining past accomplishments from prior housing element planning efforts; 4) understanding how past planning practices may have excluded groups of people from housing opportunities; 5) documenting how the public has been engaged in the planning process; and 6) assessing and describing how land and financial resources will be marshalled to meet the housing needs for all income levels. The California Legislature has identified the attainment of a decent home and suitable living environment for every Californian as the State’s main housing goal. Recognizing the important part that local planning programs play in pursuit of this goal, the Legislature has mandated that all cities and counties prepare a housing element as part of their comprehensive general plans, and update their housing elements on an eight-year basis. The City of Clayton Housing Element, last updated in 2014, contains plans to meet the existing and future projected housing needs of all economic segments of the community.

The updated Housing Element includes programs, policies, and actions to further the goal of meeting existing and projected housing needs of all income levels and identifies how the City plans to accommodate its Regional Housing Needs Allocation (RHNA) of at least 570 units. The proposed Housing Element Update has the potential to result in development of up to 868 additional dwelling units in the Planning Area, which represents a 21.07 percent increase over existing conditions. Additionally, the proposed Housing Element Update has the potential to result in a population increase of up to 2,364 additional persons and an additional 71 employees within the Planning Area, which represents a 20.98 percent and 7.66 percent increase, respectively, over existing conditions. Finally, the proposed Housing Element Update has the potential to result in development of up to 13,000 square feet of additional non-residential building square footage within the Planning Area, which represents a 3.57 percent increase over existing conditions.

2.3 Clayton 6th Cycle Regional Housing Needs Allocation

The City of Clayton has identified 18 preliminary housing sites to accommodate the RHNA balance of 570 or more additional housing units. Not all of these properties are designated and zoned for residential use and for those that are, the density yields may not be high enough to achieve the RHNA through private development efforts. Thus, for this 6th cycle Housing Element, to accommodate its RHNA of 570 or more units, the City will need to amend General Plan land use policy to increase residential densities to support greater variety in multifamily housing types, amend the Zoning Code to provide for consistency with General Plan policy, and rezone properties to reflect parallel General Plan land use designations. With the proposed amendments, the City is able to plan for the RHNA and create a planning buffer that responds to State laws regarding no net loss of lower-income residential units, should a site planned for lower-income housing be developed with a lower density than was planned.

The public engagement process for the Housing Element Update involved participation from a variety of stakeholders to solicit input, and that input has informed key element programs and decisions, such as identifying appropriate housing sites and densities. The engagement process included interviews with the City Council and Planning Commissioners, a virtual community workshop, study sessions with the City Council and Planning Commission in which members of the public participated, a map-based online survey, frequent updates to the City Council and Planning Commission at their public meetings, and a Balancing Act survey that allowed participants to create their own housing plans. Balancing Act is an online survey service provider used by the City to elicit comments and feedback from the community on preferred housing locations and densities.

2.4 General Plan and Zoning Code Amendments

To maintain internal consistency among the elements of the General Plan, the City will need to amend the General Plan Land Use Element to clarify the density ranges for multi-family housing and thereby encourage development of housing for people of all income levels and desired housing choices. The City must also amend Title 16 (Land Development and Subdivision) and Title 17 (Zoning) of the Clayton Municipal Code as part of the Project, which is the primary tool for implementing the goals, objectives, and policies of the Housing Element Update, pursuant to the mandated provisions of the State Planning and Zoning Law (Government Code Section 65000 *et seq.*), State Subdivision Map Act (Government Code Section 66410 *et seq.*), California Environmental Quality Act (Public Resources Code Section 21000 *et seq.*), and other applicable state and local requirements. The land development and subdivision regulations, zoning map, zoning regulations, standards, permits and procedures that are contained in Title 16 and Title 17 and other parts of the Clayton Municipal Code, as applicable, are proposed to be revised following adoption of the Housing Element Update to be consistent with the Housing Element Update's goals, policies, exhibits, and texts.

2.5 Environmental Issues

As required by the CEQA Guidelines, this EIR addresses areas of potential environmental impact or controversy known to the Lead Agency (the City), including those issues and concerns identified by the City in its Notice of Preparation (NOP) of this EIR and by other agencies, organizations, and individuals in response to the NOP. The Draft EIR covers all 20 of the CEQA Appendix G checklist topics, listed below.

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

2.6 Summary of Significant Impacts and Mitigation Measures

For each of the environmental topics listed above, any "*significant*" Project or cumulative impact and associated mitigation measure(s) identified in this EIR are summarized in Table 2-1 (Summary of Potentially Significant Impacts and Recommended Mitigation Measures). The summary chart has been organized to correspond with the more detailed impact and mitigation discussions in chapters 4.1 through 4.20 of this Draft EIR. The chart is arranged in four columns: (1) summary of identified impacts, (2) potential significance without mitigation, (3) mitigation measure(s), and (4) the level of impact significance after implementation of the mitigation measure(s). Because the table does not list impacts that are less than significant with no mitigation required, the Impact/Mitigation Measure numbering may be out of sequence.

This Page Intentionally Left Blank.

Table 2-1
Summary of Potentially Significant Impacts and Recommended Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
AIR QUALITY			
<p><i>Impact AIR-2 – Would the HEU expose sensitive receptors to substantial pollutant concentrations?</i></p> <p>Construction emissions associated with future development activities facilitated under implementation of the proposed HEU could exceed BAAQMD construction Local Significance Thresholds (LSTs) and cancerogenic and non-cancerogenic threshold maintained and recommended by the BAAQMD. This is considered a potentially significant impact.</p>	<p align="center">PS (Potentially Significant Impact)</p>	<p>MM AIR-1: Implement BAAQMD Basic Construction Mitigation Measures. The City shall require new project development projects to implement the BAAQMD's Basic Control Mitigation Measures to address fugitive dust emissions that would occur during earthmoving activities associated with project construction. These measures include:</p> <ol style="list-style-type: none"> 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. 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. 4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. 5. 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. 6. 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. 7. 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. 8. Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations. 	<p align="center">LTS (Less than Significant with Mitigation)</p>

<p>Impact AIR-2 – Would the HEU expose sensitive receptors to substantial pollutant concentrations?</p> <p>Construction emissions associated with future development activities facilitated under implementation of the proposed HEU could exceed BAAQMD construction Local Significance Thresholds (LSTs) and cancerogenic and non-cancerogenic threshold maintained and recommended by the BAAQMD. This is considered a potentially significant impact.</p>	<p>PS (Potentially Significant Impact)</p>	<p>MM AIR-2: Prepare Project-level Construction Emissions Assessment. The City shall require new projects requiring discretionary review to include a quantitative project-level construction criteria air pollutant and toxic air contaminant emissions analysis prior to the start of construction activities that shows project construction activities would not exceed BAAQMD project-level thresholds of significance. The analysis may rely on BAAQMD construction screening criteria to demonstrate that a detailed assessment of criteria air pollutant and toxic air contaminant construction emissions is not required for the project. If the project does not satisfy all BAAQMD construction screening criteria, the analysis shall estimate and compare construction criteria air pollutant and toxic air contaminant emissions against the project-level thresholds of significance maintained by the Bay Area Air Quality Management District (BAAQMD) and, if emissions are shown to be above BAAQMD thresholds, the implement measure to reduce emissions below BAAQMD thresholds. Mitigation measures to reduce emissions could include, but are not limited to:</p> <ul style="list-style-type: none"> • Watering exposes surfaces at a frequency adequate to maintain a minimum soil moisture content of 12 percent, as verified by moisture probe or lab sampling; • Suspending excavation, grading, and/or demolition activities when average wind speeds exceed 20 miles per hour; • Selection of specific construction equipment (e.g., specialized pieces of equipment with smaller engines or equipment that will be more efficient and reduce engine runtime); • Installing wind breaks that have a maximum 50 percent air porosity; • Restoring disturbed areas with vegetative ground cover as soon as possible; • Limiting simultaneous ground-disturbing activities in the same area at any one time (e.g., excavation and grading); • Scheduling/phasing activities to reduce the amount of disturbed surface area at any one time; • Installing wheel washers to wash truck and equipment tires prior to leaving the site; • Minimizing idling time of diesel-powered construction equipment to no more than 2 minutes or the shortest time interval permitted by manufacturer's specifications and specific working conditions. 	<p>LTS (Less than Significant with Mitigation)</p>
--	--	---	--

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • Requiring equipment to use alternative fuel sources (e.g., electric-powered and liquefied or compressed natural gas), meet cleaner emission standards (e.g., U.S. EPA Tier IV Final emissions standards for equipment greater than 50-horsepower), and/or utilizing added exhaust devices (e.g., Level 3 Diesel Particular Filter); • Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM; • Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines; and • Applying coatings with a volatile organic compound (VOC) that exceeds the current regulatory requirements set forth in BAAQMD regulation 8, Rule 3 (Architectural Coatings). 	
<p><i>Impact AIR-4 – Would the HEU cause substantial adverse cumulative impacts with respect to Air Quality?</i></p> <p>Construction from future development activities facilitated under implementation of the proposed HEU could expose sensitive receptors to toxic emissions and have an adverse health risk impact. This is a potentially significant impact.</p>	<p>PS (Potentially Significant Impact)</p>	<p>See Mitigation Measures AIR-1 and AIR-2, Above</p>	<p>LTS (Less than Significant with Mitigation)</p>

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
CULTURAL RESOURCES			
<p><i>Impact CUL-2 – Would the HEU cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?</i></p> <p>Construction activities such as grading and trenching could result in a significant impact to unknown archaeological resources if encountered. This would represent a potentially significant impact.</p>	PS (Potentially Significant Impact)	<p>MM CUL-1: Prior to the issuance of a grading permit, the grading plan shall include a requirement (via notation) indicating that if cultural resources, or human remains are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the area of discovery and the contractor shall immediately notify the City of the discovery. In such case, the City, at the expense of the project applicant, shall retain the services of a qualified archaeologist and/or qualified tribal monitor for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist and/or tribal monitor shall be required to submit to the City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the archaeologist and/or tribal monitor, shall not be allowed until the preceding steps have been taken.</p>	LTS (Less than Significant with Mitigation)
<p><i>Impact CUL-3 – Would the HEU disturb any human remains, including those interred outside of formal cemeteries?</i></p> <p>Construction activities such as grading and trenching could result in a significant impact to buried human. This would represent a potentially significant impact.</p>	PS (Potentially Significant Impact)	<p>MM CUL-2 Pursuant to State Health and Safety Code Section 7050.5(c) and State Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop within 100 feet of the vicinity of the find, and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the Most Likely Descendant (MLD). The MLD shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. Additional work shall not take place in the immediate vicinity of the find, which shall be identified by the qualified archaeologist at the applicant's expense, until the preceding actions have been implemented.</p>	LTS (Less than Significant with Mitigation)

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
GEOLOGY AND SOILS			
<p><i>Impact GEO-6 – Would the HEU directly or indirectly destroy a unique paleontological resource or site or unique geological feature?</i></p> <p>Construction activities in excess of 10 feet in depth such as grading and trenching could result in a significant impact to unknown paleontological resources, such as fossils from mammoths, saber-toothed cats, rodents, reptiles, and birds, if encountered. This would represent a potentially significant impact.</p>	PS (Potentially Significant Impact)	<p>MM GEO-1</p> <p>In the event that fossils or fossil-bearing deposits are discovered during grading or construction of the Project, excavations within 50 feet of the find shall be temporarily halted until the discovery is examined by a qualified paleontologist, in accordance with the applicable Society of Vertebrate Paleontology standards (Standard Procedures for the Assessment and Mitigation of adverse Impacts to Paleontological Resources, Society of Vertebrate Paleontology, 2010), and assessed for significance under CEQA. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.</p>	LTS (Less than Significant with Mitigation)
GREENHOUSE GAS EMISSIONS			
<p><i>Impact GHG-1 – Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</i></p> <p>As shown in Table 4.8-6, the Project's 2040 growth projection could result in GHG emissions that exceed the adjusted, BAAQMD derived plan-level efficiency metric. This is considered a potentially significant impact.</p>	PS (Potentially Significant Impact)	<p>MM GHG-1: Prohibit Natural Gas Plumbing and Appliances in New Housing Sites. The City shall prohibit natural gas plumbing and the use of natural gas appliances such as cook tops, water heaters, and space heaters in all new housing site developments. Upon request by the project developer, exceptions to this prohibition may be allowed in the following instances:</p> <ul style="list-style-type: none"> • Accessory dwelling units constructed on a parcel with an existing residential building with gas infrastructure. • Newly constructed buildings with a valid planning entitlement or other effective development agreement approved prior to the date of certification of this EIR. • It can be demonstrated there is no commercially available technology capable of meeting the specific appliance or building system application. 	SU (Significant and Unavoidable)

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>Projects subject to the above exceptions shall provide the necessary infrastructure to support future electrification of appliances and building systems. This prohibition on natural gas plumbing and natural gas appliances shall cease if and when the City adopts a ZNE ordinance per Mitigation Measure GHG-2.</p> <p>MM GHG-2: Consider Adoption of a Zero Net Energy Ordinance. Within one year of the adoption of the HEU, the City shall complete an evaluation on the feasibility of adopting an ordinance that amends the City's Municipal Code to require all new residential and/or non-residential development subject to Title 24, Part 6 of the California Building Code to achieve Zero Net Energy (ZNE) standards. If the City finds ZNE technology, programs, and/or other strategies are feasible and cost-effective, the City shall adopt a ZNE ordinance as expeditiously as possible given City resources. As defined by the California Energy Commission (CEC), ZNE standards require the value of the net energy produced by project renewable energy resources to equal the value of the energy consumed annually by the project, using the CEC's Time Dependent Valuation.ⁱ In the event the City adopts a ZNE ordinance, Mitigation Measure GHG-2 would no longer apply to housing site projects in the City.</p>	

		<p>MM GHG-3: Residential Electric Vehicle and Bicycle Parking Requirements. The City shall require new residential housing sites to comply with the Tier 2 electric vehicle charging and bicycle parking requirements in the latest edition of the California Green Building Standards Code (CalGreen) in effect at the time the building permit application is submitted to the City. Currently, the 2019 CalGreen code, Section A4.106.8, Electric Vehicle Charging for New Construction, and Section A4.106.9, Bicycle Parking, require the following measures to facilitate the future installation and use of electric vehicle chargers and bicycle travel:</p> <ul style="list-style-type: none"> • New one and two-family dwellings and townhouses with attached private garages include a dedicated 208/240-volt branch circuit rated at 40 amperes minimum. • New multi-family dwellings provide 20 percent of the total number of parking spaces on a building site be electric vehicle charging spaces capable of supporting future electric vehicle supply equipment. • New multi-family buildings provide on-site bicycle parking for at least one bicycle per every two dwelling units, with acceptable parking facilities conveniently reached from the street. <p>MM GHG-4: Non-Residential Electric Vehicle and Bicycle Parking Requirements. The City shall require new commercial development included as part of mixed-use housing sites to comply with the Tier 2 bicycle accommodations, clean air vehicle parking, and electric vehicle charging requirements in the latest edition of the California Green Building Standards Code (CalGreen) in effect at the time the building permit application is submitted to the City. Currently, the 2019 CalGreen code, Section A5.106.4.3, Changing Rooms, Section A5.106.5.1, Designated Parking for Clean Air Vehicles, and Section A5.106.5.3, Electric Vehicle Charging, require the</p>	
--	--	---	--

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>following measures to facilitate bicycle travel, clean air vehicles, and the future installation and use of electric vehicle chargers:</p> <ul style="list-style-type: none"> • Non-residential buildings with more than 10 tenant-occupants provide changing/shower facilities for tenant-occupants in accordance with Table A5.106.4.3 of the CalGreen code. • Non-residential development involving the installation, addition, or alteration of 10 or more vehicular parking spaces provide designated parking for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles pursuant to Table A5.106.5.1.2 of the CalGreen code. • Non-residential development shall provide electric vehicle charging spaces capable of supporting electric vehicle supply equipment pursuant to Table A5.106.5.3.2 of the CalGreen code. <p>MM GHG-6: Require a Project-level Greenhouse Gas Emissions Assessment for Housing Site Projects. The City shall require development projects that are determined not to be categorically exempt from CEQA, and that require the quantitative VMT assessment required by Mitigation Measure VMT-1, to submit a project-level greenhouse gas (GHG) emissions analysis. The GHG emissions analysis shall evaluate the project's consistency with adopted state-wide GHG emissions reduction goals using the latest guidance and recommendations from the Bay Area Air Quality Management District, or another accepted methodology. If the project's GHG emissions could interfere with state-wide GHG emission reduction goals, mitigation shall be identified and implemented to reduce emissions. Mitigation measures to reduce GHG emissions could include, but are not limited to:</p>	

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Increasing the energy efficiency of the proposed building(s) (e.g., identifying building practices that go beyond CalGreen Code standards, identifying specific energy efficient appliances, etc.); Incorporating on-site renewable energy generation into project-design; Reducing the quantity of parking provided by the proposed development; Reducing indoor and outdoor potable water consumption; and Increasing solid waste diversion rates. 	
<p><i>Impact GHG-2 – Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</i></p> <p>As shown in Table 4.8-6, the Project growth could result in GHG emissions that exceed the 2017 Climate Change Scoping Plan's recommended efficiency metrics. In addition, the Project has the potential to result in growth which is approximately 1.7 times more than the assumed growth in the 2020 RTP/SCS. This is considered a potentially significant impact.</p>	PS (Potentially Significant Impact)	See Mitigation Measures GHG-1 through GHG-5, Above	SU (Significant and Unavoidable)
<p><i>Impact GHG-3 – Would the project cause substantial adverse cumulative impacts with respect to greenhouse gas emissions?</i></p> <p>The Project's 2040 growth projection and associated GHG emissions could exceed the significance threshold applied in this EIR and pose a conflict with the 2017 Climate Change Scoping Plan. This is</p>	PS (Potentially Significant Impact)	See Mitigation Measures GHG-1 through GHG-5, Above	SU (Significant and Unavoidable)

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
considered a potentially significant impact .			
HAZARDS AND HAZARDOUS MATERIALS			
<p>Impact HAZMAT-7 – Would the HEU expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?</p> <p>The proximity of potential housing sites under the proposed HEU to high fire hazard severity zones that could expose people or structures to risks involving wildfire is considered a potentially significant impact.</p>	PS (Potentially Significant Impact)	<p>MM HAZ-1: The City shall determine if it will prepare an update to its Local Hazard Mitigation Plan (LHMP) or cooperate with Contra Costa County in an update to its Emergency Operations Plan (EOP). This update must address the evacuation planning and coordination directives outlined in SB 99 and AB 747 as they apply to the City. The selected update shall address areas of the City or its Planning Area that have high fire risks and identify adequate evacuation routes with ongoing maintenance needs and operational and public education needs to support use of these routes during emergency conditions. The City shall decide which document update is most appropriate for the City within 90 days of adoption of the HEU.</p>	LTS (Less than Significant with Mitigation)
NOISE			
<p>Impact NOISE-1 – Would the HEU result in generation of a substantial temporary increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</p> <p>The potential for a substantial temporary increase in ambient noise levels that could result from construction activities on housing sites near existing sensitive receptors is considered a potentially significant impact.</p>	PS (Potentially Significant Impact)	<p>MM NOI-1: Reduce Potential Housing Site Development Construction Noise Levels. To reduce potential noise levels from construction activities pursuant to the HEU, the City shall require that future development projects subject to discretionary approval comply with the following:</p> <ol style="list-style-type: none"> 1) <i>Notify Residential and Commercial Land Uses of Planned Construction Activities.</i> This notice shall be provided at least one week prior to the start of any construction activities, describe the noise control measures to be implemented by the Project, and include the name and phone number of the designated contact for the Applicant/project representative and the City of Clayton responsible for handling construction-related noise complaints (per Section 7). This notice shall be provided to: <ol style="list-style-type: none"> A) The owner/occupants of residential dwelling units within 500 feet of construction work areas; and B) The owner/occupants of commercial buildings 	LTS (Less than Significant with Mitigation)

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>(including institutional buildings) within 100 feet of work areas or within 400 feet of construction work areas if pile driving equipment will be used.</p> <p>2) <i>Restrict Work Hours.</i> Construction-related work activities, including material deliveries, shall be subject to the requirements of City Municipal Code Section 15.01.101. Construction activities, including deliveries, shall occur only during the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise authorized in writing by the City Engineer or designee or other project conditions of approval. If such authorization is granted, construction-related work activities shall still conform to the requirements of General Plan Policy 3b., which limits construction activities to the hours 7:00 a.m. to 5:30 p.m. on weekdays and 9:00 a.m. to 6:00 p.m. on weekends when adjacent neighbors are affected. The applicant/project representative and/or its contractor shall post a sign at all entrances to the construction site informing contractors, subcontractors, construction workers, etc. of this requirement.</p> <p>3) <i>Control Construction Traffic and Site Access.</i> Construction traffic, including soil and debris hauling, shall follow City-designated truck routes and shall avoid local roads in the City that contain residential dwelling units as much as possible unless an alternative route that provides access to the specific project location is not available.</p> <p>4) <i>Construction Equipment Selection, Use, and Noise Control Measures.</i> The following measures shall apply to construction equipment used to develop housing sites:</p> <p>A) Contractors shall use the smallest size equipment capable of safely completing work activities.</p> <p>B) Construction staging shall occur as far away from residential and commercial land uses as possible.</p>	

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>C) All stationary noise-generating equipment such as pumps, compressors, and welding machines shall be shielded and located as far from sensitive receptor locations as practical. Shielding may consist of existing vacant structures or a three- or four-sided enclosure provide the structure/barrier breaks the line of sight between the equipment and the receptor and provides for proper ventilation and equipment operations.</p> <p>D) Heavy equipment engines shall be equipped with standard noise suppression devices such as mufflers, engine covers, and engine/mechanical isolators, mounts, etc. These devices shall be maintained in accordance with manufacturer's recommendations during active construction activities.</p> <p>E) Pneumatic tools shall include a noise suppression device on the compressed air exhaust.</p> <p>F) The applicant/project representative and/or their contractor shall connect to existing electrical service at the site to avoid the use of stationary power generators unless electrical service is not available or the electricity provider indicates service cannot be provided.</p> <p>G) No radios or other amplified sound devices shall be audible beyond the property line of the construction site.</p> <p>6) <i>Implement Construction Activity Noise Control Measures:</i> The following measures shall apply to construction activities in the Plan Area:</p> <p>A) Demolition: Activities shall be sequenced to take advantage of existing shielding/noise reduction provided by existing buildings or parts of buildings, and methods that minimize noise and vibration, such as sawing concrete blocks and</p>	

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>prohibiting on-site hydraulic breakers, crushing, or other pulverization activities, shall be employed when activities occur adjacent to sensitive residential areas.</p> <p>B) Demolition Site Preparation, Grading, and Foundation Work: During all demolition, site preparation, grading, and structure foundation work activities within 500 feet of a residential dwelling unit or 400 feet of a commercial building (including institutional buildings), a 6-foot tall physical noise barrier shall be installed and maintained around the work site perimeter to the maximum extent feasible given site constraints and access requirements. Physical barriers shall consist of a solid material (i.e., free of openings or gaps other than weep holes) that has a minimum rated transmission loss value of 20 dB. The noise barrier may be removed following the completion of building foundation work (i.e., it is not necessary once framing and typical vertical building construction begins provided no other grading, foundation, etc. work is still occurring on-site).</p> <p>C) Pile Driving: If pile driving activities are required within 500 feet of a residential dwelling unit or 400 feet of a commercial building, the piles shall be pre-drilled with an auger to minimize pile driving equipment run times.</p> <p>7) <i>Prepare a Construction Noise Complaint Plan.</i> The Construction Noise Complaint Plan shall: A) Identify the name and/or title and contact information (including phone number and email) for a designated project and City representative responsible for addressing construction-related noise issues; B) Includes procedures describing how the designated project representative will receive, respond, and resolve construction noise complaints; C) At a</p>	

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		minimum, upon receipt of a noise complaint, the project representative shall notify the City contact, identify the noise source generating the complaint, determine the cause of the complaint, and take steps to resolve the complaint; D) The elements of the Construction Noise Complaint Plan may be included in the project-specific noise evaluation prepared to satisfy Section 7 or as a separate document.	
<p>Impact NOISE-5 – Would the HEU cause substantial adverse cumulative impacts with respect to noise or vibration?</p> <p>The potential for a substantial temporary increase in ambient noise levels that could result from construction activities on housing sites near existing sensitive receptors is considered a potentially significant impact.</p>	PS (Potentially Significant Impact)	See Mitigation Measure NOI-1, Above	LTS (Less than Significant with Mitigation)
TRANSPORTATION			
<p>Impact TRANS-2 – Would the project conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)?</p> <p>The results suggest that the HEU's impact with respect to home-based VMT would be potentially significant. Additionally, individual development proposals under the HEU that do not screen out of further analysis may exceed the VMT criteria on a case-by-case basis. Therefore, the HEU would be inconsistent with section 15064.3, subdivision (b). For these reasons, this is</p>	PS (Potentially Significant Impact)	<p>VMT-1:</p> <p>The Project shall implement the following VMT Reduction Measures:</p> <ul style="list-style-type: none"> 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 Clayton 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 	SU (Significant and Unavoidable)

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
considered a potentially significant impact , requiring mitigation.		<p>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). Project developers may substitute any of the measures listed below with one or more alternative measures; provided, that any substitute measures would reduce GHG from VMT in an amount that is equal to or greater than the reduction achieved by the measure being replaced, and the amount of the reduction is supported by evidence. 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 of the measures below is generally expected to result in a net VMT reduction of 10 percent or less for development projects in suburban settings such as Clayton:</p> <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. 	

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Impact TRANS-5 – Would the HEU cause substantial adverse cumulative impacts with respect to transportation and traffic?</p> <p>VMT impacts from the proposed Housing Element Update would be significant and unavoidable even with recommended mitigation. Therefore, the HEU would also make an incremental but significant contribution to a regional (cumulative) VMT impact and would not be fully consistent with the General Plan (Circulation Element) in that regard.</p>	<p>PS (Potentially Significant Impact)</p>	<p>See Mitigation Measure VMT-1, Above</p>	<p>SU (Significant and Unavoidable)</p>
UTILITIES AND SERVICE SYSTEMS			
<p>IMPACT UTS-1 – Would the HEU 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> <p>The proposed HEU may have potentially significant impacts on water supply that necessitate the expansion of water treatment facilities and sewer/wastewater treatment in the future. This is considered a potentially significant impact.</p>	<p>PS (Potentially Significant Impact)</p>	<p>MM UTL-1</p> <p>Water Demand Management. Prior to receiving entitlements for new residential development under the Housing Element Update, project applicants must contact the CCCWD and obtain confirmation that adequate water service can be provided and adequate water supplies are available consistent with their latest Urban Water Management Plan. If the CCCWD indicates it cannot guarantee water supplies for the new development, or the project involves an increase over planned development (i.e., General Plan Amendment or Rezoning) to a use or uses that would consume more water than under the current General Plan and zoning, then the development must implement one or more of the following water conservation measures to the degree necessary to achieve the level of water use that would have occurred under the current General Plan and/or zoning designation(s):</p> <ul style="list-style-type: none"> • Install appliances and plumbing that exceed current State Green Building Code water conservation requirements (i.e., those “current” at the time of application). Examples include but are not limited 	<p>LTS (Less than Significant with Mitigation)</p>

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>to low or dual flush toilets, composting toilets, high efficiency washing machines, shower timers, low-flow faucet and shower aerators, insulate water pipes, etc.;</p> <ul style="list-style-type: none"> • Prohibit installation of a swimming pool or allow only a spa; • Prohibit installation of water-consuming landscape features (fountains, ponds, etc.); • Prohibit installation of turf and promote individual gardens; • Install all hardscape or all xeriscape (drought-tolerant) plants; • Install only highly efficient drip irrigation systems - do not allow installation of any overhead sprayers or aerial sprinkler systems; • Install rain barrels or other rain storage systems to reduce demand on domestic water needed for landscaping; • Evaluate feasibility of installing grey water collection and recycling system, and install the system if feasible; and • For a General Plan Amendment or Rezoning, the project must demonstrate that it would exceed state and/or regional water conservation requirements sufficient to achieve water use that would have occurred under the existing land use and zoning designations. <p>Projects are not limited to this list but can recommend additional improvements or systems as appropriate to maximize water conservation. A project must identify the water conservation measures to be implemented with the project prior to entitlement and must demonstrate full compliance with this measure, including installation of specified improvements, prior to receiving a certificate of occupancy. This measure shall be implemented to the satisfaction of the City Planning Department.</p>	

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>IMPACT UTS-2 – Would the HEU have insufficient water supplies available to serve the HEU and reasonably foreseeable future development during normal, dry, & multiple dry years?</p> <p>The projected population increase estimated in the CCWD UWMP is only +530 persons from 2025 to 2045 and so it does not account for the +2,364 persons estimated by the HEU for the same period. In addition, the UWMP shows a cumulative deficit of water demand over supply after 2025 under the multi-dry year 5 conditions. Since the Bay Area is already experiencing that level of drought, this analysis will err on the side of caution and conclude water supply impacts of the HEU are potentially significant. This is considered a potentially significant impact.</p>	PS (Potentially Significant Impact)	See Mitigation Measure UTL-1, Above	LTS (Less than Significant with Mitigation)
<p>IMPACT UTS-6 – Would the HEU cause substantial adverse cumulative impacts with respect to Utilities and Service Systems?</p> <p>The proposed HEU may have potentially significant impacts on water consumption and sewer/wastewater treatment in the future within the Planning Area. This is considered a potentially significant impact.</p>	PS (Potentially Significant Impact)	See Mitigation Measure UTL-1, Above	LTS (Less than Significant with Mitigation)
WILDFIRE			
<p>Impact WIL-2 – Would the HEU result in impacts due to slope, prevailing winds, and other factors, exacerbating wildfire risks, and thereby expose project occupants to, pollutant concentrations</p>	PS (Potentially Significant Impact)	<p>MM HAZ-1: The City shall determine if it will prepare an update to its Local Hazard Mitigation Plan (LHMP) or cooperate with Contra Costa County in an update to its Emergency Operations Plan (EOP). This update must address the evacuation planning and coordination directives outlined in SB 99 and AB 747 as they apply to the City. The</p>	LTS (Less than Significant with Mitigation)

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p><i>from a wildfire or the uncontrolled spread of a wildfire?</i></p> <p>The proposed HEU could potentially expose project occupants to the uncontrolled spread of wildfire. This is considered a potentially significant impact.</p>		<p>selected update shall address areas of the City or its Planning Area that have high fire risks and identify adequate evacuation routes with ongoing maintenance needs and operational and public education needs to support use of these routes during emergency conditions. The City shall decide which document update is most appropriate for the City within 90 days of adoption of the HEU.</p>	

NOTES:**PS = Potentially Significant Impact****LTS = Less than Significant Impact****SU = Significant Unavoidable Impact**

This Page Intentionally Left Blank.

2.7 Alternatives to the Proposed Project

To provide a basis for further understanding of the environmental effects of a proposed project and possible approaches to reducing its identified significant impacts, Section 15126.6 of the CEQA Guidelines also requires an EIR to “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.”

Project Objectives

1. Maintain and enhance existing housing and neighborhoods.
2. Ensure adequate sites are available to accommodate moderate housing and population growth and ensure achievement of the City’s regional housing needs allocation in compliance with state law.
3. Update City policies and regulations to allow for a greater number and diversity of housing units.
4. Diversify the housing stock to increase housing opportunities at all income ranges and for both renters and homeowners.
5. Minimize governmental constraints to housing production.
6. Ensure fair housing practices.
7. Preserve and improve existing affordable housing stock.

Identified Alternatives

1. **Alternative 1: No Project/Existing Housing Element.** The No Project/Existing Housing Element Alternative (No Project Alternative) assumes that development would occur within the Planning Area, but only in the locations and at the densities allowed or anticipated under the 2014 Housing Plan. The No Project Alternative assumes a continuation of the existing 2014 Housing Plan. As this alternative would not update City policies and regulations to allow for greater number and diversity of housing units and would not provide the densities needed to allow the City to accommodate its RHNA of 570 or more units, it would not meet most of the project objectives.
2. **Alternative 2: Reduced Residential Development Capacity at Site M (3 du/ac) and Town Center Sites (20 du/ac).** Alternative 2 assumes that overall development would be reduced by 19 percent within the Planning Area when compared to the project. This alternative assumes that policies and goals associated with the Housing Element Update would be applicable to development under this alternative. This alternative would allow the City to accommodate its RHNA of 570 units similar to the project; however, this alternative would generally not meet the project objectives to the extent as the project.
3. **Alternative 3: Reduced Residential Development Capacity at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory.** Alternative 3 assumes the reduced development potential associated with Alternative 2 and assumes addition of new Sites U and V to the housing inventory. Overall development associated with the Alternative 3 would be increased by 11 percent within the Planning Area compared to the project. This alternative assumes that policies and goals associated with the Housing Element Update would be applicable to development under this alternative. This alternative would allow the City to accommodate its RHNA of 570 units similar to the project and generally meet the

project objectives as does the project; however, identified environmental impacts would likely increase compared to the project.

Comparison of Impacts

Table 2-2 (Alternatives Impacts Compared to Project Impacts) compares the environmental impacts of the various alternatives to those of the proposed Housing Element Update. Alternatives 1 and 2 would reduce the overall levels of impacts compared to the project since they propose less overall development. However, Alternatives 1 and 2 would not help the City achieve its RHNA housing allocation to the same degree as the proposed Housing Element Update. While Alternative 3 would achieve the project objectives, Alternative 3 would increase the overall levels of impacts compared to the project since it proposes greater overall development. Finally, none of the alternatives would eliminate any of the significant and unavoidable impacts identified for the proposed Housing Element Update.

Environmentally Superior Alternative

The CEQA Guidelines (Section 15126[e][2]) stipulate, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Alternative 3 would result in similar or greater environmental impacts as compared to the proposed project because Alternative 3 would result in greater development potential than the project. Other than Alternative 1 (No Project—Existing Housing Element), Alternative 2, Reduced Development Capacity at Site M and Town Center Sites, would result in the least adverse environmental impacts and would therefore be the "environmentally superior alternative." However, Alternative 2 would not meet the project objectives to the same degree as the proposed project and would not help the City achieve its RHNA housing allocation to the same degree as the proposed project. This conclusion is based on the comparative impact conclusions in Table 2-2.

Table 2-2
Alternatives Impacts Compared to Project Impacts

Impact/Resource	1. No Project-- Existing Housing Element Development Capacity	2. Reduced Development Capacity at Site M and Town Center Sites	3. Reduced Development Capacity at Site M and Town Center Sites/Addition of Sites U and V to the Housing Inventory
Aesthetics	Reduced LTS	Reduced LTS	Similar LTS
Agriculture and Forestry Resources	Similar No Impact	Similar No Impact	Similar No Impact
Air Quality	Reduced LTS	Similar LTS	Similar LTS
Biological Resources	Similar LTS	Similar LTS	Similar LTS
Cultural Resources	Similar LTS	Similar LTS	Similar LTS
Energy	Reduced LTS	Reduced LTS	Similar LTS
Geology and Soils	Similar LTS	Similar LTS	Similar LTS
Greenhouse Gas Emissions	Reduced SU	Reduced SU	Similar SU
Hazards and Hazardous Materials	Similar LTS	Similar LTS	Similar LTS
Hydrology and Water Quality	Similar LTS	Similar LTS	Similar LTS
Land Use	Similar LTS	Similar LTS	Similar LTS
Mineral Resources	Similar No Impact	Similar No Impact	Similar No Impact
Noise	Similar LTS	Similar LTS	Similar LTS
Population and Housing	Reduced LTS	Reduced LTS	Similar LTS
Public Services	Reduced LTS	Reduced LTS	Similar LTS
Recreation	Reduced LTS	Reduced LTS	Similar LTS
Transportation	Reduced SU	Reduced SU	Similar SU
Tribal Cultural Resources	Similar LTS	Similar LTS	Similar LTS
Utilities and Service Systems	Reduced LTS	Reduced LTS	Similar LTS
Wildfire	Similar LTS	Similar LTS	Similar LTS
Source: MIG, 2022 LTS= Less-than-Significant Impacts SU= Significant and Unavoidable Impacts			

2.8 Areas of Controversy

Several areas of controversy have arisen during preparation of the City's Housing Element Update. These include higher residential densities, increased housing and vehicle miles traveled (VMT), school capacity, and water availability, as outlined below:

Higher Residential Densities. Concerns have been expressed from the public about increasing housing densities to meet the City's RHNA. A number of residents made specific comments during the NOP period about increasing densities of multi-family housing and the addition of higher density multi-family housing near their single-family neighborhoods.

School Capacity. Both the Mt. Diablo Unified School District (MDUSD) and members of the public made specific comments related to MDUSD's ability to house additional students resulting from the Housing Element Update.

Water Availability. Local water-serving agencies may face challenges in providing of water in a manner timely to support the anticipated growth in housing and non-residential uses under the Housing Element Update.

ⁱ California Energy Commission. *Integrated Energy Policy Report*. (2015).

3 – PROJECT DESCRIPTION

The City's Housing Element was last updated in 2014. The City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments ("HEU" or "project") bring the Clayton General Plan into conformance with the requirements of Article 5 (Authority for and Scope of General Plans) of California Government Code and addresses changes to the demographic, economic, and environmental conditions in Clayton that are anticipated to occur through the year 2031. Article 5 requires that every California city and county has a general plan that functions as a comprehensive, long-range policy document. For cities, the housing element is an aspect of the general plan that is used to adequately plan to meet the existing and future projected housing needs of all economic segments of the community, guiding the physical development of the incorporated city (e.g., city limit) and any land outside city boundaries (e.g., unincorporated sphere of influence area) that has a relationship to the city's future growth and development. A sphere of influence is a planning boundary outside of a city's legal boundary (such as the city limit line) that designates a city's probable future boundary and service area. The City of Clayton Housing Element applies to a Planning Area comprised of the City of Clayton, the Clayton Sphere of Influence, and the undeveloped area to the east, south, and southwest. The project analyzed in this program Environmental Impact Report (EIR) is the adoption and long-term implementation of the sixth cycle Housing Element Update.

3.1 Project Background

Under California law (Government Code Section 65300 *et seq.*), every city and county is required to have a general plan that functions as the overarching, comprehensive and long-range policy document. For cities, the general plan guides the physical development of the incorporated city and any land outside city boundaries (e.g., city limit) that has a relationship to the city's future growth and development. The City of Clayton Housing Element, last updated in 2014, contains goals, policies and implementation programs to meet the existing and future projected housing needs of all economic segments of the community. The Housing Element contains goals and policies, all focused on issue statements. The project analyzed in this program EIR is the adoption and long-term implementation of the updated City of Clayton Housing Element, updated Land Use Element, and any subsequent amendments to Title 17 (Zoning) of the Clayton Municipal Code (Zoning Code) adopted to implement the updated General Plan Element. This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 *et seq.*) and the State CEQA Guidelines (California Code of Regulations, Section 15000 *et seq.*). This EIR is a Program EIR prepared in accordance with State CEQA Guidelines Section 15168, which allows for the preparation of a Program EIR for a series of actions that can be characterized as a single project.

3.2 Project Location

The Planning Area is located in north-central Contra Costa County, approximately 20 miles east of downtown Oakland, and encompasses all properties within the City's corporate boundaries, Sphere of Influence (SOI), and some open space areas outside the City's corporate boundaries and SOI. The City of Clayton is located at the base of the north slope of Mt. Diablo. The City is bordered by the unincorporated ghost town of Nortonville to the northeast. The City of Concord lies to the west, and Walnut Creek lies to the southwest. The regional context of Clayton is shown in Exhibit 3-1.

3.3 Existing Conditions

Environmental Setting

As shown in Exhibit 3-2, the corporate boundary of the City of Clayton encompasses approximately 4 square miles or 2,600 acres. Areas within the corporate city boundary include lands developed with predominantly low-density residential uses, public and private recreational facilities and open space. There are two schools for elementary- and middle school-aged children, and two primary commercial areas located near the northern end of the City and in the City's Town Center. The City's Sphere of Influence (SOI) encompasses approximately 1 square mile or 628 acres of lands adjacent to and outside of the corporate boundary. The SOI outside of the corporate boundary includes lands that the City intends to annex for purposes of development, consistent with the land use designations shown on the General Plan land use and the City's Marsh Creek Road Specific Plan land use diagrams. Areas outside of the corporate boundaries but within the SOI line contain mostly open space with limited development.

The City's Planning Area encompasses the lands within the City's corporate boundary and SOI plus an additional approximately 4 square miles or 2,572 acres. The portions of the Planning Area located outside the City's corporate boundaries and SOI line are mostly undeveloped and comprised of open space or agricultural uses. The City does not intend to annex lands within the Planning Area outside of the SOI; however, the City has identified these lands as areas where actions have a direct effect on City conditions. Entitlement actions on these lands bear relation to achievement of the City's long-range development goals, particularly the natural resource preservation and viewshed protection goals enumerated in the Community Design Element and Open Space and Conservation Element of its General Plan.

Several freeways and highways provide regional access to the Planning Area, including Interstate 680 (I-680) to the west, State Route 242 (SR 242) to the northwest, and Interstate 580 (I-580) to the south. Regional arterials that serve Clayton include Ygnacio Valley-Kirker Pass Road and Clayton Road. Clayton Road carries traffic to downtown Clayton from SR 242 in Concord. Marsh Creek Road carries traffic to Clayton from residential developments and ranches to the east between Clayton and Brentwood. Marsh Creek Road is primarily a rural facility. Clayton and Marsh Creek Roads meet both in the Town Center (where Marsh Creek Road ends) and adjacent to the Diablo view Middle School (where Clayton Road ends and Marsh Creek Road turns to the Town Center).

Clayton is served by several transit providers that include the County Connection and Bay Area Rapid Transit (BART). County Connection is a central Contra Costa County fixed-route and paratransit bus service serving cities and communities including Orinda, Lafayette, Moraga, Walnut Creek, Pleasant Hill, Concord, Martinez, Clayton, Danville and San Ramon (County Connection, 2022). BART is a rapid transit system serving the San Francisco Bay Area of California. The closest BART station to Clayton is the Concord BART station, which is accessible to Clayton residents by County Connection Route 10 on weekdays and County Connection Route 310 on weekends.

Elevations in Clayton range from approximately 300 to 1,100 feet above sea level to 3,849 feet in the Diablo State Park (Google Earth; California State Parks, 2022). As shown in Exhibit 3-3, Clayton's northeast and southwest portions have high elevations. The steep terrain and dense natural vegetation in Diablo State Park and the northeast region of the Planning Area present potential wildland fire and slope failure hazards (California State Parks, 2022).

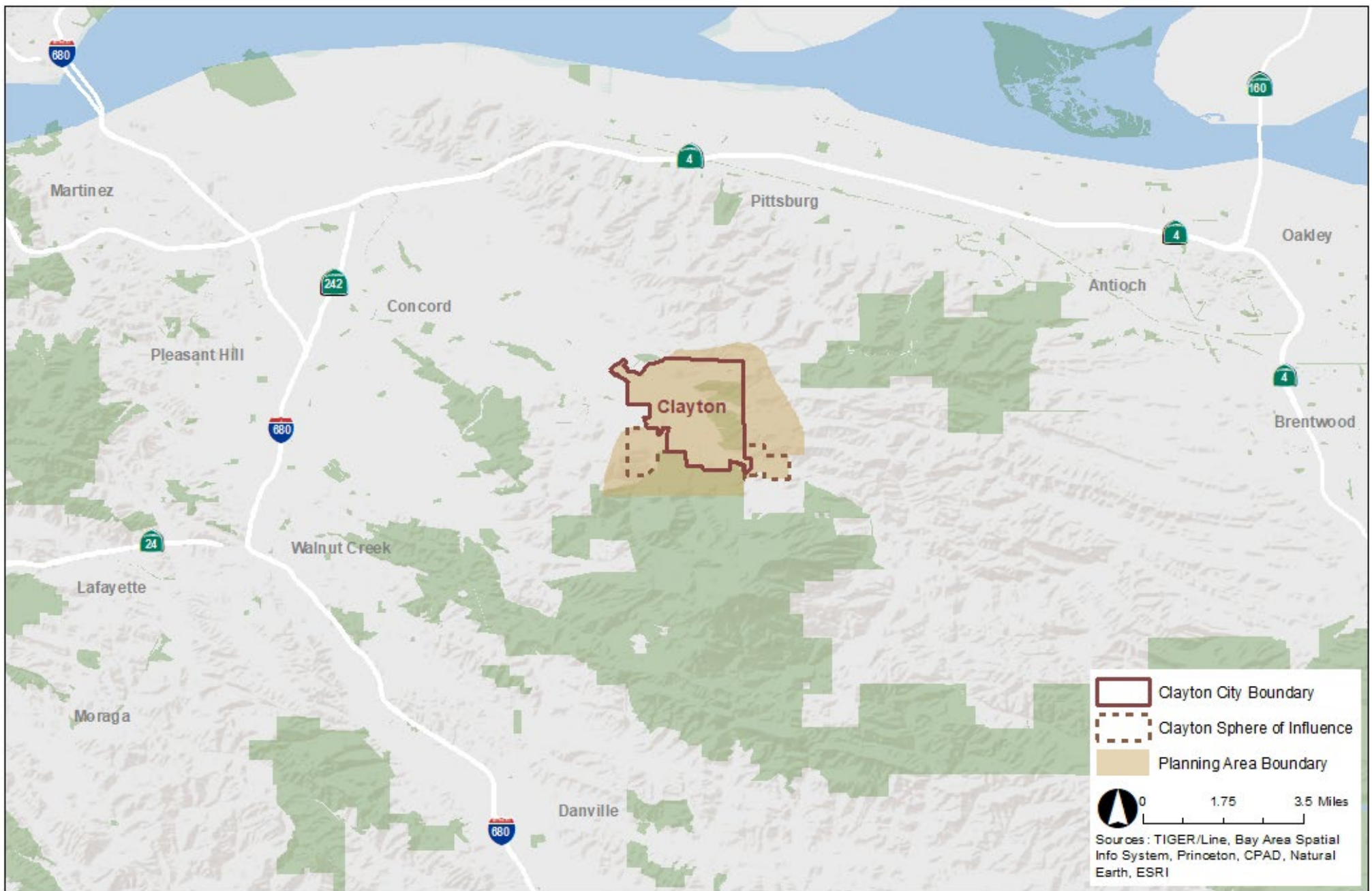


Exhibit 3-1 Regional Location

Clayton Housing Element Update

Clayton, CA

This Page Intentionally Left Blank.

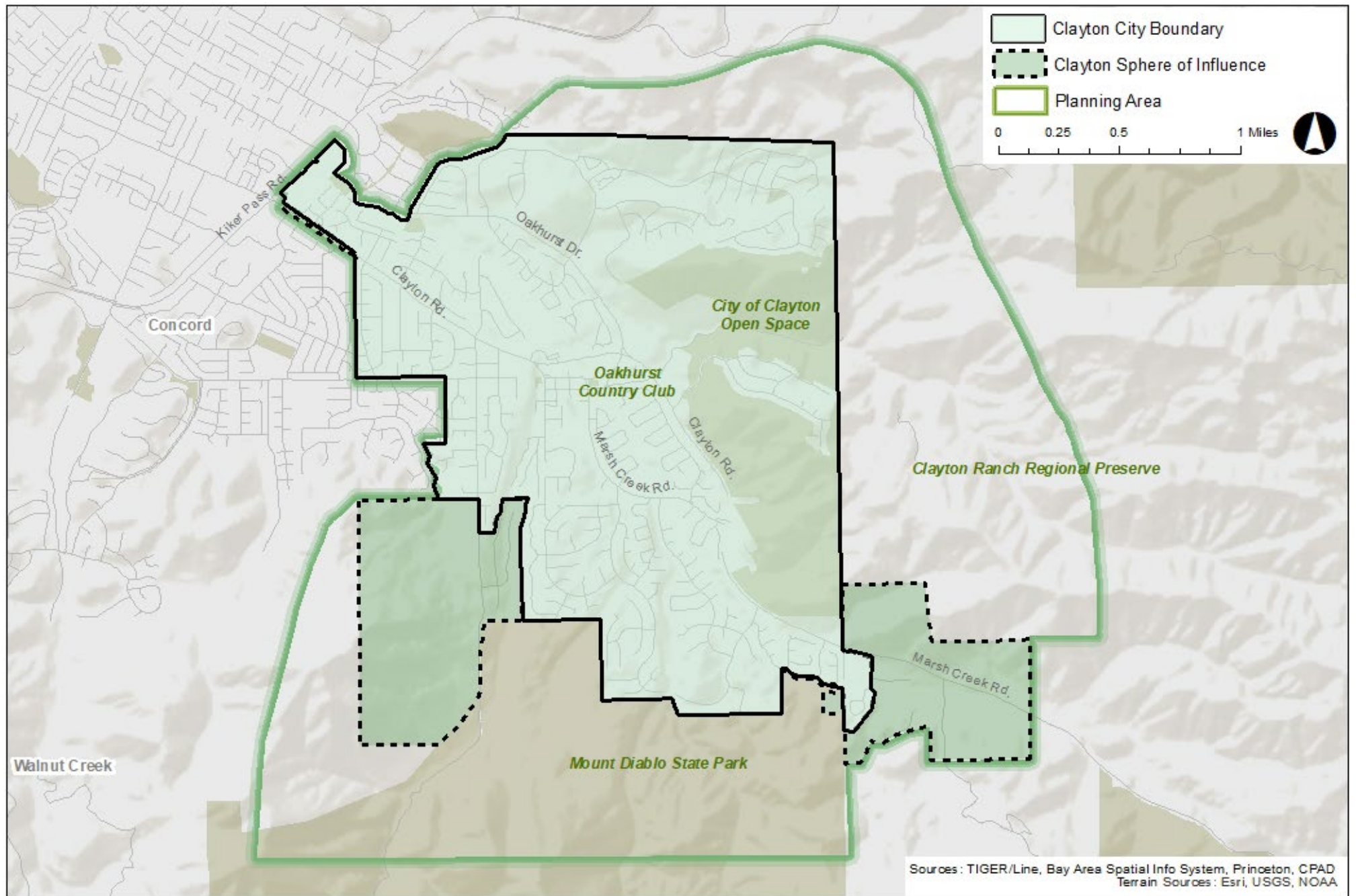


Exhibit 3-2 Planning Area

Clayton Housing Element Update

Clayton, CA

This Page Intentionally Left Blank.

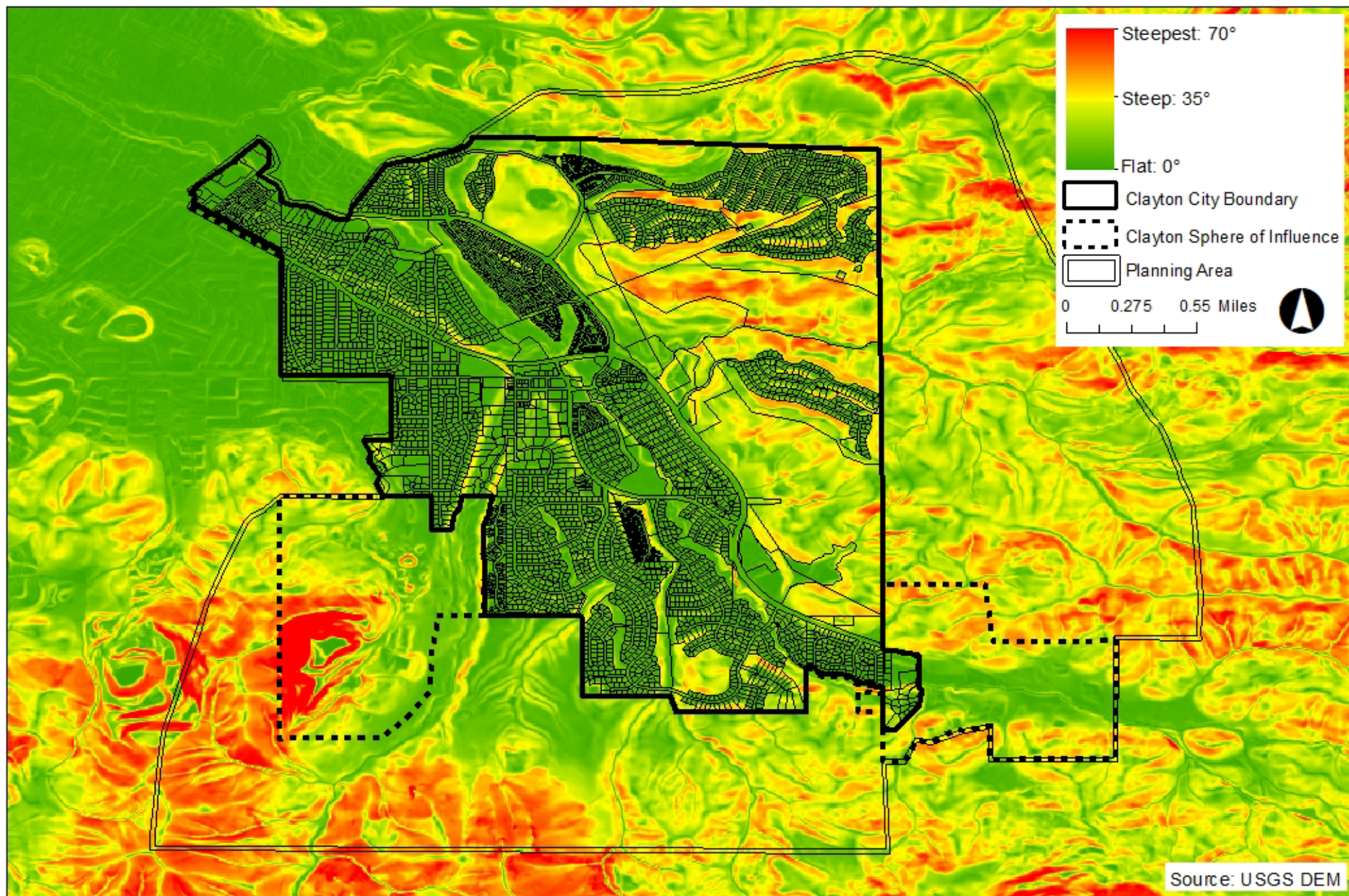


Exhibit 3-3 Topography and Slope

Clayton Housing Element Update
Clayton, CA

This Page Intentionally Left Blank.

Undeveloped regions of Clayton contain unstable expansive soil on slopes, posing a threat of mudflows, rockslide, and creep. According to the Clayton Safety Element, the most critical faults posing a threat to the Planning Area are the San Andreas, Calaveras and Hayward faults. Other faults that pose a lesser or indeterminate threat include the Antioch, Concord, Pinole, Bollinger, Las Trampas, Franklin, South Hampton, Clayton Marsh Creek, Midland, and Mt. Diablo Faults.

Clayton's storm drain system is regulated by the San Francisco Regional Water Quality Control Board (Region 2). The City of Clayton is also a member of the Contra Costa Clean Water Program where it combines efforts with 18 other jurisdictions to comply with the federal Clean Water Act. Stormwater endpoint discharge is the Pacific Ocean, specifically the San Francisco Bay and the Delta, via the local creeks. Limited portions of the Planning Area, specifically Mt. Diablo Creek, are mapped as special flood hazard areas (FEMA, 2022).

Existing Land Use

The City of Clayton encompasses approximately 2,600 acres (including City rights-of-way), the City's SOI encompasses approximately 628 acres, and the area outside the City's corporate boundary and SOI encompasses approximately 2,572 acres, for a total Planning Area of approximately 5,800 acres. Most development in the Planning Area is residential (1,270 acres), which accounts for almost half (45.9 percent) of the total land area. Park, open space, and agricultural uses make up almost one-third of the Planning Area with 904 acres (32.7 percent). Commercial, office, and industrial land uses total 226 acres (8.2 percent). Public facilities, schools, and utilities and transportation facilities total 167 acres (6.0 percent). Vacant land within the Planning Area totals 199 acres (7.2 percent). Table 3-1, below, provides a detailed acreage breakdown of existing land uses in the Planning Area. Table 3-1 also shows existing and projected demographics for the Planning Area including a separate breakdown for the City and areas with its SOI. The estimated population for the Planning Area in 2022 is 11,268 persons, and the estimated employment for the Planning Area in 2022 is 927 jobs.

Clayton is a residential community that began in the mid-19th century as a supply town for nearby coal and precious metal mines. As mined resources were exhausted, Clayton evolved in the latter half of the 19th century into a predominantly agricultural community with orchards, livestock ranches and vineyards. By the mid-20th century and post-World War II, the City began to see its farms and orchards replaced by individual homes on large lots.

The older, larger lots are responsible for much of the open space and vegetation of the community. Many design features that capture the character of Clayton can be found in these sites. This includes large trees and shrubs, unique residential design, open space vistas, stock fences, barns, and long entryways to set back units and houses. Newer residential development has occurred in subdivision tracts, many of which have similar in large-lot residential characteristics but which also include some smaller-lot development near the City's Town Center. Clayton has a rural atmosphere, has a large trail system, is considered quieter than surrounding communities, and has a large amount of open space. Residential development in Clayton is quaint, refined, contemporary, and reflective of Clayton's heritage.

The Clayton General Plan establishes seven residential designations: Rural Estate, Single-Family Low Density, Single-Family Medium Density, Single-Family High Density, Multifamily Low Density, Multifamily Medium Density, Multifamily High Density, and Institutional Density. The density ranges for each residential land use designation are based on the developable acreage of the parcel. Developable acreage and residential density calculations are further

defined and described in the Clayton Municipal Code regarding residential parcels with sensitive land areas.

Commercial development in Clayton is located primarily along Kirker Pass Road and in the Town Center, and with other smaller sites along Clayton Road, Pine Hollow Road, and Marsh Creek Road. Commercial designations include retail, restaurant, and office uses. Commercial development on Kirker Pass Road has a coordinated design and appearance that distinguishes it from nearby commercial areas in Concord. Commercial development in the Town Center makes for a clearly-defined central business district. The Town Center is located in the center of the City of Clayton and has been a historical commercial center since Clayton's inception. The uses allowed within the Town Center designation include retail sales, commercial service, restaurant, bar, commercial recreation, child day care, office, upper-floor residential, and visitor-accommodation uses.

Within Clayton, open space falls into four categories as designated in the General Plan: Private Open Space, Public Park/Open Space/Open Space and Recreational, Quarry, and Agriculture. Typical examples of private open spaces in Clayton include the Oakhurst golf course and areas where development has been clustered to retain open space. Other examples include private recreational facilities such as the riding club southeast of Clayton, the swimming pools at Marsh Creek Park Villas and Dana Hills, and the open space within the Dana Hills and Westwood tracts. Public park and open space uses within the planning area include City-owned open space areas and developed neighborhood and community parks, creek corridors, Mt. Diablo State Park, and the open space areas within the Oakhurst subdivision (dedicated to the City). There are no quarries located within the City limits of Clayton; however, the CEMEX Clayton Quarry is located on unincorporated lands located next to the southwestern edge of the community. The quarry produces high quality rock and gravel and has an expected life in excess of 50 years. The quarry is designated as a State resource and cannot be curtailed by local action. The purpose of the Agriculture designation is to preserve and protect lands capable of and generally used for the production of food, fiber and plant materials. Many land owners in the Clayton Planning Area have entered into Williamson Act contracts with Contra Costa County. The contracts are self-perpetuating 10-year agreements that, unless canceled by the property owner, preclude non-agricultural development. Acres to the northeast and east of the City limits include rugged terrain that is primarily used as rangeland for livestock and other similar open uses. Vacant properties are located throughout the Planning Area but are primarily located in single-family residential areas in the southern hillsides.

3.4 Project Characteristics/Housing Element Update

Every California city and county must have a general plan, and every general plan must address eight mandatory elements, one of which is housing. The housing element of a general plan must:

...consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and shall make adequate provision for the existing and projected needs of all economic segments of the community. (Government Code Section 65583)

The City of Clayton updates its General Plan Housing Element on an eight-year cycle, and the last update took place in December 2014 and established a housing plan for the City for the eight-year cycle between 2015 and 2023. In fall 2021, the City commenced the update of its Housing Element for the 6th cycle, which spans years 2023 through 2032. The community engagement process for the 6th cycle Housing Element Update included introductory meetings with stakeholders, members of the City Council, and Planning Commissioners to obtain early feedback on the current update; a virtual community workshop with residents and interested parties on October 20, 2021; online surveys launched in November 2021 and March 2022 for residents and interested parties to share their housing preferences, priorities, and opinions about Downtown and housing in Clayton; and six community study sessions or comment meetings with at City Council and Planning Commission meetings between January and June 2022. The study sessions and comment meetings focused on legislative intent of housing law, population and housing characteristics in Clayton, how affordable housing is defined, and how the City can best accommodate its Regional Housing Needs Allocation (RHNA) of 570 or more units.

The updated Housing Element includes programs, policies, and actions to further the goal of meeting existing and projected housing needs of all income levels and identifies how the City plans to accommodate its RHNA of at least 570 units. Table 3-2, below, provides a detailed acreage breakdown of projected land uses in the Planning Area under the proposed Housing Element Update as well as projected demographics for the Planning Area. Table 3-3, below, provides a comparison of existing land use in the Planning Area and projected land use under the proposed Housing Element Update. As shown in Table 3-3, the proposed Housing Element Update has the potential to result in development of up to 868 additional dwelling units in the Planning Area, which represents a 21.07 percent increase over existing conditions.ⁱ Additionally, the proposed Housing Element Update has the potential to result in a population increase of up to 2,364 additional persons and an additional 71 employees within the Planning Area, which represents a 20.98 percent and 7.66 percent increase, respectively, over existing conditions. Finally, the proposed Housing Element Update has the potential to result in development of up to 13,000 square feet of additional non-residential building square footage within the Planning Area, which represents a 3.57 percent increase over existing conditions.

ⁱ At the time of release of the Housing Element Update Notice of Preparation (NOP), the City had prepared a preliminary sites inventory that included up to 868 new units. That number was established as the maximum possible number of dwelling units. Subsequent to release of the NOP and as a result of public workshops on the preliminary sites inventory, the number of units was reduced to 764. However, this EIR examines impacts associated with up to 868 new potential units to reflect the NOP project description and to provide flexibility during the public hearing process to reconsider sites removed and/or new sites added (with 868 units as the limit).

This Page Intentionally Left Blank.

**Table 3-1
Existing Land Use**

Existing Land Use	Acres		Dwelling Units		Population		Building Square Footage						Employment					
	City	SOI	City	SOI	City	SOI	City			SOI			City			SOI		
							Comm	Office	PF	Comm	Agr	Ind	Comm	Office	PF	Comm	Agr	Ind
Single Family Units	1,082	184	3,910	68	10,450	204	0	0	0	0	0	0	0	0	0	0	0	0
-Accessory Dwelling Units	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Multi-Family Units	4	0	155	0	582	0	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	30	12	0	0	0	0	173,490	0	0	1,680	0	0	686	0	0	7	0	0
Office	3	0	0	0	0	0	0	83,650	0	0	0	0	0	163	0	0	0	0
Industrial	0	181	0	0	0	0	0	0	0	0	0	350	0	0	0	0	0	1
Public Facilities	139	0	52	0	233	0	0	0	107,000	0	0	0	0	0	78	0	0	0
Schools	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utilities and Transportation	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parks	481	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Open Space	369	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	39	0	0	0	0	0	0	0	0	2,839	0	0	0	0	0	4	0
Vacant	3	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2,139	627	4,120	68	11,268	204	173,490	83,650	107,00	1,680	2,839	350	686	163	78	7	4	1

Source: MIG, 2022.
Note: The acreage for the City's corporate boundaries and Sphere of Influence do not include City rights-of-way.

**Table 3-2
Projected Land Use**

Existing Land Use	Acres		Dwelling Units		Population		Building Square Footage						Employment					
	City	SOI	City	SOI	City	SOI	City			SOI			City			SOI		
							Comm	Office	PF	Comm	AGR	Ind	Comm	Office	PF	Comm	Agr	Ind
Single Family Units	1,085	184	4,095	68	10,963	204	0	0	0	0	0	0	0	0	0	0	0	0
-Accessory Dwelling Units	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
Multi-Family Units	29	0	830	0	2,425	0	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	30	12	0	0	0	0	193,490	0	0	1,680	0	0	765	0	0	7	0	0
Office	3	0	0	0	0	0	0	83,650	0	0	0	0	0	163	0	0	0	0
Industrial	0	181	0	0	0	0	0	0	0	0	0	350	0	0	0	0	0	1
Public Facilities	128	0	52	0	233	0	0	0	100,000	0	0	0	0	0	70	0	0	0
Schools	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utilities and Transportation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parks	480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Open Space	356	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0	39	0	0	0	0	0	0	0	0	2,839	0	0	0	0	0	4	0
Vacant	2	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2,139	627	4,988	68	13,632	204	193,490	83,650	100,000	1,680	2,839	350	765	163	70	7	4	1

Source: MIG, 2022.
Note: The acreage for the City's corporate boundaries and Sphere of Influence do not include City rights-of-way.

This Page Intentionally Left Blank.

**Table 3-3
Existing and Projected Land Use Comparison**

Land Use Type	Existing Conditions (2021)	Future Buildout Conditions (2029)	Existing to Buildout Change (Total)	Existing to Buildout Change (Percentage)
Dwelling Units	4,120	4,988	+868	+21.07%
-Single-Family	3,910	4,095	+185	+4.73%
-Accessory Dwelling Unit	3	11	+8	+266.67%
-Multi-Family	207	882	+675	+326.09%
Population	11,268	13,632	+2,364	+20.98%
Employees	927	998	+71	+7.66%
Non-Residential Building SF	364,140	377,140	+13,000	+3.57%
-Commercial	173,490	193,490	+20,000	+11.53%
-Office	83,650	83,650	+0	0.00%
-Public Facilities/Institutional	107,000	100,000	-7,000	-6.54%
Source: City of Clayton, 2021; MIG, 2022; Urban Footprint, 2021; Department of Finance (DOF) Demographic and Research Unit, 2021; and ESRI Business Summary, 2021. Notes: Vacancy Rate = 2.79%; Persons per Household = 2.81 (DOF, 2021), City Area = 3.84 sq. mi. (not including City rights-of-way); Sphere of Influence = 0.98 sq. mi.				

Projected 6th Cycle RHNA Housing Sites

As shown in Exhibit 3-4 (Preliminary 6th Cycle Housing Inventory Sites), the City of Clayton has identified 18 preliminary housing sites to accommodate the RHNA of 570 or more additional housing units. As described in the Housing Element Update, these sites include:

- Vacant properties zoned for residential, public, or agricultural use;
- An overflow parking lot owned by the Oakhurst Country Club;
- Within the Town Center, vacant properties (including a City-owned site), public parking lots, and private properties that could be redeveloped with mixed-use projects;
- Properties that are currently developed with a single-family home but are large enough to support additional residences or a multifamily housing project; and
- Sites owned by religious institutions that have expressed interest in developing housing on portions of their properties.

Not all of these properties are designated and zoned for residential use, and for those that are, the density yields may not be high enough to achieve the RHNA through private development efforts. Thus, for this 6th cycle Housing Element, to accommodate its RHNA of 570 or more units, the City will need to amend General Plan land use policy to increase residential densities to support greater variety in multifamily housing types, amend the Zoning Code to provide for consistency with General Plan policy, and rezone properties to reflect parallel General Plan land use designations. With the proposed amendments, the City is able to plan for the RHNA and create a planning buffer that responds to State laws regarding no net loss of lower-income residential units, should a site planned for lower-income housing be developed with a lower density than was planned. It should also be noted that the 6th cycle inventory sites shown in Exhibit 3-4 may change based on the public review process and comments from the California Department of Housing and Human Development (HCD).

3.5 Project Objectives

The Housing Element Update serves as the guide for the City's future residential growth and development. The Housing Element contains goals, policies, and programs that will provide City staff and discretionary bodies with a foundation for decisions for long-range planning related to physical development and public services. The Housing Element Update also includes the objectives listed below for future residential development in the community.

1. Maintain and enhance existing housing and neighborhoods.
2. Ensure adequate sites are available to accommodate moderate housing and population growth and achievement of the City's regional housing needs allocation.
3. Update City policies and regulations to allow for a greater number and diversity of housing units.
4. Diversify the housing stock to increase housing opportunities at all income ranges and for both renters and homeowners.
5. Minimize governmental constraints to housing production.
6. Ensure fair housing practices.
7. Preserve and improve existing affordable housing stock.

3.6 Housing Element Update Goals and Policies

The Housing Element Update's goals and policies have been established to address housing issues in Clayton and to meet state law housing requirements. The Housing Element Update identifies long-term housing goals and shorter-term policies and programs to address identified housing needs, constraints to development, and resources available to address housing needs. To make adequate provision for the housing needs for people of all income levels, the Housing Element Update includes the following goals and policies:

Goal 1. ***Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.***

Policy 1.1 **Neighborhood Preservation.** Preserve the architectural and design quality of established residential neighborhoods.

Policy 1.2 **Impacts of New Housing.** Consider and mitigate the impacts of new housing on the City's infrastructure, open space, natural resources, and public services.

Policy 1.3 **Targeted Growth.** Target new housing development to areas in Clayton near major travel corridors and commercial centers.

Policy 1.4 **Code Enforcement.** Continue to utilize the City's code enforcement program to improve overall housing conditions, and promote increased awareness among property owners and residents of the importance of property maintenance.

Policy 1.5 **Facilitate Reinvestment.** Make it easy for homeowners to reinvest in their properties by having staff-level review processes for the home renovations and additions that meet minimum development standards.

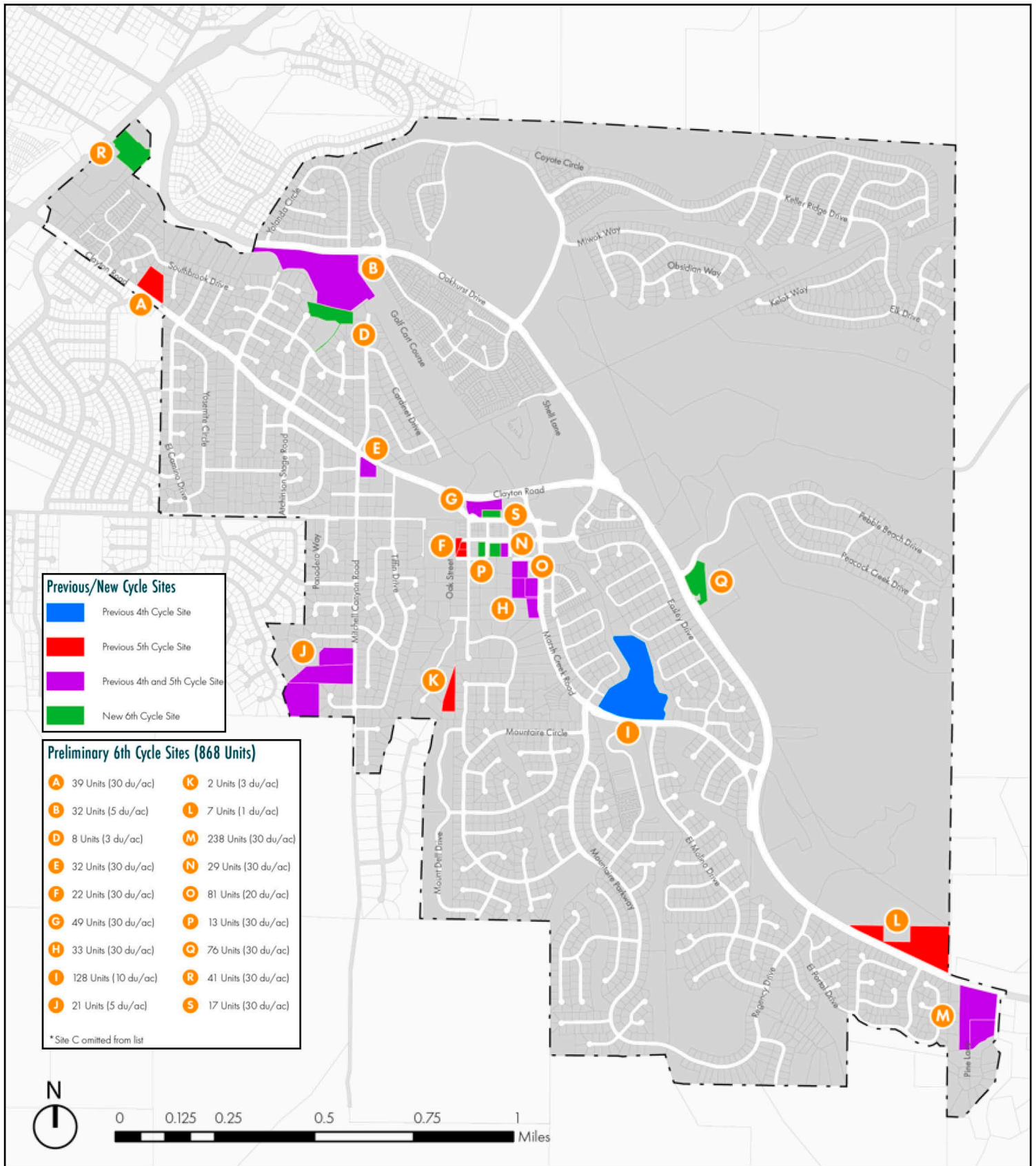


Exhibit 3-4 Preliminary 6th Cycle Housing Inventory Sites

<http://www.mig.com> • 951-787-9222



Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.

- Goal 2.** *Encourage a variety of housing types, densities, and affordability levels to meet the diverse needs of the community, including a mix of ownership and rental.*
- Policy 2.1** **Adequate Housing Sites.** Maintain and implement land use policies and zoning regulations that accommodate a range of residential housing types that can fulfill local housing needs and accommodate the City’s Regional Housing Needs Allocation of at least 570 units.
- Policy 2.2** **Variety of Densities and Housing Types.** Implement land use policies and standards that allow for a range of residential densities and housing types that will enable households of all types and income levels opportunities to find suitable ownership and rental housing in the City.
- Policy 2.3** **Accessory Dwelling Units.** Promote construction of accessory dwelling units as a way to increase the housing stock, particularly for lower-income households, seniors, young adults and persons with disabilities, recognizing that ADUs also promote investment in existing properties and reduce ongoing housing costs for property owners.
- Policy 2.4** **Urban Lot Splits.** Recognize urban lot splits, as defined and allowed by State law, as a viable means to create new housing.
- Policy 2.5** **Mixed-use Development.** Promote mixed-use development in Downtown Clayton that includes residential uses above ground-floor commercial and office uses, with ground-floor residential allowed under limited circumstances, such as alongside streets or behind street-facing commercial uses on Central and Main Streets.
- Policy 2.6** **Housing on Religious Institution Lands.** Create land use regulations that encourage the development of housing, particularly below market-rate housing, on properties owned by religious institutions.
- Goal 3.** *Provide opportunities for housing that respond to the needs of special needs households.*
- Policy 3.1** **Persons with Living with Disabilities.** Ensure zoning regulations accommodate development approaches that support special consideration for persons living with disabilities of all types.
- Policy 3.2** **Assistance and Incentives.** Facilitate the development of lower- and moderate-income housing by offering developers incentives such as density bonuses, streamlined entitlement and permitting processes, City participation in on- and off-site public improvements, and flexible development standards.
- Policy 3.3** **Seniors, Large Families, Single-parent Households, Foster Youth.** Encourage development of housing that meets the specific needs of seniors, large families, single-parent households, and youth transitioning out of the foster care system.
- Policy 3.4** **Supportive and Transitional Housing.** Ensure that zoning regulations respond to evolving laws regarding supportive and transitional housing.

- Policy 3.5 Unhoused Persons and Families.** Support regional programs focused on finding safe housing for persons and families who are temporarily or chronically without a place to live.
- Goal 4. Remove governmental constraints and obstacles to the production of housing for all income groups.**
- Policy 4.1 General Plan Land Use Policy.** Ensure that General Plan land use policies permit higher density housing development within a range that can support and encourage affordable housing.
- Policy 4.2 Residential Development Standards.** Review and adjust residential development standards, regulations, ordinances, departmental processing procedures, and residential fees related to rehabilitation and construction that are determined to constrain housing development.
- Policy 4.3 Policy Assessments.** Identify, assess, and, when appropriate, amend ordinances and policies that adversely affect housing cost.
- Goal 5. Ensure equal housing opportunities for all persons in Clayton regardless of age, race, religion, sex, marital status, national origin, color, disability, or other barriers that prevent choice in housing.**
- Policy 5.1 Anti-Discrimination.** Promote equity and prohibit discrimination in the sale, rental, or financing of housing based on race, color, ancestry, religion, national origin, sex, sexual orientation, gender identity, age, disability/medical condition, familial status, marital status, source of income, or any other arbitrary factor.
- Policy 5.2 Fair Housing.** Assist in the enforcement of fair housing laws by providing references for residents to organizations that can receive and investigate fair housing allegations, monitor compliance with fair housing laws, and refer possible violations to enforcing agencies.
- Policy 5.3 Housing Distribution.** Distribute affordable housing throughout all Clayton neighborhoods.
- Policy 5.4 Quality Living Environments.** Avoid concentrating low-income housing in areas with high pollution loads and low levels of public services.
- Policy 5.5 Inclusion.** Facilitate increased participation in civic conversations and decision-making by residents who have traditionally been underrepresented or hesitant to engage.
- Policy 5.6 Education.** Support continuing education for landlords regarding their fair housing legal responsibilities and tenants regarding their fair housing rights.
- Goal 6. Incorporate sustainability practices into housing production and operations.**
- Policy 6.1 New Subdivisions.** Require developers to incorporate sustainable practices into the design of subdivisions.

- Policy 6.2 Appliances.** Promote the use of clean, energy-efficient appliances in new homes.
- Policy 6.3 Energy Efficient Retrofits.** Promote home retrofits that reduce consumption of water and energy resources.
- Policy 6.4 High Standards.** Establish high sustainability standards for new multi-family housing and mixed-use developments.

3.7 General Plan and Zoning Code Amendments

General Plan Amendments

The City proposes to amend the General Plan Land Use Element to clarify the density ranges for multi-family housing and thereby encourage development of housing for people of all income levels and desired housing choices. The proposed amendments are as follows:

- Amend Objective 1 and related policies to reflect higher allowed densities along major transportation corridors.
- Amend the Multifamily Medium Density land use designation to describe a broader range of desired housing types and establish a density range of 10.1 to 20 units per acre.
- Amend the Multifamily High Density land use designation to describe a broader range of desired housing types and establish a density range of 20.1 to 30.0 units per acre.
- Amend the Institutional land use designation to allow for residential development within a density range of 10.1 to 30 units per acre, and at a minimum density of 20 units per acre on sites where religious assembly uses already exist.
- Amend the allowed uses in the Town Center designation to accommodate ground-floor residential under prescribed circumstances, such as alongside streets or behind street-facing commercial uses on Central and Main Streets and to allow for densities of up to 30 units per acre. Revisit the lot coverage standards to provide conditions that can accommodate higher densities.
- Amend the General Plan land use map to identify housing sites inventory properties for affordable housing as Multifamily High Density.
- Amend the General Plan to include policy language that allows for 100 percent affordable housing developments at up to 40 units per acre.
- Adopt a new policy in the Land Use Element requiring that development be built in accordance with minimum densities of the land use designation in which they are located.

Zoning Code Amendments

Title 16 (Land Development and Subdivision) and Title 17 (Zoning) of the Clayton Municipal Code is the primary tool for implementing the goals, objectives, and policies of the Housing Element Update, pursuant to the mandated provisions of the State Planning and Zoning Law (Government Code Section 65000 *et seq.*), State Subdivision Map Act (Government Code Section 66410 *et seq.*), California Environmental Quality Act (Public Resources Code Section 21000 *et seq.*), and other applicable state and local requirements. The land development and subdivision regulations, zoning map, zoning regulations, standards, permits and procedures that are contained in Title 16 and Title 17 and other parts of the Clayton Municipal Code, as applicable, are proposed to be revised following adoption of the Housing Element Update to be consistent with the Housing Element Update's goals, policies, exhibits, and texts.

The Housing Element Update identifies a shortfall of properties zoned at appropriate densities to accommodate housing for the extremely low-, very low-, and low-income categories of the RHNA. State law (Government Code Section 65583.2(h) and (i)) requires that land rezoned or redesignated to meet a shortfall meet the following criteria:

- Require a minimum density of at least 20 units per acre
- Accommodate at least 16 units per site
- Allow multi-family housing by-right (without a use permit)
- At least 50 percent of rezoned sites must be designated for residential uses only

In 2012, the City established the Multi-Family High Density General Plan land use designation and the M-R-H zoning (High Density Multiple Family Residential) zoning district to accommodate the City's lower-income RHNA shortfall from the 2007–2014 Housing Element planning period. However, properties identified to meet the lower-income RHNA were not rezoned, and not all of the additional Zoning Code amendments were made. For this cycle, the City proposes to:

- Amend the Zoning Code to include provisions for sites in the M-R-M (Medium Density Multiple Family Residential) and M-R-H zoning districts to allow at least 16 units regardless of density restrictions.
- Establish a Religious Institutional Overlay zone or similar mechanism to allow residential development on properties with an established religious use at a minimum density of 20 units per acre.

The Constraints analysis for this 6th cycle Housing Element identifies several Zoning Code amendments needed to address new state laws and remove potential constraints to development. In response, the City proposes to:

- Revise the development standards for the M-R zone to increase the maximum allowable building height to 35 feet within 50 feet of an abutting single-family residential district.
- Revise the lot area regulation in Section 17.20.050 for the M-R-M zone to require a minimum of 10 units per acre and accommodate a maximum of 20 units per acre, and revise the lot area regulation for the M-R-H zone to require a minimum of 20 units per acre and accommodate a maximum of 30 units per acre.
- Establish a zoning overlay or other mechanism to allow affordable housing developments at a maximum density of 40 units per acre on properties occupied by a religious institution.
- Pursuant to the requirements of AB 101 (2017), amend the Zoning Code to allow Low Barrier Navigation Centers as a by-right use on properties zoned for mixed use and non-residential zones that permit multifamily housing.
- Identify ways to streamline the site plan review process, authorize the Planning Commission as the decision-making body for planned development permit approval, and make other procedural streamlining amendments to the Zoning Code as appropriate.
- Revisit parking requirements for single-family residential uses to base requirements on the number of bedrooms in a unit instead of having the minimum standard of four per unit, and revise codified parking standards for multifamily residential uses to eliminate requirements for covered and guest parking.
- Establish objective design standards for multifamily residential and qualifying mixed-use developments under State law.

3.8 Intended Uses of this EIR

The planning framework proposed in the Housing Element Update and related Land Use Element and Zoning Code amendments would not result in the immediate entitlement or construction of any new development project. All new development within the City will continue to be subject to the City's permitting, approval, and public participation processes. Elected and appointed officials along with City Staff will review subsequent project applications for consistency with the General Plan, applicable Specific Plans, and the Zoning Ordinance, and will prepare appropriate environmental documentation to comply with CEQA and other applicable environmental requirements.

Pursuant to Section 15168 of the State CEQA Guidelines, this EIR is a Program EIR. The goals, policies, land use designations, implementation programs, and other substantive components of the Housing Element Update, Land Use Element and implementing sections of the Zoning Ordinance comprise the project and the "program" evaluated in this Program EIR. Subsequent activities undertaken by the City and project proponents to implement the project will be examined considering this Program EIR to determine the appropriate level of environmental review required under CEQA. Subsequent implementation activities may include but are not limited to the items listed below.

- Rezoning of properties to achieve consistency with the Housing Element Update.
- Updating and approval of Specific Plans and other development plans and planning documents.
- Review and approval of general plan amendments, specific plans, and zone changes.
- Approval of tentative maps, variances, conditional use permits, and other land use permits and entitlements.
- Approval of development agreements.
- Approval of facility and service master plans and financing plans.
- Approval and funding of public improvement projects.
- Approval of resource management plans.
- Issuance of permits and other approvals necessary for implementation of the General Plan.
- Issuance of permits and other approvals necessary for public and private development projects.

As the Lead Agency, the City also intends this EIR to serve as the CEQA-required environmental documentation for consideration by other Responsible Agencies and Trustee Agencies that may have limited discretionary authority over any future project affected by the Housing Element Update. Following certification of this Program EIR and adoption of the Housing Element Update, Land Use Element amendment and Zoning Code amendments by the Lead Agency (City of Clayton), other agencies may use this Program EIR in the approval of subsequent implementation activities. These agencies may include but are not limited to those listed below.

Local Agencies

- City of Concord
- City of Pleasant Hill
- City of Walnut Creek
- City of Pittsburg
- City of Antioch

- County of Contra Costa
- Contra Costa County Cultural Preserve at Mount Diablo State Park
- Clayton Ranch Regional Preserve

Regional and State Agencies

- Contra Costa Local Agency Formation Commission (LAFCO)
- Contra Costa County Flood Control District
- Contra Costa Transportation Authority
- Association of Bay Area Governments (ABAG)
- California Department of Fish and Wildlife
- California Department of Conservation
- California Department of Housing and Community Development (HCD)
- California Department of Parks and Recreation
- California Department of Transportation (Caltrans)
- California Department of Toxic Substances Control
- Regional Water Quality Control Board, San Francisco Bay Region
- Bay Area Air Quality Management District (BAAQMD)
- East Bay Regional Park District

Federal Agencies

- U.S. Fish and Wildlife Service

3.9 References

- California State Parks. California State Park Mt. Diablo Visitor Webpage.
<https://www.parks.ca.gov>. [Accessed March 2022].
- California State Parks. California State Park Mt. Diablo Visitor Brochure, 2000.
<https://www.parks.ca.gov>. [Accessed March 2022].
- City of Clayton. Clayton Safety Element, March 2000, page VII-10. [Accessed March 2022].
- City of Clayton. City of Clayton Stormwater Management & NPDES webpage.
<https://claytonca.gov>. [Accessed March 2022].
- City of Clayton. Clayton Zoning Map, Jan 2017. <https://claytonca.gov/community-development/planning/current-planning/>. [Accessed March 2022].
- County Connection. County Connection Maps & Schedules.
<https://countyconnection.com/routes/>. [Accessed March 2022].
- Federal Emergency Management Agency. FEMA Flood Map Service Center: City of Clayton.
<https://msc.fema.gov>. [Accessed March 2022].
- Google Earth Elevation Profile: Clayton, CA. [Accessed March 2022].
- United States Census Bureau. American Community Survey 2019 5-year Estimates.
<https://datausa.io>. [Accessed March 2022].

This Page Intentionally Left Blank.

4.1 – AESTHETICS

This EIR Chapter addresses potential impacts on scenic vistas and scenic resources, the potential of the City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”) to degrade the visual character or quality within the Planning Area and surrounding areas, and the potential of the project to create substantial and adverse light and glare.

4.1.1 *Environmental Setting*

The City of Clayton is located in north-central Contra Costa County, approximately 20 miles east of downtown Oakland. Clayton is located at the base of the north slope of Mt. Diablo. The City is bordered by the unincorporated ghost town of Nortonville to the northeast. The City of Concord lies to the west and Walnut Creek lies to the Southwest. Elevations in Clayton range from approximately 300 to 1,100 feet above sea level.^{1, 2} The higher elevation areas of the City in the northeast have superior views compared to the other portions of the City. Mt. Diablo State Park is located to the south of the City with elevations up to 3,849 feet. Most of the incorporated land within the Planning Area is developed with residential units.

Scenic Vistas

Scenic vistas are defined in this document as natural landscapes that provide views of unique flora, geologic or other natural features that are generally free from urban intrusions. Typical scenic vistas include views of mountains and hills, large, uninterrupted open spaces and waterbodies. Scenic vistas generally play a large role in the way a community defines itself and also affects development patterns as projects are designed to take advantage of viewsheds. Mt. Diablo State Park is visible toward the southern end of the Planning Area. Mt. Diablo State Park is a major topographic and open space feature in the area. Mt. Diablo provides an intact natural backdrop to Clayton; the rolling hills and broad, flat valleys host a variety of protected flora and fauna.³ Mt. Diablo State Park was established as such in 1851. Mt. Diablo can be seen from many locations within the Planning Area; unobstructed views help connect the Planning Area to the natural environment. The City’s General Plan and municipal codes underscore the importance of preserving the scenic attributes provided by Mt. Diablo.⁴

Scenic Resources/Routes

While scenic vistas form a complete viewshed, scenic resources are occurrences of aesthetically pleasing features. Examples of natural scenic resources include rock outcroppings, trees, prominent ridgelines, slopes and hilltops. Scenic resources can also be man-made, such as architecturally distinctive or historic buildings, historic points of interest, or historic roadways or highways. As previously described, Mt. Diablo forms the most significant scenic resource in the Planning Area, creating a distinguishable topographic feature that defines many of the views in the area. The incorporated lands within the Planning Area are primarily zoned for residential uses with some areas in the northern and central neighborhoods of the City zoned for commercial and government use.⁵

Clayton was established in 1857 with its founders envisioning a town at the commercial and industrial center of the developing coal mining industry. Many of the oldest buildings in Clayton

4.1 - Aesthetics

are in the City's Town Center, in the downtown area. Many local buildings were built in the 1800s and early 1900s.⁶ The town's cultural history is of central importance to the community, and historical preservation was a central purpose for a majority of residents' support for incorporation into a City in 1964. As such, the Planning Area and nearby lands have a variety of historic points of interest. Live Oak Cemetery, located in the City of Concord just east of Clayton's corporate boundary, is the burial site for many of Clayton's earliest settlers, including the town founder, Joel Clayton. The Clayton Club Saloon in Clayton's Town Center is the oldest continuously operated business in Clayton, having been established in 1874. Other historical structures include Clayton Jail, along with Endeavor Hall, a hall originally built as a Methodist church in the 1860s, which has served as a church, public meeting hall, and community space for over 160 years. Other historic points of interest include the site of Clayton's original two-room school established in 1857, the Keller Ranch House, and the DeMartini Winery building, which was rehabilitated by the City and has served as Clayton's City Hall since 1997.

The most current Community Design Element (2008) of the City's General Plan states the following regarding locally designated "scenic routes":

The scenic routes and corridors are those thoroughfares through Clayton indicated in Exhibit V-1 [of the Community Design Element]. These routes have been selected due to the incidental and panoramic view of Mt. Diablo, the foothills surrounding Mt. Diablo and the border vegetation along the route.

Clayton Road – This route extends from Kirker Pass Road around to the Town Center to connect with Marsh Creek Road southeast of the Town Center.

Marsh Creek Road – This route extends from the eastern limits of the Planning Area through the Town Center and connects with Clayton Road.

Oakhurst Drive / Concord Boulevard – This route extends from Kirker Pass Road and connects with Clayton Road.

Visual Character

The visual character of the Planning Area varies by location. Residential neighborhoods are located throughout the incorporated lands within the Planning Area. The residences in the Planning Area are primarily low-density single-family homes and rural estates, and many are two multi-story structures. There are smaller areas of high-density single-family and single-family attached homes north of and just south of the Town Center.

The north and northeast portions of the Planning Area, near Seeno Hill, are primarily characterized by low- and medium-density single-family homes built in the late 1990s. In the east, near Peacock Drive, there are primarily low-density single-family homes constructed in the 1970s, 1980s, and 1990s, with the later construction years closer to the eastern corporate boundary. The southeast portions of the Planning Area contain rural residential development, as well as, low-density single-family homes constructed in the 1970s and, as you move outward, the 1980s and 1990s. In the south, close to Donner Canyon, low-density single family homes were built primarily in the late 1970s. The northwest of the Planning Area is primarily characterized by low-density single-family homes constructed mostly in the 1950s and 1960s. The single-family homes near the Town Center are older, with construction dates ranging from the 1940s to 1960s. There are also several small areas of single-family attached housing just north of the Town Center; these buildings were primarily constructed in the 1990s.^{7 8}

Distinct and traditional commercial districts exist within the Planning Area and are primarily located in the Town Center along Main Street, Center Street, Diablo Street, and Morris Street. The neighborhoods proximate to the Town Center are primarily developments of large-lot and small-lot single-family housing. Many of the businesses in the Town Center are small, and some operate within historic structures. The northwest corner of the Planning Area offers commercial and retail services more oriented toward strip commercial buildings and large shopping centers with large parking lots and chain stores.⁹

Night Skies

The Planning Area contains open space, recreational land, and agricultural land that surrounds the developed area of Clayton. Night skies are dominated by urban and suburban lighting in the more developed portions of the Planning Area. During the day, sunlight reflecting from roadways and structures is a primary source of glare, while nighttime light and glare consists of both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination. There are less obstructed skies in open space within the Planning Area as well as the nearby Mt. Diablo, which offers an observatory.

4.1.2 Regulatory Framework

State

California Scenic Highway Program

Created by the California Legislature in 1963, the Scenic Highway Program was established to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways.¹⁰ The program is administered by the California Department of Transportation (Caltrans). A scenic highway is designated under this program when a local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway.¹¹ When a City or County nominates an eligible scenic highway for official designation, it defines the scenic corridor, which is land generally adjacent and visible to a motorist on the highway. State Laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263.

Local

City of Clayton General Plan

The City's existing General Plan contains the following goals, objectives, and policies which address aesthetics and visual quality:

Land Use Element (2017)¹²

Goal 3. To preserve the natural features, ecology, and scenic vistas of the Clayton area.

Objective 1. To retain the rural character of Clayton through a predominance but not exclusive use of single-family, low-density residential development balancing needs of the housing element and preservation of open space.

Policy 1e. Encourage the clustering of development to preserve open space.

4.1 - Aesthetics

Objective 2. To preserve the natural beauty and the feeling of openness in the community by preserving ridgelines and limiting development in the hills.

Policy 2a. To prevent deterioration of scenic or sensitive areas, development should be clustered in less sensitive areas and an Open Space designation should be applied to undeveloped portions of parcels.

Policy 2b. Promote mitigation measures that maintain the aesthetic quality of the hills in transition areas.

Open Space/Conservation Element (2000)¹³

Goal 1. To maintain a system of active open space along stream channels and passive open space within hillsides as a means to preserve the rural character of the community.

Objective 1. To promote the City's greenbelts as the basis of its open space system.

Objective 3. To establish open space conservation designations to preserve natural resources, to manage resources, to provide for outdoor recreation, to promote health and safety, and to ensure orderly growth.

Policy 3b. Cluster development in order to allow a Private Open Space designation on sites that pose natural limitations such as streams channel, earthquake fault, unstable soil or prominent hilltop or ridge, fire hazard areas, and ground water recharge areas.

Implementation Measure 1. Prepare a greenbelt path map for public information.

Implementation Measure 5. Identify distinctive natural and manmade features such as ridgelines, landmark trees, arroyos and rock outcroppings to be preserved.

Community Design Element (2008)¹⁴

Goal 1. To maintain the rural and historical character of Clayton's neighborhoods.

Goal 2. To establish an attractive and vibrant pedestrian-friendly Town Center with a mixture of commercial, civic, recreational, and residential uses.

Overall Community Design

Objective 5. To protect and enhance views of the foothills and Mt. Diablo.

Policy 5a. Protect scenic vistas and view corridors.

Policy 5b. Prevent development of ridge lines.

Policy 5c. Evaluate developments as to their effect on scenic qualities of the Clayton area.

Scenic Routes

Objective 8. To provide a continuous, varied scenic route system coordinated with Contra Costa County's system and scenic corridors of Concord and Walnut Creek.

Policy 8a. Select routes for scenic designation that are highly traveled and provide strong visual amenities.

Policy 8b. Coordinate Clayton routes with other scenic routes in the region.

Implementation Measure 2. Prepare a scenic route view corridor map, identify specific features to be preserved, and identify appropriate measures for City action.

Objective 9. To establish a right-of-way/corridor system that will enhance visual and cultural amenities of the scenic route.

Policy 9a. Use a boundary of 1000 feet on each side of the centerline of the route as the basis for scenic project review until a view-oriented plan can be prepared.

Policy 9b. Provide map indicating boundaries.

Objective 10. Cooperate with property owners on alternative means to allow development that is compatible with the scenic corridor objectives.

Policy 10a. Identify criteria for “scenic” review of development.

Policy 10b. Encourage property owner solutions to conflicts between development and view enhancement.

City of Clayton Municipal Code

The City Municipal Code (CMC) Title 16 deals with land development and subdivisions and includes Chapter 16.50 regarding hillside development, open space, trees, density, and grading.¹⁵ CMC Title 17 deals with zoning and land use, including Chapter 17.34, Resource Overlay (RD) District; Chapter 17.42.010 which addresses the appearance and location of various kinds of antennas which could affect aesthetics and views within the community; and Sections 17.44 17.28.170 and 17.44.040, both of which establish standards of design review for new structures or large additions to existing buildings and require new development to be complementary to existing structures.¹⁶

Various requirements of CMC are also intended to minimize nuisances to current occupants of properties during construction operations. CMC Chapter 8.09 prohibits installation of lighting, including permanent fixtures or temporary construction site lighting, that would cause an undue annoyance to occupants of neighboring properties. Grading regulations contained within CMC Chapter 15.60 limit construction hours to those between 7:00 a.m. and 5:30 p.m. on weekdays on sites located on residential zones or within 1,000 feet of a residence (exceptions are allowed for emergency work that is necessary to repair a hazardous situation). Added to the prohibition in CMC Chapter 8.09, CMC Chapter 15.60 reduces the temporary visual impacts that could occur during construction by limiting work periods to daytime hours. CMC Chapter 15.60 also imposes limitations on stockpiling of materials; authorizes the City Engineer to require temporary barriers or protective fencing; and requires hydroseeding or other measures to prevent erosion on graded areas. These measures to prevent erosion also have the effect of reducing visual impacts of projects during construction.

4.1.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to aesthetics if it would:

- a) Have a substantial adverse effect on a scenic vista;
- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- c) 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), or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality; or
- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.1.4 Impacts and Mitigation Measures

This section describes potential impacts related to aesthetics, which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Scenic Vistas

Impact AES-1 – Would the HEU have a substantial adverse effect on a scenic vista?

Analysis of Impacts

Mt. Diablo and its foothills to the south, and portions of the Briones Hills to the west, are visible from the Planning Area. Existing views of these areas can be, depending on location within the City, partially obscured by buildings, trees, telephone and power lines, cell towers or other structures typical of a suburban and rural environment. Although such obstructions are usually minimal in nature, they do exist, and they are typical of any type of built environment within a city.

The existing General Plan Land Use Element includes Goal 3, which aims to preserve the natural features, ecology, and scenic vistas of the Clayton area. Land Use Element Objective 2 and its attendant policies work to preserve the natural beauty and the feeling of openness in the community by preserving ridgelines and limiting development in the hills. To prevent deterioration of scenic vistas or sensitive areas, Policy 2a requires that development be clustered in less sensitive areas, and an Open Space designation is required to be applied to undeveloped portions of parcels. Policy 2b promotes mitigation measures that maintain the aesthetic quality of the hills in transition areas. Community Design Element Objective 5 and its attendant policies work to protect and enhance views of the foothills and Mt. Diablo. Policy 5a protects scenic vistas and view corridors, Policy 5b prevents development of ridge lines, and Policy 5c requires developments to evaluate their effect on scenic qualities of the Clayton area.

These various goals and policies of the existing General Plan demonstrate the City's commitment to protecting visual resources and scenic vistas. They will encourage future development that contributes to a high quality of life for the City's residents, employees, and visitors including the protection of visual resources. Although the project would result in somewhat more intensive and higher density uses over time, any impacts from the project on scenic vistas would be minimal given that these views are already affected by the existing built environment. In addition, the

proposed 6th cycle housing inventory sites identified in Exhibit 3-4 are all within developed portions of the Planning Area, and no development pursuant to the proposed Housing Element Update would occur in hillside areas. Therefore, potential project impacts with respect to scenic vistas would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Scenic Resources/Scenic Highways

Impact AES-2 – Would the HEU substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Analysis of Impacts

Scenic resources include occurrences of aesthetically pleasing features such as rock outcroppings, trees, ridgelines and hilltops. Scenic resources can also be man-made, such as historic buildings and structures. Scenic vistas can be impacted by development in two ways: a structure may be constructed that blocks the view of a vista, and/or the vista itself may be altered (through development of said scenic resource).

The nearest officially designated state scenic highway to the Planning Area is Interstate 680 (I-680) through Walnut Creek and Danville, which is located approximately 9 miles southwest of Clayton. Between Clayton and I-680 is Mt. Diablo State Park; because of the high elevations within the State Park, any development in the Planning Area would not be visible to motorists on this freeway corridor. Local routes designated in the City's General Plan as scenic routes because of their panoramic views include Clayton Road, Oakhurst Drive/ Concord Boulevard, and Marsh Creek Road. Mt. Diablo is a central scenic location in Contra Costa County widely visible throughout the county. Clayton's location just north of the State Park offers residents wide, unobstructed views of the mountain and the park's open space. Development on potential housing sites identified in the Housing Element Update and depicted on Exhibit 3-4 would not impact these views, as the sites are located in already developed areas or in vacant lots in developed areas of Clayton.

Although there are no scenic highways within the Planning Area, there are several historic buildings within the Planning Area. The General Plan includes applicable goals and policies supporting protection of historic resources. Community Design Element Objective 1 and its attendant policies will help protect historical structures and sites of historical significance. Community Design Element Objective 8 and its attendant policies will help maintain the continuous, varied scenic route system coordinated with Contra Costa County's system and scenic corridors of Concord and Walnut Creek.

Although the project may over time result in somewhat higher uses of local roadways, no state scenic highways occur within or in close proximity to the Planning Area, so there are no impacts in that regard. There would be no impacts to scenic vistas and resources in the Planning Area, as all potential housing sites under the Housing Element Update are located in already developed portions of the Planning Area (refer to Exhibit 3-4). For the same reason, future residential development under the project would not damage or alter locally designated scenic routes. As such, implementation and development of new housing under the proposed Housing Element

4.1 - Aesthetics

Update would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway, and potential impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Existing Visual Character

Impact AES-3 – In non-urbanized areas, would the HEU 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. If the project is an urbanized area, would the HEU conflict with applicable zoning and other regulations governing scenic quality?

Analysis of Impacts

Potential housing sites that have been identified in the Housing Element Update are located in incorporated areas of Clayton, and are either already developed or in a developed area, or are vacant properties in developed areas. Temporary impacts to the visual character of Clayton could occur during construction of proposed housing sites. Construction activities include but are not limited to utility installation, landscaping, roadway improvements, site preparation, and building construction. Furthermore, construction equipment such as excavators, bulldozers, concrete crushing machines, backhoes, and other equipment would be present during construction activities.

Future construction activities in Clayton would temporarily change the visual character of parts of the City. Vacant graded sites would be temporary, as building foundations are built, and new vertical structures are reintroduced, conforming to the visual character of the urban portions of Clayton. Visual changes in Clayton would be temporary as construction is ongoing and progressively evolving from active construction zones to finished housing developments. The visual changes anticipated during construction of future projects in Clayton would not be permanent and would not substantially degrade its visual character or the visual character of surrounding areas. Additionally, grading and construction operations would be subject to compliance with CMC Chapters 8.09 and 15.60 that would reduce lighting impacts from construction sites and authorize the City Engineer to impose vegetative and screening measures to reduce erosion, with secondary benefits of reducing visual impacts from grading activities. As such, construction impacts on visual character would be less than significant.

Housing Element Update proposed Goal 1 and Policy 1.1 work to maintain and enhance long-established housing and neighborhoods while accommodating moderate growth and work to preserve the architectural and design quality of established residential neighborhoods. Adopted Land Use Element Goal 1 and its attendant policies work to maintain the rural character that has been the pride and distinction of Clayton. Adopted Land Use Element Goal 2 and its policies encourage a balance of housing types and densities consistent with the rural character of Clayton, while Land Use Element Goal 7 and its policies encourage enhancement of the sense of identity and pride in and to encourage historical awareness of Clayton. Adopted Land Use Element Goal 9 and its policies aim to create and maintain an attractive Town Center area and to make it the commercial, civic, and heritage focus for the community.

Future development under the project would be limited to developed areas within the City boundary of Clayton. Future development pursuant to the proposed project would be required to comply with all development standards of the Zoning Code and the design requirements of the General Plan Land Use Element. With the continued application of City zoning standards and design requirements, future developments would not substantially degrade the existing visual character or quality of the Planning Area and its surroundings, and potential impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Light and Glare

Impact AES-4 – Would the HEU create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Analysis of Impacts

Existing lighting within the Planning Area is typical for urbanized areas during nighttime hours and includes streetlights, traffic signals, security lighting around businesses and homes, auto headlights and illuminated business signs. The potential housing sites under the Housing Element Update would result in an increase in the number of light sources within the Planning Area; however, all sites have already been developed or are vacant lots in developed areas, and as such, any increase would be inconsequential. Reflective surfaces can also cause glare. Sources of daytime glare typically occur around commercial areas and parking lots with large concentrations of reflective materials like window glass, car surfaces, and open spaces of pavement. According to Chapters 15.03 and 15.07 of the City Municipal Code, lighting fixtures shall be installed so as not to create glare to passerby pedestrians and vehicles. Furthermore, there is guidance for specific standards for lighting sources in multi-family dwellings and parking lots; passageways associated with the building complex are to be illuminated by lights with an intensity of at least .25 foot candles during times of darkness.

Implementation of the proposed project is not anticipated to result in new sources of light and glare to the Planning Area that would be a nuisance to pedestrians and drivers. In accordance with Clayton Municipal Code, lighting fixtures are required to be shielded such that no light spillover onto adjacent properties occurs. While potential housing sites would include windows and other glass features, as well as possible exterior metallic elements and trims, these elements are generally made from materials designed not to create glare, including but not limited to stucco, wood and powder-coated or painted metals (as for building gutters and downspouts). Standards of review for new construction (CMC Sections 17.28.170 and 17.44.040) also include a determination that the new development would include complementary materials and colors to the City's existing structures, which generally incorporate non-reflective elements. In addition, projects within the Planning Area are subject to the lighting and glare restrictions of the City Municipal Code as stated above. Adherence and implementation of these requirements would mitigate any potential impacts with respect to light and glare, as such, the project would have a less than significant impact.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact AES-5 – Would the HEU cause substantial adverse cumulative impacts with respect to aesthetics?

Analysis of Impacts

Scenic Vistas- Project specific impacts with respect to scenic vistas were determined to be less than significant. Buildout of potential housing sites identified in the Housing Element Update would occur at locations in the City of Clayton that are either already developed or in vacant properties in developed areas, as identified in Exhibit 3-4. There are no potential housing proposed for sites outside the corporate boundary of the Planning Area, and as such, the project would not result in cumulative impacts with respect to scenic vistas. Potential cumulative impacts would be less than significant.

Scenic Highways- Since the Planning Area is not visible from an eligible or officially designated state scenic highway, development within the Planning Area would not result in impacts to scenic resources within a state scenic highway. Therefore, the proposed project would not contribute to a potential cumulative significant impact to a scenic highway. Potential cumulative impacts would be less than significant.

Locally Designated Scenic Routes- Impacts related to locally-designated scenic routes, including Clayton Road, Oakhurst Drive/Concord Boulevard, and Marsh Creek Road, were determined to be less than significant. Future residential projects occurring pursuant to the project would not damage or alter these routes in any way. Future residential development would be similar in design to existing residential development along these routes, and would be subject to the City's development review process. There are also General Plan goals and policies designed to protect these scenic routes. As such, the project would not result in significant cumulative impacts with regard to locally designated scenic routes. Potential cumulative impacts would be less than significant.

Degrade Visual Character- Construction and operation of future projects within the Planning Area was determined to result in less than significant impacts to the existing visual character and quality of the Planning Area and surrounding area. Future projects would be subject to the City's zoning standards that include regulations pertaining to permitted uses, minimum lot dimensions, and maximum building height. As identified previously in Exhibit 3-4, future housing developments in the Planning Area pursuant to the project would be located in already developed areas of the City, and as such, would not entail a significant visual change such that the existing visual character and surroundings would be substantially degraded. As such, the proposed project would not result in cumulative significant impacts that would degrade the existing visual character or quality of the area and its surroundings. Potential cumulative impacts would be less than significant.

Light and Glare- Impacts from the proposed Housing Element Update with respect to light and glare were determined to be less than significant. Lighting and building materials associated with cumulative development would be subject to review and approval by the City of Clayton. If detailed information regarding proposed lighting and building materials are not known during preparation of necessary environmental documentation for cumulative projects, then the adoption of

applicant-proposed measures or mitigation measures would likely be required by the City to ensure that lighting and glare impacts are less than significant. Therefore, cumulative impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.1.5 References

- ¹ Google Earth. Google Earth Elevation Profile: Clayton, CA. [Accessed March 2022].
- ² California State Parks. California State Park Mt. Diablo Brochure, 2000. <https://www.parks.ca.gov> [Accessed March 2022].
- ³ California State Parks. California State Park Mt. Diablo Visitor Webpage. <https://www.parks.ca.gov>. [Accessed March 2022].
- ⁴ Municode Library. Clayton Municipal Code, Code 17.42.010. <https://library.municode.com/ca/clayton> [Accessed March 2022].
- ⁵ City of Clayton. Clayton Zoning Map, Jan 2017. <https://claytonca.gov> [Accessed March 2022].
- ⁶ City of Clayton. General Plan Diagram, Jan 2017. [Accessed March 2022].
- ⁷ Parcel Quest. Parcel Quest Clayton, CA. <https://pqweb.parcelquest.com> [Accessed March 2022].
- ⁸ City of Clayton. General Plan Diagram, Jan 2017. [Accessed March 2022].
- ⁹ City of Clayton. General Plan Diagram, Jan 2017. [Accessed March 2022].
- ¹⁰ Caltrans Scenic Highway Program website, accessed April 6, 2022: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.
- ¹¹ Caltrans Scenic Highway Program website, accessed April 6, 2022: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.
- ¹² City of Clayton. *General Plan Revision and EIR: Section II, Land Use Element*. (2017). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-II-land-use-element-051617.pdf>. [Accessed March 2022].
- ¹³ City of Clayton. *General Plan Revision and EIR: Section VI, Open Space/Conservation Element*. (2000). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-VI-open-space-and-conservation-element.pdf>. [Accessed March 2022].
- ¹⁴ City of Clayton. *General Plan Revision and EIR: Section V, Community Design Element* (2008). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-v-community-design-element.pdf>. [Accessed March 2022].
- ¹⁵ Clayton Municipal Code. *Section 16, Land Development and Subdivisions, Chapter 16.50, Hillside Development, Open Space, and Trees*. <https://library.municode.com/ca/clayton> [Accessed March 2022].
- ¹⁶ Clayton Municipal Code. *Section 17, Zoning, Chapter 17.34, Resource Overlay (RD) District, and Chapter 17.42.010, Antennas*. <https://library.municode.com/ca/clayton> [Accessed March 2022].

4.2 – AGRICULTURE AND FORESTRY RESOURCES

This EIR chapter addresses agriculture and forest resources impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). Issues of interest are agriculture and forestry resources impacts identified by the CEQA Guidelines: whether the project will convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; conflict with existing zoning for agricultural use or a Williamson Act contract; conflict with existing zoning for or rezoning of forest land or timberland; result in the loss of forest land or conversion of forest land to non-forest use; or involve other changes in the existing environment that could result in conversion of farmland or forest land to non-agricultural or non-forest use.

4.2.1 *Environmental Setting*

Much of the Planning Area’s Open Space outside the City’s corporate boundary and Sphere of Influence is designated as grazing land by the California Department of Conservation (DOC).^{1, 2} There are no Williamson Act Contract lands within the City’s corporate boundary or Sphere of Influence. As shown in Exhibit 4.2-1, there are Williamson Act Contract Lands located to the northeast and southeast of the City’s corporate boundary and Sphere of Influence and within the Planning Area boundary.³ However, none of the proposed housing inventory sites identified in the 6th Cycle Housing Element Update are under Williamson Act Contract. There are no existing portions of the Planning Area dedicated to the conservation and protection of forestry resources.⁴

Important Farmland

The California Department of Conservation maps all lands in the State that are considered Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, Farmlands of Local Importance or Grazing Lands. According to the California DOC’s Important Farmland Finder, the Planning Area is designated as either “Urban or Built-Up Land”, which refers to land occupied by structures with a building density of at least 1 unit to 1.5 acres, or “Grazing Land”, which refers to land on which the existing vegetation is suited to the grazing of livestock. There is no land in the Planning Area considered Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, nor Farmlands of Local Importance.⁵

Existing Agricultural Uses and Zoning

The area within the City’s corporate boundary and Sphere of Influence is designated urban and built-up land by the DOC, and the open space surrounding the City’s corporate boundary and Sphere of Influence to the west, south and east is designated grazing land or other land.^{6, 7} Grazing land is land on which the existing vegetation is suited to the grazing of livestock, while other land generally identifies the rock quarries south of the City’s corporate boundary. The Planning Area is mostly urbanized, with the eastern portions of the Planning Area outside the City’s corporate boundary and Sphere of Influence being zoned for agricultural uses.⁸

The Planning Area includes land use designations that specifically support or allow agricultural uses, or zoning classifications specifically for farming or commercial agricultural uses. These lands are primarily in the east of the Planning Area outside of city limits, although there are smaller areas of land zoned for agriculture in the north and center of the City.^{9, 10} Chapter 17.12 of the

Clayton Municipal Code regulates land zoned for agriculture's permitted uses, lot area, lot width, setback requirements, livestock structures, and keeping of animals.¹¹

Williamson Act Contracts

There are no Williamson Act Contract lands within the City's corporate boundary or Sphere of Influence. There are Williamson Act Contract Lands located to the northeast and southeast of the City's corporate boundary and Sphere of Influence and within the Planning Area boundary that are existing agricultural uses.¹² However, as previously mentioned, none of the proposed housing inventory sites identified in the 6th Cycle Housing Element Update are under Williamson Act Contract.

Forest Resources

Forest land is defined in Public Resources Code Section 12220(g) as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits". There are no existing portions of the Planning Area dedicated to the conservation and protection of forestry resources.¹³

4.2.2 Regulatory Framework

State

California Department of Conservation, Division of Land Resource Protection

The California DOC, Division of Land Resource Protection (DLRP) works with landowners, local governments, and researchers to conserve open space resources statewide. DRLP provides information, maps, funding, and technical assistance to local governments, consultants, resource conservation districts, and non-profit organizations statewide with the goal of conserving the state's agricultural and natural resources.

Sections 65560–65568, Government Code: Open Space Lands

This portion of California planning law defines open space (including rangeland and agricultural land) and requires cities and counties to prepare an open space plan as a required element of its General Plan. Building permits, subdivision approvals, and zoning ordinance approvals must be consistent with the local open space plan.

Farmland Mapping and Monitoring Program

Important farmland maps are compiled by the California DOC's Farmland Mapping and Monitoring Program (FMMP), pursuant to the provisions of Section 65570 of the California Government Code.¹⁴ These maps and programs utilize data from the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) soil survey and current land use information to monitor conversion of important farmland to other uses. The majority of the Planning Area has been mapped by the DOC, and no type of active farming or farmland is designated with the Planning Area.¹⁵

Senate Bill 275

Senate Bill (SB) 275 created the Agricultural Land Stewardship Program Act of 1995, a DOC grant program for local governments and nonprofit organizations to aid in the acquisition of agricultural conservation easements. DOC awards grant funding from the Stewardship Program

fund, which receives revenue from gifts, donations, proceeds from the sale of general obligation bonds, funds appropriated by the state legislature, federal grants and loans, and other sources.

California Land Conservation Act/Williamson Act Contract Program

The California Land Conservation Act of 1965, also known as the Williamson Act, was adopted in 1965.¹⁶ This voluntary program allows local governments to enter into contracts with private landowners for the purpose of having their property assessed on the basis of its agricultural production rather than at the current market value. The property owner is thus relieved of having to pay higher property taxes resulting from conversion of nearby lands to urban uses as long as the contracted land remains in agricultural or related open space use. The purpose of the Williamson Act is to encourage property owners to continue to farm their land with a tax incentive, and to prevent the premature conversion of farmland into non-agriculture use. Inclusion of land in under a Williamson Act contract requires that the parcel or parcels be located within an agricultural preserve, which is established by the city or county and must, with some exceptions, encompass at least 100 contiguous acres of agricultural land under one or more ownerships.

Upon approval of a contract application by the legislative body of a local jurisdiction, the land subject to the contract is restricted to agricultural and compatible uses for 10 years. Williamson Act contracts are automatically renewed annually for an additional one-year period unless the property owner applies for non-renewal or early cancellation. The Williamson Act also contains limited provisions for cancellation of contracts. Specific findings regarding the non-viability of the agricultural use must be made, and a substantial penalty for the cancellation is assessed. Participating counties and cities are required to establish their own rules and regulations regarding implementation of the act within their jurisdictions.

The Planning Area has Williamson Act Contracts: the south of the Planning Area is considered Williamson Act Non-Renewal, or enrolled lands for which non-renewal has been filed pursuant to Government Code Section 51245. Parts of the north, west, and southeast of the Planning Area are Williamson Act Mixed Enrollment Agricultural Land, or enrolled lands containing a combination of Prime, Non-Prime, Open Space Easement, or other contracted or enrolled lands not yet delineated by the county. No parcels inside City limits and none of the proposed housing inventory sites identified in the 6th Cycle Housing Element Update are under Williamson Act Contract.

California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE enforces the laws that regulate logging on privately-owned lands in California. The Forest Practice Act was enacted in 1973 to ensure that logging is done in a manner that will preserve and protect fish, wildlife, forests and streams. The State Board of Forestry and Fire Protection enacts and enforces additional rules to protect these resources. CAL FIRE ensures that private landowners abide by these laws when harvesting trees. Although there are specific exemptions in some cases, compliance with the Forest Practice Act and Board rules apply to all commercial harvesting operations for landowners. A Timber Harvesting Plan (THP) is the environmental review document submitted by landowners to CAL FIRE outlining what timber is proposed to be harvested, how it will be harvested, and the steps that will be taken to prevent damage to the environment.

This Page Intentionally Left Blank.

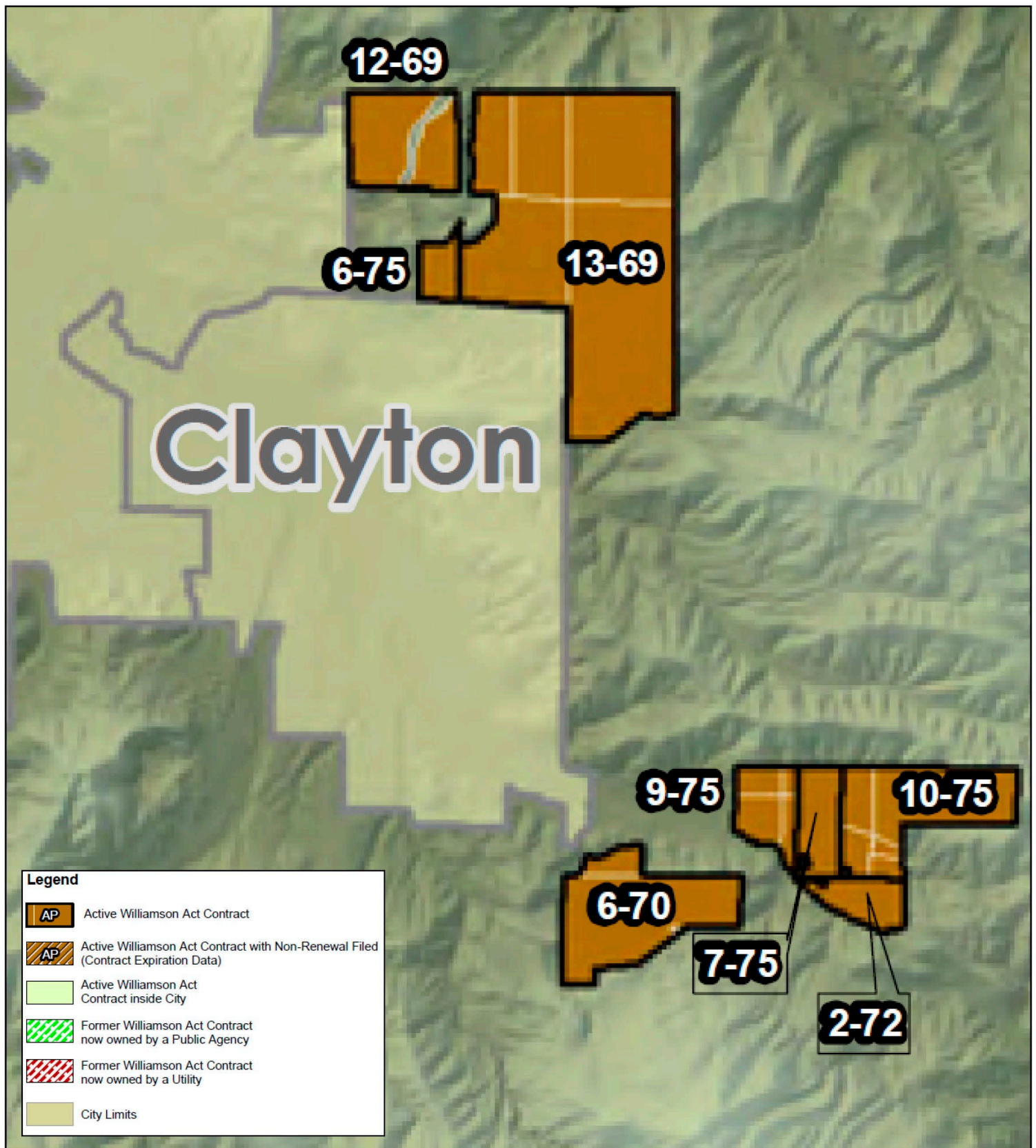


Exhibit 4.2-1 Williamson Act Contract Lands

This Page Intentionally Left Blank.

4.2.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to aesthetics if it would:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production as defined by Government Code section 51104(g);
- d) Result in the loss of forest land or conversion of forest land to non-forest use; or
- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

4.2.4 Impacts and Mitigation Measures

This section describes potential impacts related to agricultural resources, timberland, and forest range lands.

Convert Farmland

Impact AG-1 – Would the HEU convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Analysis of Impacts

According to the DOC's Important Farmland Finder, the Planning Area is designated as either: "Urban or Built-Up Land", which refers to land occupied by structures with a building density of at least 1 unit to 1.5 acres; "Grazing Land", which refers to land on which the existing vegetation is suited to the grazing of livestock; or "Other Land", which refers to land not included in any other mapping category but that could include wetland or strip mines. There is no land in the Planning Area considered Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, nor Farmlands of Local Importance. Site I of the 6th Cycle Housing Element housing inventory sites is zoned (A) Agricultural; however, Site I is no longer used for farming or grazing activities and is not designated as Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, or Farmlands of Local Importance. There are no other areas within the corporate City boundaries zoned for agricultural use and none of the other 6th Cycle Housing Element housing inventory sites identified by the City are zoned for agricultural use. For these reasons, no conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use would occur as a result of the HEU. In addition, there are no goals or policies of the proposed HEU that deal with loss or conversion of traditional agriculture.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Williamson Act Conflict

Impact AG-2 – Would the HEU conflict with existing zoning for agricultural use, or a Williamson Act contract?

Analysis of Impacts

The Planning Area has Williamson Act Contracts: the south of the Planning Area is considered Williamson Act Non-Renewal, or enrolled lands for which non-renewal has been filed pursuant to Government Code Section 51245. Parts of the north, west, and southeast of the Planning Area are Williamson Act Mixed Enrollment Agricultural Land, or enrolled lands containing a combination of Prime, Non-Prime, Open Space Easement, or other contracted or enrolled lands not yet delineated by the county. However, none of the 6th Cycle Housing Element housing inventory sites identified by the City have Williamson Act Contracts. Site I of the 6th Cycle Housing Element housing inventory sites is zoned (A) Agricultural; however, Site I is no longer used for farming or grazing activities. There are no other areas within the corporate City boundaries zoned for agricultural use and none of the other 6th Cycle Housing Element housing inventory sites identified by the City are zoned for agricultural use. In addition, there are no goals or policies of the proposed HEU that deal with Williamson Act contracts or loss agriculture. For these reasons, and because none of the 6th cycle RHNA sites identified by the City are under a Williamson Act contract, no impact to an agricultural use or Williamson Act contract would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Conflict with Existing Zoning

Impact AG-3 – Would the HEU conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Analysis of Impacts

There are no existing portions of the Planning Area dedicated to the conservation and protection of forestry resources, and none of the 6th Cycle Housing Element housing inventory sites identified by the City are zoned as forest land. In addition, there are no goals or policies of the proposed HEU that deal with zoning for timber or forest land. Therefore, the proposed HEU would not conflict with existing zoning for forest land, timberland, or Timberland Production areas, or result in the loss or conversion of forest lands to non-forest uses, as none exist in the City or Planning Area.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Loss of Forest Land

Impact AG-4 – Would the HEU result in the loss of forest land or conversion of forest land to non-forest use?

Analysis of Impacts

There are no existing portions of the Planning Area dedicated to the conservation and protection of forestry resources, and none of the 6th Cycle Housing Element housing inventory sites identified by the City are zoned for forest land. In addition, there are no goals or policies of the proposed HEU that deal with loss or conversion of forest land. Therefore, no conversion of forest land to non-forest use would occur under the HEU.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Other Changes

Impact AG-5 – Would the HEU involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Analysis of Impacts

Please refer to analyses under Impact AG-1 through AG-4 above. There are no traditional large-scale or commercial agricultural uses within the corporate City boundaries. Site I of the 6th Cycle Housing Element housing inventory sites is zoned (A) Agricultural; however, Site I is no longer used for farming or grazing activities. There are no other areas within the corporate City boundaries zoned for agricultural use and none of the other 6th Cycle Housing Element housing inventory sites identified by the City are zoned for agricultural use. Therefore, no conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use or conversion of forest land to non-forest use would occur as a result of implementation of the proposed HEU.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Cumulative Impacts

Impact AG-6 – Would the HEU cause substantial adverse cumulative impacts with respect to Agriculture and Forestry Resources?

Analysis of Impacts

As described above, the proposed HEU would not result in impacts related to agricultural resources, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, Williamson Act contracts, forest lands, timberland, or Timberland Production areas. Because the HEU would not impact agricultural uses, Farmland, Williamson Act contracts, forest lands, timberland, or Timberland Production areas, the proposed HEU would not contribute to a cumulative significant impact related to agriculture and forestry resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

This Page Intentionally Left Blank.

4.2.5 References

- ¹ California Department of Conservation. California Important Farmland Finder. <https://maps.conservation.ca.gov> [Accessed March 2022].
- ² California Department of Conservation. Important Farmland Map: Contra Costa County. <https://www.conservation.ca.gov> [Accessed March 2022].
- ³ Contra Costa Department of Conservation and Development. Williamson Act. <https://www.contracosta.ca.gov/4338/Williamson-Act> [Accessed March 2022].
- ⁴ Fire and Resource Assessment Program (FRAP). California's Forests and Rangelands, 2017. <https://frap.fire.ca.gov> [Accessed March 2022].
- ⁵ California Department of Conservation. California Important Farmland Finder. <https://maps.conservation.ca.gov> [Accessed March 2022].
- ⁶ California Department of Conservation. California Important Farmland Finder. <https://maps.conservation.ca.gov> [Accessed March 2022].
- ⁷ Important Farmland Map: Contra Costa County. <https://www.conservation.ca.gov/dlrp/fmmp/Pages/ContraCosta.aspx> [Accessed March 2022].
- ⁸ City of Clayton. General Plan Diagram, Jan 2017. [Accessed March 2022].
- ⁹ City of Clayton. General Plan Diagram, Jan 2017. [Accessed March 2022].
- ¹⁰ City of Clayton. Clayton Zoning Map, Jan 2017. <https://claytonca.gov> [Accessed March 2022].
- ¹¹ Municode Library. Clayton Municipal Code. <https://library.municode.com/ca/clayton> [Accessed March 2022].
- ¹² Contra Costa Department of Conservation and Development. Williamson Act. <https://www.contracosta.ca.gov/4338/Williamson-Act> [Accessed March 2022].
- ¹³ CalFire Fire and Resource Assessment Program (FRAP). California's Forests and Rangelands, 2017. <https://frap.fire.ca.gov> [Accessed March 2022].
- ¹⁴ California Department of Conservation (DOC 2020a). Farmland Mapping and Monitoring Program: Important Farmland Finder. Web: <https://maps.conservation.ca.gov/DLRP/CIFF/>. [Accessed April 2022a].
- ¹⁵ California Department of Conservation (DOC 2020a). Farmland Mapping and Monitoring Program: Important Farmland Finder. Web: <https://maps.conservation.ca.gov/DLRP/CIFF/>. [Accessed April 2022a].
- ¹⁶ California Department of Conservation (DOC 2022b). Williamson Act Program: Reports and Statistics. Web: https://www.conservation.ca.gov/dlrp/wa/Pages/stats_reports.aspx. [Accessed April 2022].

4.3 – AIR QUALITY

This EIR chapter provides information on the environmental and regulatory air quality setting of the Planning Area and evaluates the potential amount of emissions of regulated air pollutants that could be generated by construction and operation of projects pursuant to the HEU (project). The methodologies and assumptions used in the preparation of this section follow the CEQA Guidelines developed by the Bay Area Air Quality Management District (BAAQMD). Information on existing air quality conditions, federal, and state ambient air quality standards, and pollutants of concern was obtained from the U.S. Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB), and SCAQMD. This EIR air quality analysis has been closely coordinated with the energy and greenhouse gas analyses contained in Chapters 4.6 and 4.8 of this EIR. As described in Section 4.3.4, potential project impacts with respect to air quality include conflict with or obstruction of the applicable air quality plan, cumulatively considerable net increases in criteria pollutants, exposure of sensitive receptors to substantial pollutant concentrations, and other emissions (such as odors) that could adversely affect a substantial number of people.

4.3.1 *Environmental Setting*

Air quality is a function of pollutant emissions and topographic and meteorological influences. The physical features and atmospheric conditions of a landscape interact to affect the movement and dispersion of pollutants and determine its air quality.

San Francisco Bay Area Air Basin

The U.S. EPA and CARB are the federal and state agencies charged with maintaining air quality in the nation and California, respectively. The U.S. EPA delegates much of its authority over air quality to CARB, which has geographically divided the state into 15 air basins for the purposes of managing air quality on a regional basis. An air basin is a CARB-designated management unit with similar meteorological and geographic conditions.

The City of Clayton is located in the San Francisco Bay Area Air Basin (SFAAB), which includes the counties of Contra Costa, Alameda, Santa Clara, San Mateo, San Francisco, Marin, the southeastern portion of Sonoma, Napa, and the southwestern portion of Solano.¹ These nine counties surround the San Francisco Bay. The SFAAB is currently designated as a nonattainment area for a number of different types of air pollutants (including ozone precursors and various forms of particulate matter) under state and federal ambient air quality standards. The SFAAB encompasses 101 cities across almost 7,000 square miles and is home to more than 7 million people.²

Air quality in the SFAAB is managed by the Bay Area Air Quality Management District (BAAQMD). Pursuant to the California Clean Air Act, BAAQMD is responsible for bringing air quality within the SFAAB into conformity with federal and state air quality standards by reducing existing emission levels and ensuring that future emission levels meet applicable air quality standards. BAAQMD works with federal, state, and local agencies to reduce pollutant emissions through adoption and implementation of rules and regulations.

SFAAB Climate and Meteorology

The climate of the Bay Area region is classified as Mediterranean.³ The climate is dominated by the Pacific high-pressure system that results in generally mild, dry summers and mild, wet winters. In addition to the SFAAB's topography and geographic location, El Niño and La Niña patterns in the central Pacific Ocean can also have large effects on weather and rainfall received in the SFAAB between November and March.

Local weather conditions within the SFAAB are also dependent on local topography and proximity to the Pacific Ocean. Clayton is at the upper end of Clayton Valley. Clayton Valley is a box-end canyon; as such, it is subject to periods of inversion, which will bring poor air quality.⁴ Proximity to the bay and the Carquinez Strait would normally result in coastal rain and fog, but the Berkeley Hills create a rain shadow over Clayton, creating warmer and drier conditions in Clayton. The surrounding mountains also prevent the coastal wind which would flush pollutants from the valley.⁵

Regulated Air Pollutants

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for six common air pollutants: ozone (O₃), particulate matter (PM), which consists of “inhalable coarse” PM (particles with an aerodynamic diameter between 2.5 and 10 microns in diameter, or PM₁₀) and “fine” PM (particles with an aerodynamic diameter smaller than 2.5 microns, or PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead. The U.S. EPA refers to these six common pollutants as “criteria” pollutants because the agency regulates the pollutants on the basis of human health and/or environmentally-based criteria and because they are known to cause adverse human health effects and/or adverse effects on the environment.^{6, 7}

CARB has also established California Ambient Air Quality Standards (CAAQS) for the six criteria air pollutants regulated by the federal Clean Air Act (the CAAQS are more stringent than the NAAQS), plus the following additional air pollutants due to their known adverse effects on human health or the environment⁸: hydrogen sulfide (H₂S), sulfates (SO_x), vinyl chloride, and visibility reducing particles.

A description of the air pollutants associated with the proposed project and its vicinity is provided below. Air pollutants not commonly associated with the existing or proposed sources in the Planning Area such as hydrogen sulfide and visibility reducing particles, are not described below.

- **Ground-level Ozone**, commonly referred to as smog, is not emitted directly into the atmosphere. It is created from chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOCs), also called reactive organic gases (ROG), in the presence of sunlight.⁹ Thus, ozone formation is typically highest on hot sunny days in urban areas with NO_x and ROG pollution. Ozone irritates the nose, throat, and air pathways and can cause or aggravate shortness of breath, coughing, asthma attacks, and lung diseases such as emphysema and bronchitis.
 - **ROG** is a CARB term defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and includes several low-reactive organic compounds which have been exempted by the U.S. EPA.¹⁰
 - **VOCs** is a U.S. EPA term defined as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions.

The term exempts organic compounds of carbon which have been determined to have negligible photochemical reactivity such as: methane, ethane, and methylene chloride.¹⁰

- **Particulate Matter**, also known as particle pollution, is a mixture of extremely small solid and liquid particles made up of a variety of components such as organic chemicals, metals, and soil and dust particles.¹¹
 - **PM₁₀**, also known as inhalable coarse, respirable, or suspended PM, consists of particles less than or equal to 10 micrometers in diameter (approximately 1/7th the thickness of a human hair). These particles can be inhaled deep into the lungs and possibly enter the blood stream, causing health effects that include, but are not limited to, increased respiratory symptoms (e.g., irritation, coughing), decreased lung capacity, aggravated asthma, irregular heartbeats, heart attacks, and premature death in people with heart or lung disease.¹¹
 - **PM_{2.5}**, also known as fine PM, consists of particles less than or equal to 2.5 micrometers in diameter (approximately 1/30th the thickness of a human hair). These particles pose an increased risk because they can penetrate the deepest parts of the lung, leading to and exacerbating heart and lung health effects.¹¹
- **Carbon Monoxide (CO)** is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Motor vehicles are the single largest source of carbon monoxide in the SFAAB. At high concentrations, CO reduces the oxygen-carrying capacity of the blood and can aggravate cardiovascular disease and cause headaches, dizziness, unconsciousness, and even death.¹²
- **Nitrogen Dioxide (NO₂)** is a by-product of combustion. NO₂ is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO₂ are collectively referred to as NO_x and are major contributors to ozone formation. NO₂ also contributes to the formation of particulate matter. NO₂ can cause breathing difficulties at high concentrations.¹³
- **Sulfur Dioxide (SO₂)** is one of a group of highly reactive gases known as SO_x. Fossil fuel combustion in power plants and industrial facilities are the largest emitters of SO₂. Short-term effects of SO₂ exposure can include adverse respiratory effects such as asthma symptoms. SO₂ and other SO_x can react to form PM.¹⁴
- **Sulfates (SO₄²⁻)** are the fully oxidized ionic form of sulfur. SO₄²⁻ are primarily produced from fuel combustion. Sulfur compounds in the fuel are oxidized to SO₂ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Sulfate exposure can increase risks of respiratory disease.¹⁵
- **Lead** is a metal found naturally in the environment as well as in manufactured products. Mobile sources used to be the main contributor to ambient lead concentrations in the air. In the early 1970s, the U.S. EPA established national regulations to gradually reduce the lead content in gasoline, and in 1996, lead was banned from gasoline. As a result of these efforts, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically. Lead can adversely affect multiple organ systems of the body and people of every age group. Lead poisoning in young children can cause brain damage, behavioral problems, and liver or kidney damage. Lead poisoning to adults can cause reproductive problems, muscle and joint pain, nerve disorders and kidney disease.¹⁶

Common criteria air pollutants, such as ozone precursors, SO₂, and PM, are emitted by a large number of sources and have effects on a regional basis (i.e., throughout the SFAAB). Other pollutants, such as hazardous air pollutants (HAPs; described in more detail below under “Toxic Air Contaminants”), toxic air contaminants (TACs; described in more detail below), and fugitive dust, are generally not as prevalent and/or are emitted by fewer and more specific sources. As

such, these pollutants have much greater effects on local air quality conditions and local receptors.

Ambient Air Quality Standards and SFAAB Attainment Status

In general, the NAAQS and CAAQS define “clean” air, and are established at levels designed to protect the health of the most sensitive groups in our communities by defining 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. Air pollutant levels are typically described in terms of concentration, which refers to the amount of pollutant material per volumetric unit of air. Concentrations are typically measured in parts per million (ppm) or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

The U.S. EPA, CARB, and regional air agencies assess the air quality of an area by measuring and monitoring the amount of pollutants in the ambient air and comparing pollutant levels against NAAQS and CAAQS. Based on these comparisons, regions are classified into one of the following categories.

- **Attainment.** A region is “in attainment” if monitoring shows ambient concentrations of a specific pollutant are less than or equal to the NAAQS or CAAQS. In addition, an area that has been re-designated from nonattainment to attainment is classified as a “maintenance area” for 10 years to ensure that the air quality improvements are sustained.
- **Nonattainment.** If the NAAQS or CAAQS are exceeded for a pollutant, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment. Federal and state laws require nonattainment areas to develop strategies, implementation plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.
- **Unclassified.** An area is unclassified if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Table 4.3-1 (Ambient Air Quality Standards and SFAAB Attainment Status) lists the NAAQS and CAAQS and summarizes the SFAAB’s attainment status.

Toxic Air Contaminants

In addition to criteria air pollutants, the U.S. EPA and CARB have classified certain pollutants as hazardous air pollutants (HAPs) or toxic air contaminants (TACs), respectively. The U.S. EPA has identified 187 HAPs, including substances such as benzene and formaldehyde; CARB also considers particulate emissions from diesel-fueled engines and other substances to be TACs. Since CARB’s list of TACs references and includes U.S. EPA’s list of HAPs, this EIR uses the term TAC when referring to HAPs and TACs.

TACs can cause severe health effects at very low concentrations (non-cancer effects), and many are suspected or confirmed carcinogens (i.e., can cause cancer)^{7, 17}. People exposed to TACs at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects such as (but not limited to) reduced immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and/or other health problems.^{7, 17}

**Table 4.3-1
Ambient Air Quality Standards and SFAAB Attainment Status**

Pollutant	Averaging Time ^(B)	California Standards ^(A)		National Standards ^(A)	
		Standard ^(C)	Attainment Status ^(D)	Standard ^(C)	Attainment Status ^(D)
Ozone	1-Hour	180 µg/m ³	Nonattainment	--	--
	8-Hour	137 µg/m ³	Nonattainment	137 µg/m ³	Nonattainment
PM ₁₀	24-Hour	50 µg/m ³	Nonattainment	150 µg/m ³	Unclassifiable
	Annual Average	20 µg/m ³	Nonattainment	--	--
PM _{2.5}	24-Hour	--	--	35 µg/m ³	Nonattainment ^(D)
	Annual Average	12 µg/m ³	Nonattainment	12 µg/m ³	Attainment
Carbon Monoxide	1-Hour	23,000 µg/m ³	Attainment	40,000 µg/m ³	Attainment
	8-Hour	10,000 µg/m ³	Attainment	10,000 µg/m ³	Attainment
Nitrogen Dioxide	1-Hour	339 µg/m ³	Attainment	188 µg/m ³	Unclassifiable
	Annual Average	57 µg/m ³	--	100 µg/m ³	Attainment
Sulfur Dioxide	1-Hour	655 µg/m ³	Attainment	196 µg/m ³	Attainment
	24-Hour	105 µg/m ³	Attainment	--	--
Lead	3-Months Rolling	--	--	0.15 µg/m ³	Attainment
Hydrogen Sulfide	1-Hour	42 µg/m ³	Unclassifiable	--	--
Sulfates	24-Hour	25 µg/m ³	Attainment	--	--
Vinyl Chloride	24-Hour	26 µg/m ³	--	--	--

Source: Air Quality Standards and Attainment Status; BAAQMD, 2017, Green Book; U.S. EPA, 2022. Modified by MIG.

(A) This table summarizes the CAAQS and NAAQS and the SFAAB's attainments status. This table does not prevent comprehensive information regarding the CAAQS and NAAQS. Each CAAQS and NAAQS has its own averaging time, standard unit of measurement, measurement method, and statistical test for determining if a specific standard has been exceeded. Standards are not presented for visibility reducing particles, which are not concentration-based. The SFAAB is unclassified for visibility reducing particles.

(B) Ambient air standards have changed over time. This table presents information on the standards previously used by the U.S. EPA for which the SFAAB does not meet attainment.

(C) All standards are shown in terms of micrograms per cubic meter (µg/m³) rounded to the nearest whole number for comparison purposes (with the exception of lead, which has a standard less than 1 µg/m³). The actual CAAQS and NAAQS standards specify units for each pollutant measurement.

(D) On January 2013, the U.S. EPA issued a final rule to determine the Bay Area attains the 24-hour PM_{2.5} national standard. This U.S. EPA rule suspends key State Implementation Plan (SIP) requirements as long as monitoring data continue to show that the Bay Area attains the standard. Despite this U.S. EPA action, the Bay Area will continue to be designated as "non-attainment" for the national 24-hour PM_{2.5} standard until such time as the BAAQMD submits a "redesignation request" and a "maintenance plan" to U.S. EPA, and U.S. EPA approves the proposed redesignation.

A description of the TACs associated with the proposed project and its vicinity is provided below.

- Diesel Particulate Matter (DPM).** Diesel engines emit both gaseous and solid material; the solid material is known as DPM. Almost all DPM is less than 1 µm in diameter, and thus is a subset of PM_{2.5}. DPM is typically composed of carbon particles and numerous organic compounds. Diesel exhaust also contains gaseous pollutants including VOCs and NO_x. The primary sources of diesel emissions are ships, trains, trucks, rail yards and heavily traveled roadways. These sources are often located near highly populated areas, resulting in greater DPM related health consequences in urban areas. The majority of DPM is small enough to be inhaled into the lungs, and what particles are not exhaled can

be deposited on the lung surfaces and in the deepest regions of the lungs where they are most susceptible to injury. In 1998, CARB identified DPM as a toxic air contaminant based on evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM also contributes to the same non-cancer health effects as PM_{2.5} exposure.¹⁸

Local Air Quality Conditions

The BAAQMD maintains a comprehensive air quality monitoring network consisting of over 30 stations distributed among the nine Bay Area counties in its jurisdiction. Table 4.3-2 shows the three most recent years' worth of data from the monitor located on Treat Boulevard in Concord. The Concord monitoring station is located approximately 4 miles west of Clayton, which is the site closest in proximity to the City. The Concord station monitors O₃, NO_x, SO₂, CO, PM₁₀, PM_{2.5}, and Toxics.

As shown in Table 4.3-2, air quality conditions have generally improved or remained about the same over the 2017 to 2019 time period:

- Ozone concentrations generally increased from 2017 to 2019. Ozone exceedances for the state and federal 8-hour standards increased from none in 2017 and 2018 to two in 2019. There were no exceedances of the 1-hour standard during this time period.
- PM_{2.5} concentrations increased from 2017 to 2018 and decreased in 2019 to levels below both 2017 and 2018 concentrations. NAAQS exceedances increased from 2017 to 2018, but there were no exceedances in 2019.
- PM₁₀ concentrations increased from 2017 to 2018 and decreased in 2019 to levels below both 2017 and 2018 concentrations. There was one CAAQS exceedance in 2018, but none in 2019.
- CO, NO₂, and SO₂ had no NAAQS or CAAQS exceedances from 2017-2019.

Sensitive Receptors

Some people are more affected by air pollution than others. 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.”¹⁹ In general, children, senior citizens, and individuals with pre-existing health issues, such as asthmatics, are considered sensitive receptors. Both CARB and the BAAQMD consider schools, schoolyards, parks and playgrounds, daycare facilities, nursing homes, hospitals, and residential areas as sensitive air quality land uses and receptors.^{20, 20}

In general, sensitive air quality receptors in proximity of the City include:

- Existing low-, medium-, and high-density residential receptors within the City;
- Existing schools, and education or institutional facilities including Mt. Diablo Elementary School and Diablo View Middle School; and
- Existing parks and recreational facilities.

**Table 4.3-2
Local Air Quality Conditions 2017-2019**

Pollutant	2017	2018	2019
<i>Ozone</i>			
Maximum 1-hour Concentration (ppm)	0.082	0.077	0.092
Maximum 8-hour Concentration (ppm)	0.070	0.061	0.074
Number of days exceeding State 1-hr standard	0	0	0
Number of days exceeding State 8-hr standard	0	0	2
Number of days exceeding Federal 8-hr standard	0	0	2
<i>Carbon Monoxide</i>			
Maximum 1-hour Concentration (ppm)	1.7	1.9	3.3
Maximum 8-hour Concentration (ppm)	1.3	1.6	0.8
Number of days national/state standard exceeded	0	0	0
<i>Fine Particulate Matter (PM_{2.5})</i>			
Maximum 24-hour Concentration (µg/m ³)	89.4	180.0	28.2
Number of days exceeding Federal 24-hr standard	6	14	0
<i>Respirable Particulate Matter (PM₁₀)</i>			
Maximum 24-hour Concentration (µg/m ³) (California)	41	105	36
Number of days State 24-hr standard exceeded	0	1	0
Number of days Federal 24-hr standard exceeded	0	0	0
<i>Nitrogen Dioxide</i>			
Maximum 1-hour Concentration (ppm)	0.041	0.038	0.041
Annual Average Concentration (ppm)	0.007	0.006	0.006
Number of days exceeding State 1-hour standard	0	0	0
Number of days exceeding Federal 1-hour standard	0	0	0
<i>Sulfur Dioxide</i>			
Maximum 1-hour Concentration (ppm)	0.013	0.0096	0.0084
Maximum 24-hour Concentration (ppm)	0.002	0.002	0.002
Number of days exceeding State 24-hour standard	0	0	0
Number of days exceeding Federal 1-hour standard	0	0	0
Source: Bay Area Air Pollution Summary; BAAQMD, 2018-2020			

Existing Air Pollution-Related Health Risks

Common sources of TAC emissions in the SFBAAB include gasoline stations, dry cleaners, diesel-fueled generators and pumps, other stationary sources (e.g., refineries), and mobile sources such as cars and trucks travelling on roads and freeways, and construction equipment, ships, and trains.

CARB data collected pursuant to the Assembly Bill (AB) 2588 Air Toxics “Hot Spots” Program indicates there were 7 facilities (including gas stations and generators) in the Planning Area subject to the requirements of AB 2588. The Oakhurst Country Club’s a gas dispensing facility

was the largest source of TAC emissions in Clayton for which AB 2588 information was available at the time this EIR was prepared. The address listed for this source was 2500 Indianhead Way.

A search of publicly available information indicates the CEMEX Clayton Quarry, which is located south of the City boundaries, has a cancer risk of 0.58 per million and a Hazard Index score of 0.0.²¹

As noted, mobile sources such as cars, trucks, and trains can also emit TACs. There are no highways within the City. The nearest highway, State Route 242, is located approximately 5 miles northeast from the northern edge of the City. In addition, there are no roadways within the City where average daily trips (ADT) exceeds 50,000.

Although the City contains existing sources of TAC emissions, the BAAQMD has not identified the City as an impacted community under its Community Air Risk Evaluation (CARE) program.²² According to CalEnviroScreen 4.0, the City (U.S. Census tracts 6013355301, 6013355304, and 6013355306), is in the 1st to 15th percentile based on the CalEnviroScreen indicators (e.g., exposure, environmental effects, population characteristics, socioeconomic factors), does not experience a high pollution burden, and is not considered a disadvantaged community pursuant to Senate Bill (SB) 535, which allocates funding from the state's Cap and Trade Program to disadvantaged communities.²³

4.3.2 Regulatory Framework

Federal

Federal Clean Air Act

The federal Clean Air Act (CAA), as amended, provides the overarching basis for both federal and state air pollution prevention, control, and regulation. The Act establishes the U.S. EPA's responsibilities for protecting and improving the nation's air quality. The U.S. EPA oversees federal programs for setting air quality standards and designating attainment status, permitting new and modified stationary sources of pollutants, controlling emissions of hazardous air pollutants, and reducing emissions from motor vehicles and other mobile sources. In 1971, to achieve the purposes of Section 109 of the CAA, the EPA developed primary and secondary NAAQS. Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and public welfare from air pollutants in the atmosphere.

The U.S. EPA requires each state prepare and submit a State Implementation Plan (SIP) that consists of background information, rules, technical documentation, and agreements that an individual state will use to attain compliance with the NAAQS within federally-imposed deadlines. State and local agencies implement the plans and rules associated with the SIP, but the rules are also federally enforceable.

State

California Clean Air Act

In addition to being subject to federal requirements, air quality in the state is also governed by more stringent regulations under the California Clean Air Act (CCAA), which was enacted in 1988 to develop plans and strategies for attaining the CAAQS. As discussed above, in California, both the federal CAA and state CCAA are administered by CARB. CARB oversees the functions of

local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional level.

In-Use Off-Road Diesel Equipment Program

CARB's In-Use Off-Road Diesel Equipment regulation is intended to reduce emissions of NO_x and PM from off-road diesel vehicles, including construction equipment, operating within California. The regulation imposes limits on idling; requires reporting equipment and engine information and labeling all vehicles reported; restricts adding older vehicles to fleets; and requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing exhaust retrofits for PM. The requirements and compliance dates of the off-road regulation vary by fleet size, and large fleets (fleets with more than 5,000 horsepower) must meet average targets or comply with Best Available Control Technology requirements beginning in 2014. CARB has off-road anti-idling regulations affecting self-propelled diesel-fueled vehicles 25 horsepower and up. The off-road anti-idling regulations limit idling on applicable equipment to no more than 5 minutes, unless exempted due to safety, operation, or maintenance requirements.

On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation

CARB's On-Road Heavy-Duty Diesel Vehicles (In-Use) regulation (also known as the Truck and Bus Regulation) is intended to reduce emission of NO_x, PM, and other criteria pollutants generated from existing on-road diesel vehicles operating in California. The regulation applies to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds that are privately- or federally-owned, and for privately- and publicly-owned school buses. Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year, or owners can report to show compliance with more flexible options. Fleets complying with the heavier trucks and buses schedule must install the best available PM filter on 1996 model year and newer engines, and replace the vehicle 8 years later. Trucks with 1995 model year and older engines had to be replaced starting in 2015. Replacements with a 2010 model year or newer engine meet the final requirements, but owners can also replace the equipment with used trucks that have a future compliance date (as specified in regulation). By 2023, all trucks and buses must have at least 2010 model year engines with few exceptions.

CARB Stationary Diesel Engines – Emission Regulations

In 1998, CARB identified DPM as a TAC. To reduce public exposure to DPM, in 2000, the Board approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Risk Reduction Plan). Integral to this plan is the implementation of control measures to reduce DPM, such as the control measures for stationary diesel-fueled engines. As such, diesel generators must comply with regulations under CARB's amendments to Airborne Toxic Control Measure for Stationary Compression Ignition Engines and be permitted by BAAQMD.

CARB Air Quality and Land Use Handbook

In 1998, CARB identified particulate matter from diesel-fueled engines as a TAC. CARB's Air Quality and Land Use Handbook is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process²¹. The CARB Handbook recommends that planning agencies consider proximity to air pollution sources when considering new locations for "sensitive" land uses, such as residences, medical facilities, daycare centers, schools, and playgrounds. Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the

4.3 – Air Quality

Handbook relative to the Planning Area include taking steps to consider or avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day;
- Within 300 feet of gasoline fueling stations; or
- Within 300 feet of dry cleaning operations (dry cleaning with TACs is being phased out and will be prohibited in 2023).

CARB prepared a technical supplement to the Handbook, a Technical Advisory on Strategies to Reduce Air Pollution Exposure Near High Volume Roadways, that provides recommendations for strategies to minimize exposure of the public to air pollutants due to proximity to high volume roadways.²⁴

Air Toxics “Hot Spots” Program

State requirements specifically address emissions of air toxics through AB 1807 (known as the Tanner Bill) that established the State Air Toxics “Hot Spots” Program and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code Section 44300 *et seq.*). Under the Air Toxics Hot Spots Information and Assessment Act of 1987 (or Air Toxics “Hot Spots” Act) and Air Toxics Hot Spots Program, the state (CARB) must collect data on toxic emissions from stationary sources (facilities) throughout California and ascertain potential health risks that these emissions pose to members of community for developing cancer or for resulting in non-cancer health effects. California’s Children’s Environmental Health Protection Act of 1999 (California Health and Safety Code Section 39606), also requires explicit consideration of infants and children in assessing risks from air toxics.

Substances regulated under California’s Air Toxics Hot Spots Program are defined in statute and include a list of substances developed by the following sources:

- International Agency for Research on Cancer (IARC);
- U.S. EPA;
- U.S. National Toxicology Program (NTP);
- CARB Toxic Air Contaminant Identification Program List;
- Hazard Evaluation System and Information Service (HESIS) (State of California);
- Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) list of carcinogens and reproductive toxicants (State of California); and
- Any additional substance recognized by the State Board as presenting a chronic or acute threat to public health when present in the ambient air.

Asbestos Airborne Toxic Control Measure

CARB’s Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations applies to any road construction and maintenance, or construction and grading operations on any property that is located in a geographic ultramafic rock unit or has naturally occurring asbestos, serpentine rock, or ultramafic rock. The measure requires an operator to notify the BAAQMD at least 14 days prior to the start of activities and implement certain dust control measures such as, but not limited to, stabilizing unpaved areas and limiting vehicle speeds on unpaved roads to 15 miles per hour.

Regional

CARB divides into 15 air basins based on geographic and meteorological features. One or more local air districts administer air quality management within each basin. These air districts develop local air quality/pollutant regulations and prepare air quality plans that set goals and measures for achieving attainment with ambient air quality standards. The districts also develop emission inventories, collect air monitoring data, and perform dispersion modeling simulations to establish strategies to reduce emissions and improve air quality. Local air regulations and air quality plans include measures to reduce air pollutant emissions from industrial facilities, commercial processes, motor vehicles, and other sources.

Bay Area Air Quality Management District

The project is located within the San Francisco Air Quality basin under the jurisdiction of the BAAQMD, which is the agency primarily responsible for maintaining air quality and regulating emissions of criteria and toxic air pollutants within the SFBAAB. The BAAQMD carries out this responsibility by preparing, adopting, and implementing plans, regulations, and rules that are designed to achieve attainment of state and national air quality standards. The BAAQMD currently has 14 regulations containing more than 100 rules that control and limit emissions from sources of pollutants²⁵. Table 4.3-3 below presents the major BAAQMD rules and regulation that may apply to future development projects in the City.

On April 29, 2017, the BAAQMD adopted its Spare the Air-Cool the Climate 2017 Clean Air Plan (Clean Air Plan). The 2017 Clean Air Plan updates the most recent Bay Area ozone plan, the 2010 Clean Air Plan, in fulfillment of state ozone planning requirements. Over the next 35 years, the Plan will focus on the three following goals:

- Attain all state and national quality standards;
- Eliminate disparities among Bay Area communities in cancer health risk from toxic air contaminants; and
- Reduce Bay Area GHG Emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050.

The 2017 Plan includes 85 distinct control measures to help the region reduce air pollutants and has a long-term strategic vision that forecasts what a clean air Bay Area will look like in the year 2050. The control measures aggressively target the largest source of GHG, ozone pollutants, and particulate matter emissions – transportation. The 2017 Plan includes more incentives for electric vehicle infrastructure, off-road electrification projects such as Caltrain and shore power at ports, and reducing emissions from trucks, school buses, marine vessels, locomotives and off-road equipment.

**Table 4.3-3
Potentially Applicable BAAQMD Rules and Regulations**

Regulation	Rule	Description
1- General Provisions and Definitions	1- General Provisions and Definitions	301 – Public Nuisance: Establishes that no person shall discharge quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number or person or the public; or which endangers the comfort, repose, health or safety of any such person or the public.
2- Permits	2- New Source Review	Provides for the review of new and modified sources of pollutants; requires use of Best Available Control Technology and emissions offsets to achieve no net increase in nonattainment pollutants; implements Prevention of Significant Deterioration review for attainment pollutants.
2 – Permits	5 – New Source Review of Toxic Air Contaminants	Provides for the review of new and modified sources of toxic air contaminants; requires use of Best Available Control Technology for sources that have a risk above certain thresholds and limits total project risks to 10.0 in a million cancer risk, 1.0 chronic hazard index, and 1.0 acute hazard index.
2 – Permits	6 – Major Facility Review	Provides for the review and issuance of operating permits for facilities that have the potential to emit 100 tons per year or more of any regulated air pollutant, 10 tons per year of a single hazardous air pollutant, and 25 tons per year or more of combined hazardous air pollutants.
6 – Particulate Matter	1 – General Requirements	Limits visible particulate matter emissions.
7- Odorous substances	Odorous Substances	Establishes general limitations on odorous substances and specific emission limitations on certain odorous compounds, such as ammonia.
9 – Inorganic Gaseous Pollutants	8 – NO _x and CO from Stationary Internal Combustion Engines	Limits emissions of NO _x and CO from stationary internal gas combustion engines more than 50 brake horsepower.
11 – Hazardous Pollutants	2 – Asbestos Demolition, Renovation, and Manufacturing	Controls emissions of asbestos to the atmosphere during demolition.
Source: Current Rules; BAAQMD, 2022		

Local

City General Plan

The current City General Plan Safety Element contains the following goals, objectives, and policies related to air quality issues.

Goal 1. To reduce potential risk to new development by proper planning and to minimize existing risk through coordinated City-County actions.

Objective 14. To promote measure to improve air quality.

Policy 14a. Cooperate with region and area-wide measures to improve air quality.

Policy 14b. Promote Transportation System Management as a means to reduce single occupant vehicle travel.

2015 to 2023 Housing Element

Goal V. Encourage and maintain energy efficiency in new and existing housing.

Policy 5.1. The City shall continue to promote energy conservation in the design of all new residential structures and shall promote incorporation of energy conservation and weatherization features in existing homes.

Clayton Municipal Code

The Clayton Municipal Code (CMC) includes certain standards that help reduce construction and operational emissions from development projects.

Chapter 15.80 (Green Building Standards Code; Project Construction and Demolition Debris Requirements), Section 15.80.030 (Submission and Contents of Waste Management Plan) specifies that projects subject to the City's Green Building Standards Code shall complete and submit a Waste Management Plan that identifies the types of construction and demolition debris expected to be generated from plans for at least 65 percent of this debris to be diverted from landfilling and made available for salvage, reuse, and /or recycling.

Chapter 17.80 (Landscape Water Conservation Standards) identifies best management practices and standards for water-efficient landscape design in certain landscaping projects.

4.3.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the project would have a significant impact related to air quality if it would:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard;
- c) Expose sensitive receptors to substantial pollutant concentrations;
- d) Result in other emissions such as those leading to odors adversely affecting a substantial number of people; or
- e) Cause substantial adverse cumulative impacts with respect to Air Quality Regional Significance Thresholds.

The BAAQMD's CEQA Air Quality Guidelines contains guidance on assessing and mitigating both project- and plan-level air quality impacts.²⁶ Page 9-1 of the BAAQMD's guidelines states:

"The term general and area plan refers broadly to discretionary planning activities which may include, but are not limited to the following: general plans, redevelopment plans, specific plans, area plans, community plans, congestion management plans, and annexations of lands and service areas. General and area plans are often subject to program-level analysis under CEQA, as opposed to project-level analysis. As a general principle, the guidance offered within [the BAAQMD's CEQA Air Quality Guidelines] should be applied to discretionary, program-level planning activities; whereas the project-level

guidance offered in other chapters should be applied to individual project-specific approvals, such as a proposed development project.

Air quality impacts from future development pursuant to general or area plans can be divided into construction-related impacts and operational-related impacts. Construction-related impacts are associated with construction activities likely to occur in conjunction with future development allocated by the plan. Operational-related impacts are associated with continued and future operation of developed land uses, including increased vehicle trips and energy use.

The proposed project is a planning-level document that does not authorize or approve any specific project and is therefore primarily analyzed using the plan-level guidance contained in Chapter 9 of the BAAQMD CEQA Air Quality Guidelines.²⁶ Whereas the proposed project provides the blueprint and basis for future land use decisions within the Planning Area, individual future development projects supported by the project could be analyzed using the project-level guidance contained in Part II (Chapters 4 through 8) the BAAQMD CEQA Air Quality Guidelines. This project level guidance has also informed the evaluation of air quality impacts presented below. The BAAQMD's plan-and project-level thresholds of significance are summarized in Table 4.3-4 and Table 4.3-5, respectively. The project level thresholds are provided for information purposes only.

**Table 4.3-4
BAAQMD Plan-Level Thresholds of Significance**

Pollutant	Threshold of Significance
Criteria Air Pollutants and Precursor Emissions	Construction: None
	Operational: Consistency with current air quality plan and projected VMT or vehicle trip increase is less than or equal to projected population increase.
Local Community Risks and Hazards	Land use diagram identifies special overlay zones around existing and planned sources of TACs and PM _{2.5} , including special overlay zones of at least 500 feet (or Air District-approved modeled distance) on each side of all freeways and high-volume roadways, and plan identifies goals, policies, and objectives to minimize potentially adverse impacts.
Odors	Identify locations of odor sources in plan; identify goals, policies, and objectives to minimize potentially adverse impacts.
Source: California Environmental Quality Act Air Quality Guidelines; BAAQMD, 2017	

**Table 4.3-5
BAAQMD Project-Level Thresholds of Significance**

Pollutant	BAAQMD Project-Level Threshold of Significance		
	Construction Emissions	Operational Emissions	
	Daily Emissions (pounds/day)	Daily Emissions (pounds/day)	Annual Emissions (tons per year)
ROG	54	54	10
NO _x	54	54	10
Exhaust PM ₁₀	82	82	15
Exhaust PM _{2.5}	54	54	10
Fugitive Dust PM ₁₀ /PM _{2.5}	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average) 20.0 ppm (1-hour average)	
Risks and Hazards – New Source/Receptor (Individual)	Compliance with Qualified Community Risk Reduction Plan; or Increased cancer risk of >10.0 in a million; and Increased non-cancer risk of >1.0 Hazard Index (chronic or acute); and Ambient PM _{2.5} increase: >0.3µg/m ³ annual average		
Risks and Hazards – New Source/Receptor (Cumulative)	Compliance with Qualified Community Risk Reduction Plan; or Increased cancer risk of >100 in a million (from all local sources); and Increased non-cancer risk of >10.0 Hazard Index (from all local sources) (chronic); and Ambient PM _{2.5} increase: >0.8µg/m ³ annual average (from all local sources)		
Accidental Release of Acutely Hazardous Pollutants	None	Storage or use of acutely hazardous materials locating near receptors or receptors locating near stored or used acutely hazardous materials considered significant	
Odors	None	Complaint History – 5 confirmed complaints per year averaged over three years	
Source: California Environmental Quality Act Air Quality Guidelines: BAAQMD, 2017			

Source: California Environmental Quality Act Air Quality Guidelines; BAAQMD, 2017

4.3.4 Impacts and Mitigation Measures

This section describes potential impacts related to conflicts with an applicable air quality plan, cumulatively considerable net increases of criteria pollutants for which the region is in nonattainment, exposure of sensitive receptors to substantial pollutant concentrations, and objectionable odors, which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Conflicts with Local Air Quality Plans / Increases in Criteria Air Pollutants and Precursor Emissions

Impact AIR-1 – Would the HEU conflict with or obstruct implementation of the applicable air quality plan and/or result in a cumulative considerable net increase in criteria air pollutants and/or precursor emissions?

Analysis of Impacts

Consistent with the BAAQMD's CEQA Air Quality Guidelines, the proposed project would result in a significant impact if it would be inconsistent with the 2017 Clean Air Plan or result in a

projected increase in vehicle trips or vehicle miles traveled (VMT) that exceeds a projected population increase. As described below, the project includes standards and guidelines that would be consistent with the 2017 Clean Air Plan and would not result in an increase in trip generation that exceeds the projected increase in service population. Therefore, the proposed project would be consistent with the 2017 Clean Air Plan.

The BAAQMD's CEQA Guidelines recommend a lead agency analyze consistency with the 2017 Clean Air Plan using the following three questions:

- 1) Does the project support the primary goals of the Air Quality Plan?
- 2) Does the project include applicable control measures from the Air Quality Plan?
- 3) Does the project disrupt or hinder implementation of any Air Quality Plan control measures?

The BAAQMD's 2017 Clean Air Plan is a multi-pollutant plan focused on protecting public health and the climate. Specifically, the primary air quality-related goals of the 2017 Clean Air Plan (Consistency Question 1) are to:ⁱ

- Goal 1: Attain all state and national air quality standards; and
- Goal 2: Eliminate disparities among Bay Area communities in cancer health risk from toxic air contaminants.

According to the BAAQMD CEQA Guidelines, to meet the thresholds of significance for operational-related criteria air pollutant and precursor impacts for plans (i.e., attain state and air quality standards per Consistency Question 1, Goal 1), a proposed plan must satisfy the following criteria:

- Criteria 1: Consistency with current air quality plan control measures; and
- Criteria 2: A proposed plan's projected VMT or vehicle trips increase is less than or equal to its projected population increase.

Based on the preceding discussion of the criteria needed to meet the BAAQMD thresholds of significance for plan-level documents, the following analysis is organized as such:

- Consistency with Air Quality Plan Control Measures. This section addresses:
 - Consistency Question 1 (Primary Goals of Air Quality Plan): Goal 1 - Attain Air Quality Standards, Criteria 1 (Applicable Control Measures)
 - Consistency Question 2 (Include Applicable Control Measures from Air Quality Plan)
- Disrupt or Hinder Implementation of Air Quality Plan Control Measures. This section addresses:
 - Consistency Question 3 (Disrupt or Hinder Implementation of Air Quality Plan)
- Increases in Vehicle Trips and Service Population. This section addresses:
 - Consistency Question 1 (Primary Goals of Air Quality Plan): Goal 1 - Attain Air Quality Standards, Criteria 2 (Vehicle Trips and Population Growth)

ⁱ In addition to the two goals identified in this Chapter, the 2017 Clean Air Plan includes a third primary goal related to Bay Area greenhouse gas (GHG) emissions. For the purposes of this EIR, consistency with the 2017 Clean Air Plan's goal related to GHG emissions is considered and evaluated separately in EIR Chapter 4.8 (Greenhouse Gas Emissions).

- Eliminate Health Risk Disparities Among Bay Area Communities. This section addresses:
 - Consistency Question 1 (Primary Goals of Air Quality Plan): Goal 2 – Eliminate Health Risk Disparities Among Bay Area Communities

Consistency with Air Quality Plan Control Measures

The 2017 Clean Air Plan contains 85 control strategies designed to reduce ozone precursors, protect public health, and serve as a regional climate protection strategy. The 85 control strategies identified in the 2017 Clean Air plan are grouped by nine economic-based “sectors” as shown in Table 4.3-6.ⁱⁱ

The BAAQMD’s implementation of the control strategies employs a wide range of tools and resources, and many of the control strategies are not intended or designed to be achieved by local government. Table 4.3-7 identifies the 2017 Clean Air Plan control measures that are relevant to the proposed project and summarizes how the project would be consistent with these measures.

ⁱⁱ The BAAQMD 2017 Clean Air Plan uses the same economic sectors contained in CARB’s 2017 Climate Change Scoping Plan.

**Table 4.3-6
BAAQMD 2017 Clean Air Plan Control Measure Sectors**

Sector	No. of Measures	General Description of Sector Applicability
Agriculture (AG)	4	Applies to sources of air pollution from agricultural operations include on and off-road trucks and farming equipment, aircraft for crop spraying, animal waste, pesticide and fertilizer use, crop residue burning, travel on unpaved roads, and soil tillage.
Buildings (BL)	4	Applies to residential, commercial, governmental and institutional buildings, which generate emissions through energy use for heating, cooling, and operating the building, and from the materials used in building construction and maintenance.
Energy (EN)	2	Applies to emissions of criteria pollutants, TACs, and GHGs from electricity generated and used within the Bay area, as well as GHG emissions from electricity generated outside the Bay area that is imported and used within the region.
Natural and Working Lands (NW)	3	Applies to emissions from natural and working lands, including forests, woodlands, shrub lands, grasslands, rangelands, and wetlands.
Stationary Sources (SS)	40	Applies to stationary sources generally used in commercial and industrial facilities. Such sources are typically regulated through BAAQMD rulemaking, permitting, and enforcement programs.
Super GHGs (SL)	3	Applies to emissions of methane, black carbon, and fluorinated gases.
Transportation (TR)	23	Applies to on-road motor vehicles such as light-duty automobiles or heavy-duty trucks, as well as off-road vehicles, including airplanes, locomotives, ships and boats, and off-road equipment such as airport ground-support equipment, construction equipment and farm equipment.
Waste (WA)	4	Applies to emissions from landfills and composting activities.
Water (WR)	2	Applies to direct emissions from the treatment of water and wastewater at publicly-owned treatment works and indirect emissions associated with the energy used to pump, convey, recycle, and treat water and wastewater throughout the Bay.

Table 4.3-7
BAAQMD 2017 Clean Air Plan Control Measure Consistency

Applicable 2017 Clean Air Plan Control Measures	Proposed Project Consistency
Transportation Control Measures	
TR2: Trip Reduction Programs	Consistent. The proposed project reduces trips because of its high density and mixed-use development style. Policy 2.5 promotes mixed-use development in downtown Clayton. Proposed Housing Element Policy 4.1 of the project would ensure General Plan land use policies would permit higher density housing development.
TR10: Land Use Strategies	Consistent. Proposed Housing Element Policy 4.1 of the project would ensure General Plan land use policies would permit higher density housing development than what is currently allowed by adopted General Plan land use designations and zoning districts. The proposed project includes amendments the General Plan Land Use Element and the Clayton Municipal Code to increase housing density.
Building Control Measures	
BL1: Green Buildings	Consistent. New development occurring under implementation of the proposed project would be subject to the latest CalGreen requirements, which establish statewide standards for sustainable building practices. In addition, proposed Housing Element Goal 6 of the project supports to incorporating sustainability practices into housing production and operations. Proposed Housing Element Policy 6.1 would require developers to incorporate sustainable practices into the design of subdivisions; proposed Policy 6.2 would promote the use of clean, energy-efficient appliances in new homes; proposed Policy 6.3 would promote home retrofits that reduce consumption of water and energy resources; and proposed Policy 6.4 establishes high sustainability standards for new multi-family housing and mixed-use developments.
Waste Management Control Measures	
WA4: Recycling and Waste Reduction	Consistent. New development occurring under implementation of the proposed project would meet the requirements of Clayton Municipal Code (CMC) Chapter 15.80- Green Building Standards Code; Project Construction and Demolition Debris Requirements. CMC Section 15.80.030 - Submission and Contents of Waste Management Plan, subsection (B) requires applicants who are required to submit a Waste Management Plan to acknowledge the standard diversion requirement requires at least 65 percent, or a numerical threshold

	established by subsequent state regulation, of the construction and demolition debris materials to be diverted from the landfill and made available for salvage, reuse, and/or recycling.
Water Control Measures	
WR2: Support Water Conservation	Consistent. New development occurring under implementation of the project would meet the requirements of CMC Chapter 17.80- Landscape Water Conservation Standards, which includes best management practices and standards for reducing water at applicable new projects.

As shown in Table 4.3-7, the project would be in compliance and consistent with the control measures contained in the 2017 Clean Air Plan.

Disrupt or Hinder Implementation of Clean Air Plan Control Measures

As shown in Table 4.3-7, the proposed project incorporates standards and guidelines that are consistent with and similar to applicable 2017 Clean Air Plan control measures. Thus, the proposed project would not disrupt or hinder implementation of any 2017 Clean Air Plan control measures.

Vehicle Trips and Service Population Growth

The BAAQMD CEQA Air Quality Guidelines recommend lead agencies evaluate the projected VMT or vehicle trips in relation to projected population increases when considering the adoption of a plan-level document. Specifically, that the projected VMT or vehicle trips are less than or equal to the projected population increase. Table 4.3-8 compares the potential increases in trip generation, VMT, and population under the proposed project to the trip generation, VMT and population conditions under the existing 2020 conditions and under 2040 No Project conditions.

**Table 4.3-8
Project Trip Generation, VMT, and Population Increases**

Year	Daily Trip Generation	Daily VMT	Population
Existing Conditions Compared to 2040 Project Conditions			
Existing 2020	47,392	478,740	11,268
2040 Project	54,850	576,705	13,632
Percent Increase	15.7%	20.4%	21.0%
2040 No Project Conditions Compared to 2040 Project Conditions			
2040 No Project	48,408	502,376	11,547
2040 Project	54,850	576,705	13,632
Percent Increase	13.3%	14.8%	18.1%
Sources: City of Clayton 2022 and Fehr and Peers 2022.			

As shown in Table 4.3-8, the projected increase in VMT under the proposed project would not exceed the projected population increase that would occur under the project. In addition, the projected increase in trip generation under the proposed project would not exceed the projected population increase that would occur under the project. Thus, the project would not result in a significant increase in emissions of criteria air pollutants, including ozone precursor pollutants.

Eliminate Disparities in Health Risks

As described under Section 4.3.1, the City is located within an area shown by CalEnviroScreen to have pollution burden percentiles ranging from the 5 to 26 percentile, which indicate relatively low health risks in the City as compared to other areas of the state. In addition, the City is not an impacted community identified under the BAAQMD's CARE Program and is not considered a disadvantaged community pursuant to SB 535. Therefore, although the proposed project could result in potentially significant health risk increases (see Impact AIR-2), it would not do so in an area that is currently disadvantaged or disproportionately affected by adverse air quality. The potential health risks posed by implementation of the project are solely related to those posed by construction activities, which are temporary in nature. The project proposes residential and commercial land uses and would not include industrial or other land uses that have the potential to generate TAC emissions from large stationary sources or industrial processes. The City is not located in or adjacent to a disadvantaged community, nor does it propose land uses that would generate long-term, stationary sources of emissions that could promote disparities in health risks. The proposed project would not increase health risk disparities in the Bay Area.

Level of Significance Before Mitigation

Implementation of the proposed project would be consistent with and not hinder the implementation of any applicable 2017 Clean Air Plan Control Measures, nor would it result in VMT growth that exceeds population growth. In addition, the project would not promote disparities in health risks. Based on the preceding analysis, the proposed project would be consistent with the 2017 Clean Air Plan and would not result in significant increases in criteria air pollutant or precursor pollutant emissions. This impact would be less than significant (see criterion [a] in subsection 4.3.3 "Significance Thresholds" above).

Mitigation Measures

None required.

Substantial Pollutant Concentrations / Community Risks and Hazards

Impact AIR-2 – Would the project result in substantial pollutant concentrations that result in community health risks and hazards?

Analysis of Impacts

This section evaluates the potential for the proposed project to generate substantial pollutant concentrations that could impact sensitive air quality receptors. In addition, this section presents information on the potential for existing mobile and stationary sources of emissions to impact new sensitive receptors associated with the project.

Construction-Related Pollutant Concentrations

The adoption of the proposed project would not directly result in construction of any development or infrastructure; however, future development supported by the project would result in short-term

construction-emissions of criteria air pollutants and toxic air contaminants emissions that would have the potential to have an adverse effect on air quality.

Although specific project characteristics are not known, construction activities associated with typical residential and commercial development can include demolition, site preparation, grading, building construction, paving, and architectural coating phases. These types of construction activities could generate emissions from the following sources:

- Gasoline- and diesel-fuel combustion in on- and off-site, heavy-duty construction equipment, worker vehicle trips, vendor vehicle trips, and haul truck trips generate emissions of ROG, NO_x, CO, exhaust PM, and other pollutants. The age, type, amount, size, and activity hours of construction equipment used, as well as the associated number of workers, vendors, and haul trucks needed to construct a project, all influence the amount of exhaust emissions produced during construction.
- On- and off-site vehicle travel on paved and unpaved roads used to access the job site generates fugitive dust and PM emissions. The silt content, moisture level, vehicle weight, and vehicle speed are factors that affect fugitive dust emissions from vehicle travel on paved and unpaved roads.
- Demolition and ground disturbance activities associated with grading, excavation, and other soil-disturbing activities also generate fugitive dust and PM emissions. Emissions that occur as a result of these activities not only occur during the active earth disturbance, but also while the materials are being deposited into haul trucks and transported to their final destinations. Similar to vehicle travel on unpaved roads, the soil moisture, wind speed, and volume of material moved affect potential fugitive dust emissions from earth moving activities.
- Surface coating and finishes (e.g., painting, waterproofing, etc.) generates ROG emissions from off-gassing/evaporation of pollutants.

The BAAQMD's CEQA Air Quality Guidelines contain construction screening criteria to provide lead agencies with a conservative indication of whether a proposed project could result in a potentially significant construction-related air quality impact.²⁶ Consistent with the BAAQMD's guidance, if a project meets all the construction screening criteria, then the project would result in a less than significant construction air quality impact, and a detailed construction air quality assessment would not be required for the project. Table 4.3-9 compares the potential development supported by the proposed project sites with the BAAQMD's construction screening criteria.

Table 4.3-9
HEU Site Consistency with BAAQMD Construction Screening Criteria

Criterion ^(A)	Requirement	Project Consistency
1) Land Use Type and Size	<p>Project is below the construction screening size for the appropriate project type:</p> <ul style="list-style-type: none"> • Single-Family Residential: 114 dwelling units • Multi-family Residential: 240 dwelling units • Commercial facility (any type): 277,000 square feet of building space 	<p>Individual proposed project sites B (35 units), D (8 units), J (21 units), K (4 units), and L (7 units) would each be below the single-family residential construction screening size criterion.</p> <p>Individual proposed project sites A (39 units), E (32 units), F (22 units), G (49 units), H (34 units), I (132 units), N (30 units), O (81 units), P (13 units), Q (81 units), R (41 units), and S (17 units) would each be below the multi-family residential construction screening size criterion.</p> <p>Potential commercial development (up to 20,000 square feet) associated with the proposed project would be below the potential commercial construction screening size criterion.^(B)</p>
2) Basic Construction Measures	Project design and implementation includes all BAAQMD <i>Basic Construction Mitigation Measures</i> .	The City would require future development projects supported by the project to incorporate the BAAQMD <i>Basic Construction Mitigation Measures</i> into the project design (see Mitigation Measure AIR-1).
3) Demolition	The project would not include demolition.	There are insufficient project-specific details to determine if individual HEU projects would meet this BAAQMD construction screening criterion.
4) Construction Phases	Construction does not include simultaneous occurrence of more than two construction phases (e.g., grading, paving, and building construction would occur simultaneously).	There are insufficient project-specific details to determine if individual HEU projects would meet this BAAQMD construction screening criterion.
5) Multiple Land Uses	Construction does not include simultaneous construction of more than one land use type.	The project (proposed Housing Element Policy 2.5) would allow for the construction of mixed-use projects containing both residential and commercial projects. This would be limited to the Downtown Clayton area.

Table 4.3-9
HEU Site Consistency with BAAQMD Construction Screening Criteria

Criterion ^(A)	Requirement	Project Consistency
6) Site Preparation	Construction does not require extensive site preparation.	There are insufficient project-specific details to determine if individual HEU projects would meet this BAAQMD construction screening criterion.
7) Material Transport	Construction does not require extensive material transport and considerable haul truck activity (greater than 10,000 cubic yards).	There are insufficient project-specific details to determine if individual HEU projects would meet this BAAQMD construction screening criterion.
<p>Table prepared by MIG using the following sources of information:</p> <p>(A) BAAQMD Screening Criteria from pg. 3-5 of BAAQMD CEQA Guidelines²⁶</p> <p>(B) Construction screening level size from Table 3-1 of BAAQMD CEQA Guidelines.²⁶ Although the exact land use type for each commercial land use project is not currently known, the construction-related screening size is the same among all commercial land use types.</p>		

As described in Table 4.3-9, each individual HEU project is anticipated to be less than the construction screening size criterion determined by the BAAQMD to require a detailed construction air quality impact assessment; however, there are insufficient project-specific details at this point to determine if all projects would meet all BAAQMD construction screening criteria (e.g., construction phasing and material export details) and, in some cases, certain projects may not be able to meet all construction screening criteria (e.g., mixed-use projects in Clayton Town Center). In addition, individual construction projects would emit DPM, a TAC. The exposure of sensitive receptors near (i.e., within 500 feet) of construction sites to DPM could have an adverse health risk impact if project construction activities were of sufficient intensity and duration to result in prolonged exposure to DPM emissions. Consistent with the BAAQMD's construction screening criteria, this condition would be most likely to occur for projects that involve the simultaneous occurrence of more than one construction activity, the simultaneous construction of more than one land use type, and/or extensive site preparation, and/or extensive material transport.

Although unlikely, the potential for future development projects supported by the project to exceed BAAQMD project-level construction thresholds of significance is considered a potentially significant impact. Accordingly, the Mitigation Measures AIR-1 and AIR-2 are recommended to be implemented with future development projects supported by the project. Mitigation Measure AIR-1 requires future project development projects to implement the BAAQMD's Basic Construction Measures to control fugitive dust emissions generated during construction activities. Mitigation Measure AIR-2 requires future HEU projects that cannot satisfy all BAAQMD construction screening criteria to prepare a detailed construction air quality impact assessment that identifies potential project construction emissions, compares emissions against BAAQMD project-level construction thresholds of significance and, if necessary, incorporate measures to reduce construction emission impacts to levels below the BAAQMD's construction thresholds of significance for criteria air pollutants and TACs.

Operations-Related Pollutant Concentrations

The BAAQMD's CEQA Air Quality Guidelines also contain operational screening criteria to provide lead agencies with a conservative indication of whether a proposed project could result

in a potentially significant operations-related air quality impact.²⁶ Consistent with the BAAQMD's guidance, if a project meets the operational screening-size criterion, then the project would result in a less than significant air quality impact, and a detailed air quality assessment would not be required for the project. Table 4.3-10 compares the potential HEU projects with the BAAQMD's operations screening criteria.

Table 4.3-10
HEU Site Consistency with BAAQMD Operational Screening Criteria

Criterion ^(A)	Requirement	Project Consistency
1) Land Use Type and Size	<p>Project is below the operational screening size for the appropriate project type:</p> <ul style="list-style-type: none"> • Single-Family Residential: 325 dwelling units • Multi-family Residential: 451 dwelling units • Non-restaurant commercial facility: 42,000 square feet of building space 	<p>Individual proposed project sites B (35 units), D (8 units), J (21 units), K (4 units), and L (7 units) would each be below the single-family residential operational screening size criterion.</p> <p>Individual proposed project sites A (39 units), E (32 units), F (22 units), G (49 units), H (34 units), I (132 units), M (241 units), N (30 units), O (81 units), P (13 units), Q (81 units), R (41 units), and S (17 units) would each be below the multi-family residential operational screening size criterion.</p> <p>Potential commercial development (up to 20,000 square feet) associated with the proposed project would below the smallest potential operations screening size criterion for a non-restaurant commercial land use.^(B)</p>
<p>Table prepared by MIG using the following sources of information:</p> <p>(A) BAAQMD Screening Criteria from pg. 3-5 of BAAQMD CEQA Guidelines²⁶</p> <p>(B) Construction screening level size from Table 3-1 of BAAQMD CEQA Guidelines.²⁶ Although the exact land use type for each commercial land use project is not currently known, this table uses the criterion of a supermarket as a proxy for the potential commercial development envisioned by the project. Banks and restaurants were excluded due to proposed Housing Element Policy 2.5, Mixed-use Development, which promotes residential uses above commercial and office uses.</p>		

As shown in Table 4.3-10, each individual Housing Element Update project is anticipated to be well below the operational screening size criterion determined by the BAAQMD to require a detailed operational air quality impact assessment. Since the size of potential Housing Element Update projects is dependent on known factors such as lot size, allowable density, etc., the size of each individual project is not expected to change substantially such that BAAQMD operational screening thresholds would be exceeded. Therefore, this impact would be less than significant.

Carbon Monoxide Hot Spots

The BAAQMD developed a screening-level analysis for CO hotspots in 2010 which identifies that projects that are consistent with the applicable congestion management program, and that do not cause traffic volumes at affected intersections to increase to more than 44,000 vehicles per hour, do not result in a CO hotspot that could exceed state or federal air quality standards.²⁶ Based on

the transportation analysis prepared for the project (see Chapter 4.17), the maximum number of vehicles moving through any study intersection in a given hour in proximity of the Planning Area under the 2040 project conditions would be approximately 7,451 vehicles through the intersection of Kirker Pass Road and Clayton Boulevard during the PM peak hour.²⁷ This is less than one fifth of the BAAQMD's threshold of 44,000 vehicles per hour. Therefore, the proposed project would not cause or significantly contribute to CO concentrations that exceed state or federal ambient air quality standards for CO. This impact would be less than significant.

Other Disclosures - Exposure of New Receptors to Air Quality Risks and Hazards

Per the ruling by the California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015), projects are not required to analyze how existing conditions might impact a project's future users or residents; however, the proposed project includes goals and policies in the draft Housing Element related to quality living environments (Goal 5, Policy 5.4) and sustainable housing practices (Goal 6, Policy 6.1 and Policy 6.4). Therefore, the following is not an impact discussion under CEQA, but rather a consistency analysis with proposed project policies.

Within the SFBAAB, localized risks are primarily associated with exposure to TACs and PM_{2.5} emissions. As discussed in Section 4.3.1, TACs are a defined set of airborne pollutants that may pose a present or potential hazard to human health, and PM_{2.5} is a type of particle pollution that pose an increased risk because they can penetrate the deepest parts of the lung, leading to and exacerbating heart and lung health effects. Common sources of TACs and PM_{2.5} emissions are stationary sources (e.g., diesel backup generators, gasoline stations, and dry cleaners), which are subject to BAAQMD permit requirements. Another common and often more significant source type is on-road motor vehicles on high-volume roads and off-road sources such as construction equipment. Although the proposed project does not include plans for any new, large stationary sources of emissions, it could result in new sensitive residential receptors near existing sources of emissions.

Consistent with the BAAQMD's CEQA Air Quality Guidelines, the proposed project would not expose sensitive residential receptors to substantial community risks or hazards if it identifies special overlay zones around existing and planned sources of TACs and PM_{2.5}, including special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways, and the plan identifies goals, policies, and objectives to minimize potentially adverse impacts. For example, the CARB *Air Quality and Land Use Handbook* recommends avoiding the siting of new sensitive land uses (e.g., residences, schools, etc.) within:

- Within 300 feet of large gasoline fueling stations (with a throughput of more than 3.6 million gallons of gasoline per year);
- Within 300 feet of dry cleaning operations;
- Within 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; and
- Within 1,000 feet of a major rail service or maintenance yard.

A review for gas stations and dry cleaning facilities within the Planning Area indicates there may be approximately two gas stations and two dry cleaning facilities in or within approximately 1,000 feet of the City's boundary. These facilities are generally located at the intersection of Clayton Road and Ygnacio Valley Road/Kirker Pass Road. The closest potential housing site to these facilities is Site R (41 units), which is located on Kirker Pass Road at least 500 feet east of any existing dry cleaning facility and 1,300 feet east of any existing gas station facility. Thus, the

proposed project would not place new receptors within 300 feet of any existing gas station or dry cleaning facility. In addition, the City does not contain any freeways, urban roadways that carry more than 100,000 vehicles/day, rural roads that carry more than 50,000 vehicles/day, or major rail service or maintenance yards. Thus, the proposed project would not place new receptors in close proximity to substantial mobile source emissions sources.

Finally, a review of BAAQMD screening data identified 11 permitted stationary source facilitiesⁱⁱⁱ in or within 1,000 feet of the City's boundary, including the gas station and dry clearing facilities identified above, and the Hanson Aggregates and CEMEX Clayton Quarry that operate south of the City boundary²⁸ (see Appendix C). Table 4.3-11 summarizes these permitted stationary sources and their corresponding cancer risk, non-carcinogenic hazard, and PM_{2.5} concentrations resulting from these sources.

**Table 4.3-11
Summary of BAAQMD Stationary Source Screening Data**

Facility	Permit Address	Source Type	Cancer Risk	Chronic Hazard Index	PM _{2.5} (µg/m ³)
Pacific Bell (ID 13456)	6191 High Street	Generator	10.60	0.02	0.01
CEMEX (ID 828)	515 Mitchell Canyon Road	Not Available	--	--	10.17
Hanson Aggregates (ID 896)	Pine Hollow Road	Not Available	--	--	20.73
Contra Costa Water District (ID 14041)	Peacock Creek Drive	Generator	1.68	0	0.00
Contra Costa Water District (ID 20147)	Marsh Creek Road	Generator	2.08	0.01	0.00
Verizon Wireless (ID 17047)	Seminary Water Tanks	Generator	2.15	0.00	0.00
OSH (ID 2466)	5424 Ygnacio Valley Road	Generator	0.00	0	0
Oakhurst Country Club (ID 111172_1)	2500 Indianhead Way	Gas Dispensing Facility (Private)	0.59	0.00	--
Clayton Valley Shell (ID 111574_1)	1500 Kirker Pass Road	Gas Dispensing Facility	21.06	0.10	--
Clayton Valero (ID 111889_1)	5399 Clayton Road	Gas Dispensing Facility	11.81	0.06	--
CEMEX (ID 828_19)	515 Mitchell Canyon Road	Gas Dispensing Facility	0.58	0.00	--

ⁱⁱⁱ BAAQMD screening data identifies different facilities than the CARB's AB 2588 Air Toxics "Hot Spots" Program discussed in Section 4.3.1 above due to a difference in search areas and the frequency in which the data is updated.

4.3 – Air Quality

BAAQMD Individual Project Risk and Hazard Thresholds	10	1	0.3
BAAQMD Cumulative Risk and Hazard Thresholds	100	10	0.8
Table prepared by MIG using the following sources of information: (A) BAAQMD Screening Criteria from pg. 3-5 of BAAQMD CEQA Guidelines ²⁶ (B) Construction screening level size from Table 3-1 of BAAQMD CEQA Guidelines ²⁶			

As shown in Table 4.3-11, BAAQMD screening data indicates that the existing Pacific Bell, CEMEX, and Hanson Aggregates facilities may generate carcinogenic and annual average PM_{2.5} concentrations that could exceed BAAQMD individual project thresholds of significance shown in Table 4.3-11. It is noted that the BAAQMD's screening data predict pollutant concentrations and associated health risks at the facility boundary. Both the CEMEX and the Hanson Aggregates quarries are located outside the City, more than 1,000 feet from the closest potential project sites (Sites J and K) and, therefore, would not expose new receptors in potential project sites to substantial pollutant concentrations or adverse health risks. The Pacific Bell facility at 6191 High Street lies adjacent to potential project Site O and is within 1,000 feet of potential project sites H, N, and P.^{iv} In addition, new permitted facilities could begin to operate in the future. Accordingly, to ensure development projects supported by the project are consistent with project policies, the City is incorporating Condition of Approval Air-1 into the project. Condition of Approval Air-1 requires future HEU projects to review the BAAQMD's publicly available information on permitted stationary sources to determine if the project could expose new receptors to air quality risks and hazards that exceed the BAAQMD's individual project and cumulative risk thresholds and, if necessary, incorporate measures to reduce receptor exposure to levels below the BAAQMD's thresholds.

Level of Significance Before Mitigation

Construction Emissions. As discussed above, although it is unlikely given the size of individual project sites, construction emissions associated with future project development activities could exceed BAAQMD-recommended project-level CEQA significance thresholds. This is considered a potentially significant impact.

Operational Emissions. As discussed above, each individual HEU project is anticipated to be well below the operational screening size criterion determined by the BAAQMD to require a detailed operational air quality impact assessment. This is considered a less than significant impact.

Carbon Monoxide Hotspots. As discuss above, the implementation of the project would not cause or significantly contribute to CO concentrations that exceed state or federal ambient air quality standards for CO. This impact would be less than significant.

Other Disclosures – Exposure of New Receptors to Air Quality Risks and Hazards.

As described above, the proposed project could place new receptors in close proximity to stationary sources of emissions that pose an adverse health risks and hazards. This would be inconsistent with proposed HEU policies related to quality living environments (Goal 5, Policy 5.4) and sustainable housing practices (Goal 6, Policy 6.1 and Policy 6.4).

^{iv} The Pacific Bell facility is near Site O, The Olivia at Marsh Creek development, which is already entitled and not subject to further environmental review.

Mitigation Measures and Conditions of Approval

MM AIR-1: Implement BAAQMD Basic Construction Mitigation Measures. The City shall require new project development projects to implement the BAAQMD's Basic Control Mitigation Measures to address fugitive dust emissions that would occur during earthmoving activities associated with project construction. These measures include:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. 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.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
5. 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.
6. 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.
7. 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.
8. Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations.

MM AIR-2: Prepare Project-level Construction Emissions Assessment. The City shall require new projects requiring discretionary review to include a quantitative project-level construction criteria air pollutant and toxic air contaminant emissions analysis prior to the start of construction activities that shows project construction activities would not exceed BAAQMD project-level thresholds of significance. The analysis may rely on BAAQMD construction screening criteria to demonstrate that a detailed assessment of criteria air pollutant and toxic air contaminant construction emissions is not required for the project. If the project does not satisfy all BAAQMD construction screening criteria, the analysis shall estimate and compare construction criteria air pollutant and toxic air contaminant emissions against the project-level thresholds of significance maintained by the Bay Area Air Quality Management District (BAAQMD) and, if emissions are shown to be above BAAQMD thresholds, the implement measure to reduce emissions below BAAQMD thresholds. Mitigation measures to reduce emissions could include, but are not limited to:

- Watering exposes surfaces at a frequency adequate to maintain a minimum soil moisture content of 12 percent, as verified by moisture probe or lab sampling;
- Suspending excavation, grading, and/or demolition activities when average wind speeds exceed 20 miles per hour;
- Selection of specific construction equipment (e.g., specialized pieces of equipment with smaller engines or equipment that will be more efficient and reduce engine runtime);
- Installing wind breaks that have a maximum 50 percent air porosity;
- Restoring disturbed areas with vegetative ground cover as soon as possible;
- Limiting simultaneous ground-disturbing activities in the same area at any one time (e.g., excavation and grading);
- Scheduling/phasing activities to reduce the amount of disturbed surface area at any one time;
- Installing wheel washers to wash truck and equipment tires prior to leaving the site;
- Minimizing idling time of diesel-powered construction equipment to no more than 2 minutes or the shortest time interval permitted by manufacturer's specifications and specific working conditions.
- Requiring equipment to use alternative fuel sources (e.g., electric-powered and liquefied or compressed natural gas), meet cleaner emission standards (e.g., U.S. EPA Tier IV Final emissions standards for equipment greater than 50-horsepower), and/or utilizing added exhaust devices (e.g., Level 3 Diesel Particulate Filter);
- Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM;
- Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines; and
- Applying coatings with a volatile organic compound (VOC) that exceeds the current regulatory requirements set forth in BAAQMD regulation 8, Rule 3 (Architectural Coatings).

COA Air-1: Review Air Quality Risks to New Development Sites. The City shall require new development projects to review and identify, using the BAAQMD's publicly available Stationary Source Screening Map or another standard methodology (e.g., BAAQMD public records request), permitted stationary sources within 1,000 feet of the project that may result in risks and hazards to new receptors. If screening-level information indicates potential stationary source risks and hazards would exceed the BAAQMD's thresholds, the project applicant shall: 1) incorporate site and building design measures into the project that reduce exposure to pollutants; or 2) conduct refined, site-specific modeling, using the latest information and guidance from the BAAQMD, demonstrating sources risks and hazards would not exceed BAAQMD thresholds for new receptors. Site and building design measures that may reduce potential exposure to pollutants would include, but are not limited to, buffering/increasing the distance between sources and receptors, designing the site to limit exposure to the highest pollutant concentrations, and incorporating enhanced filter systems into heating, ventilation, and air conditioning equipment.

Level of Significance After Mitigation

Construction Emissions. As described in the preceding analysis, each individual HEU project is anticipated to be well below the construction screening size criterion determined by the BAAQMD to require a detailed construction air quality impact assessment; however, there are insufficient project-specific details at this point to determine if all projects would meet all BAAQMD construction screening criteria. To ensure projects achieve consistency with the BAAQMD's construction screening criteria or, if consistency with the construction screening criteria cannot be demonstrated, the mitigation measures MM AIR-1 and MM AIR-2 are recommended to be added as conditions of approval of future project development projects. MM AIR-1 would require future project development projects to implement the BAAQMD's Basic Construction Measures to control fugitive dust emissions generated during construction activities. MM AIR-2 would require future HEU projects that cannot meet construction screening criteria to prepare a detailed construction air quality impact assessment to: 1) estimate potential project construction emissions; 2) compare potential project construction emissions against BAAQMD project-level construction thresholds of significance; and 3) incorporate measures to reduce construction emission impacts to levels below the BAAQMD's construction thresholds of significance for criteria air pollutants and TACs. Therefore, this impact would be less than significant with mitigation.

Odors and Other Emissions***Impact AIR-3 – Would the project result in other emissions, such as odors, that adversely affect a substantial number of people?***Analysis of Impacts

According to the BAAQMD's CEQA Air Quality Guidelines, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). Construction occurring within the City could produce odors from fuel combustion and/or the use of solvents and paints. These odors would be temporary, quickly disperse, and would not affect a substantial number of people. The project would support an increase in the amount of residential and non-residential development in the City, including mixed-use development in Clayton's Town Center that may include residential uses above ground-floor commercial and office uses. The project does not directly authorize any new, major land uses identified in the BAAQMD's CEQA Air Quality Guidelines as a source of potential odors (e.g., wastewater treatment plant). This impact would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Impact Air-4 – Would the project cause substantial adverse cumulative impacts with respect to Air Quality?Analysis of Impacts

As described in Section 4.3.1, the SFBAAB is designated nonattainment for federal ozone, state ozone, state PM₁₀, federal PM_{2.5}, and state PM_{2.5} standards. The BAAQMD, in developing its CEQA significance thresholds, considered the emission levels at which a project's individual

4.3 – Air Quality

emissions would be cumulatively considerable. As stated in p. 2-1 in the BAAQMD's CEQA Air Quality Guidelines:²⁶

"In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. The analysis to assess project-level air quality impacts should be as comprehensive and rigorous as possible."

The analysis of potential air quality impacts described above indicates the project could result in potentially significant construction emissions impacts. All other impacts would be less than significant.

Level of Significance Before Mitigation

As described under Impact AIR-2, each individual HEU project is anticipated to be well below the construction screening size criterion determined by the BAAQMD to require a detailed construction air quality impact assessment; however, there are insufficient project-specific details at this point to determine if all projects would meet all BAAQMD construction screening criteria. In addition, individual construction projects would emit DPM, a TAC. The exposure of sensitive receptors near construction sites to DPM could have an adverse health risk impact if project construction activities were of sufficient intensity and duration to result in prolonged exposure to DPM emissions. Although unlikely, the potential for future development projects supported by the project to exceed BAAQMD project-level construction thresholds of significance is considered a potentially significant impact.

Mitigation Measures

See MM AIR-1 and MM AIR-2.

Level of Significance After Mitigation

To ensure projects achieve consistency with the BAAQMD's construction screening criteria or, if consistency with the construction screening criteria cannot be demonstrated, the mitigation measures MM AIR-1 and AIR-2 are recommended to be incorporated into future project development project approvals. MM AIR-1 would require future project development projects to implement the BAAQMD's Basic Construction Measures to control fugitive dust emissions generated during construction activities, and MM AIR-2 would require future HEU projects that cannot meet BAAQMD construction screening criteria to prepare a detailed construction air quality impact assessment to ensure projects do not generate construction emissions that exceed BAAQMD construction thresholds or otherwise result in substantial pollutant concentrations that could pose adverse health risks to sensitive receptors. Therefore, this impact would be less than significant with mitigation.

4.3.5 References

- 1 California Air Resources Board. *San Francisco Bay Area Air Basin*. (2012). <https://www.arb.ca.gov/ei/maps/2017basins/absfmap.htm> [Accessed March 2022].
- 2 Bay Area Air Quality Management District. *About the Air District*. (2022). <https://www.baaqmd.gov/about-the-air-district> [Accessed June 2022].
- 3 Office of Planning and Research, California Energy Commission, California Natural Resources Agency. *California's Fourth Climate Change Assessment*. (2018). https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-005_SanFranciscoBayArea_ADA.pdf [Accessed March 2022].
- 4 City of Clayton. *General Plan, Section X, Environmental Analysis, Page X-16*. (2000). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-x-environmental-analysis.pdf> [Accessed March 2022].
- 5 City of Clayton. *General Plan, Section VII, Safety Element, Page VII-18*. (2000). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-VII-safety-element.pdf> [Accessed March 2022].
- 6 United States Environmental Protection Agency. *Criteria Air Pollutants*. (2020). <https://www.epa.gov/criteria-air-pollutants> [Accessed July 2020].
- 7 United States Environmental Protection Agency. *Health and Environmental Effects of Hazardous Air Pollutants*. (2020). <https://www.epa.gov/haps/health-and-environmental-effects-hazardous-air-pollutants> [Accessed July 2020].
- 8 California Air Resources Board. *Common Air Pollutants*. (2020). <https://ww2.arb.ca.gov/resources/common-air-pollutants>. [Accessed July 2020].
- 9 United States Environmental Protection Agency. *Ground-Level Ozone Basics*. (2017). <https://www.epa.gov/ozone-pollution/ozone-basics#what%20where%20how> [Accessed July 2020].
- 10 California Air Resources Board. *Definitions of VOC and ROG*. (2004). https://www.arb.ca.gov/ei/speciate/voc_rog_dfn_11_04.pdf. [Accessed July 2020].
- 11 United States Environmental Protection Agency. *Particulate Matter (PM) Basics*. (2016). <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM>. [Accessed July 2020].
- 12 United States Environmental Protection Agency. *Basic Information about Carbon Monoxide (CO) Outdoor Air Pollution*. (2016). <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution#What%20is%20CO>. [Accessed July 2020].
- 13 United States Environmental Protection Agency. *Basic Information About NO₂*. (2016). <https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2>. [Accessed July 2020].
- 14 United States Environmental Protection Agency. *Sulfur Dioxide Basics*. (2016). <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#what%20is%20so2>. [Accessed July 2020].
- 15 California Air Resources Board. *Sulfate and Health*. (2022). <https://ww2.arb.ca.gov/resources/sulfate-and-health> [Accessed April 2022].
- 16 California Air Resources Board. *Lead and Health*. <https://www.arb.ca.gov/research/diesel/diesel-health.htm>. [Accessed July 2020].
- 17 California Air Resources Board. *Reducing Toxic Air Pollutants in California's Communities*. (2020) <https://www.arb.ca.gov/toxics/brochure.pdf>. [Accessed July 2020].
- 18 California Air Resources Board. *Overview: Diesel Exhaust and Health*. (2016). <https://www.arb.ca.gov/research/diesel/diesel-health.htm> [Accessed March 2022].
- 19 Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. (2017). https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en [Accessed March 2022].

-
- ²⁰ Bay Area Air Quality Management District. *Air Quality and Land Use Handbook: A Community Health Perspective*. (2005). <https://www.arb.ca.gov/ch/handbook.pdf> [Accessed March 2022].
- ²¹ Bay Area Air Quality Management District. *Permitted Stationary Sources Risks and Hazards*. 2022. [Accessed June 2022].
<https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65>
- ²² Bay Area Air Quality Management District. *Community Air Risk Evaluation Program*. (March 2021). <https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program> [Accessed March 2022.]
- ²³ Office of Environmental Health Hazard Assessment. *CalEnviroScreen 4.0*. (2021). <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40> [Accessed March 2022].
- ²⁴ California Air Resources Board. *Technical Advisory on Strategies to Reduce Air Pollution Exposure Near High Volume Roadways*. (2017). <https://ww2.arb.ca.gov/resources/fact-sheets/strategies-reduce-air-pollution-exposure-near-high-volume-roadways> [Accessed March 2022].
- ²⁵ Bay Area Air Quality Management District. *Current Rules*. (2022).
<http://www.baaqmd.gov/rules-and-compliance/current-rules> [Accessed July 2022].
- ²⁶ Bay Area Air Quality Management District. *CEQA Air Quality Guidelines*. 2017.
https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en [Accessed March 2022]
- ²⁷ Fehr & Peers, 2022.
- ²⁸ Bay Area Air Quality Management District. *Stationary Source Screening Map*. 2021.

4.4 – BIOLOGICAL RESOURCES

This EIR chapter addresses biological resource impacts associated with implementation of the City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). Issues of interest are biological resources impacts identified by the CEQA Guidelines are whether the HEU will: (1) cause a substantial adverse effect on special status wildlife species; (2) have a substantial effect on any riparian habitat/sensitive natural communities; (3) have a substantial adverse effect on state or federally protected wetlands; (4) interfere substantially with wildlife movement or use of wildlife nurseries; (5) conflict with local policies protecting biological resources; or (6) conflict with the provision of an adopted habitat conservation plan.

4.4.1 *Environmental Setting*

A Biological Constraints Analysis, dated July 7, 2022, was prepared by MIG to analyze potential impacts to biological resources from the proposed HEU (see Appendix D). The Planning Area is located on the Clayton 7.5-minute series United States Geological Survey (USGS) topographic quadrangle map. The topography of the Planning Area ranges from approximately 300 to 1,300 feet above mean sea level (AMSL), sloping roughly north to the south, with higher elevations in southern areas of the Planning Area at the foothills of Mount Diablo. Most of the City of Clayton is developed, and most undeveloped areas are located within the Sphere of Influence for the City. Undeveloped areas within the City largely consist of areas with earthen waterways (Peacock Creek, Mount Diablo Creek, Donner Creek, etc.) and natural parks/open space. Most of the larger undeveloped portions are situated in the periphery of the southern and eastern portions of the Planning Area. The Planning Area is located within the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCC HCP/NCCP) which provides a framework for development within the City.ⁱ The Mount Diablo area just south of Clayton is known to support a wide range of biodiversity; however, most of this area is not located within urban and developed areas of the City of Clayton.

Wildlife and Sensitive Species

Wildlife known to occur within the Planning Area consists of avian, reptile, and mammal species that may occupy urban and/or natural areas. The vast majority of wildlife species diversity occurs just outside the Planning Area within Mount Diablo State Park and Lime Ridge Open Space; however, some disjunction populations of some rare species may occur within undeveloped portions of the City of Clayton (such as Peacock Creek, Mount Diablo Creek, Donner Creek, Mitchell Creek, other waterways, and natural parks) as well as within urbanized areas. Historical occurrences of species previously found in the vicinity of Clayton area shown in Table 4.4-1 and consists of approximately 97 sensitive/special-status species and four sensitive Natural Communities. The “sensitive” or “special” label denotes a species as a state or federally listed threatened or endangered species and/or a potential candidate for threatened or endangered listing. The United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), California Native Plant Society (CNPS) and California Natural Diversity Database (CNDDDB) recorded the following species in Table 4.4-1 as historically occurring within a 9-quad radius of the Planning Area (an area of approximately 440 to 550 square miles).^{ii, iii, iv, v}

A habitat evaluation for the potential of sensitive species to occur within the Planning Area and/or areas planned for proposed zoning/land use changes (Housing Inventory Sites or Sites) is provided in the last column of Table 4.4-1. Some of these species have low potential to occur or are not expected to occur due to the marginal suitable habitat available or lack of habitat within the Planning Area/Sites and are indicated with the heading “Not Expected.” However, some species, which are indicated with the heading “May be Present” have some potential to occur due to remnant natural habitats or the ability of the species to thrive in developed urban areas. A succinct justification for each determination is also provided in Table 4.4-1.

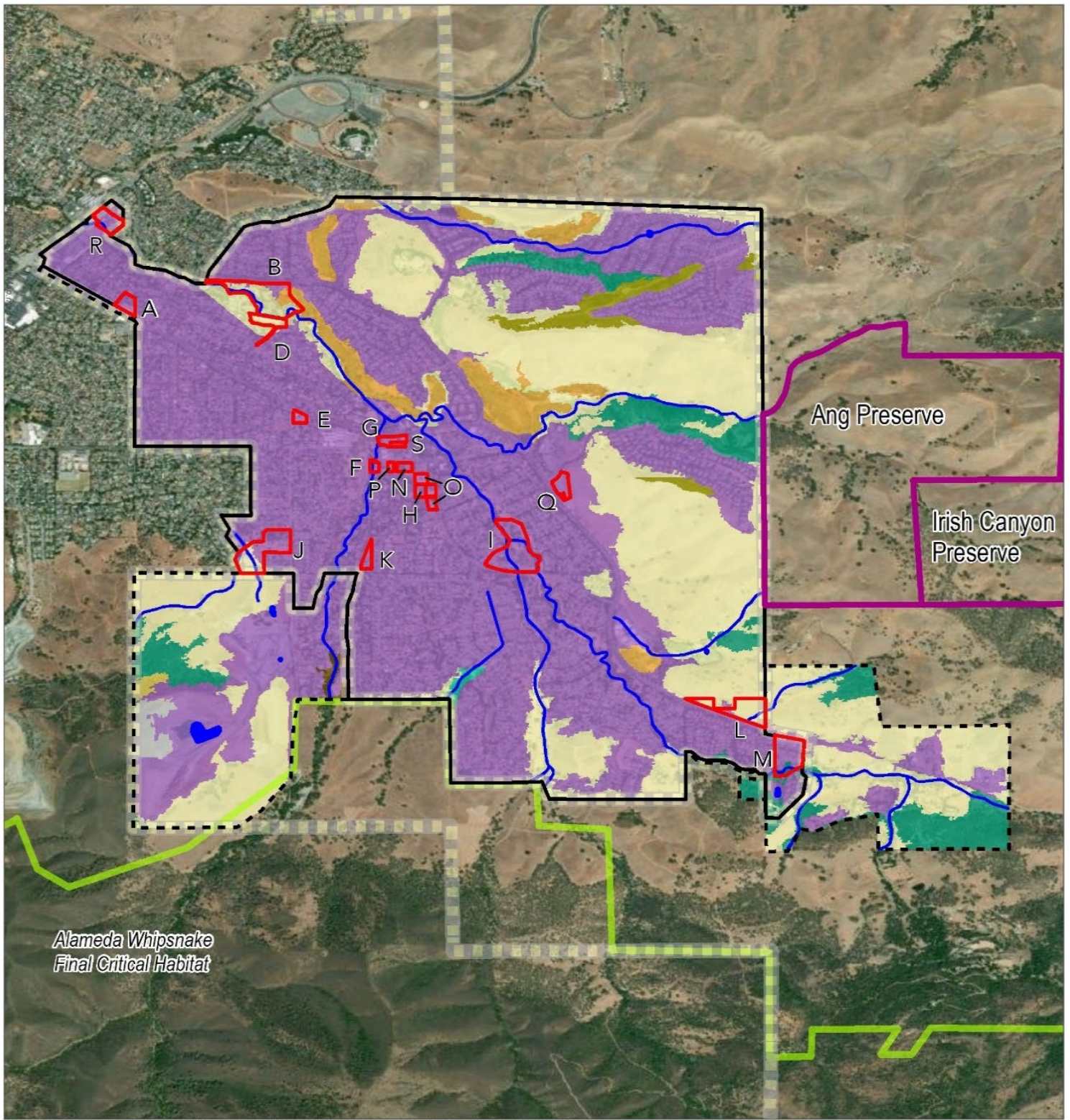
Sensitive Biological Resources Potentially Present on Project Sites

Special-Status Species. Based on a review of databases and a desktop habitat assessment, approximately 33 special status species were determined to “May be Present” within the Planning Area, with potential to occur on at least some of the Sites (see Table 4.4-1). Most of the Sites are located within or adjacent to streams, riparian woodlands, and/or other suitable habitats that could potentially support these sensitive species, including Sites B, D, F, G, I, J, L, M, Q and R. While field surveys are required to confirm for compliance with the ECCC HCP/NCCP, Sites located in urban and well-developed areas that are significantly less likely to support most of these species include Sites A, E, H, K, N, O, P, S.

Jurisdictional Wetlands. Multiple wetlands are mapped within the Planning Area by the USFWS National Wetlands Inventory (NWI).^{vi} Although a field delineation would be needed to confirm this, it is highly likely that wetlands under federal and state jurisdiction are present on some of the Sites, including Sites B, D, F, G, I, J, L, M, and R. The United States Army Corps of Engineers uses the 1987 *Corps of Engineers Wetlands Delineation Manual* and regional supplements to define wetlands under Section 404 of the federal Clean Water Act using three criteria: hydrophytic (water-loving) vegetation, hydric soils, and hydrology. An area that meets all three criteria is considered a wetland under federal and State jurisdiction.

Sensitive Natural Communities and Habitats

Regionally sensitive natural communities or habitat types are an important indicator of the existence of sensitive species. According to the CNDDB and as described above, natural communities and habitats occur near or within the Planning Area, and especially in areas within and adjacent to Mount Diablo State Park, Lime Ridge Open Space, natural parks, creeks, and vernal mesic areas; however, most of the site locations planned for updates in the HEU are primarily located in Urban/Developed areas or vegetation types that are not known to be Sensitive. A map of vegetation and landcover types known to occur within the Planning is provided in Exhibit 4.4-1, and Table 4.4-2 provides a summary.



Source: ESRI 2022, Conservation Lands Network 2019, City of Clayton 2022, USFWS 2022, ECCC NCCP/HCP 2006-2022, MIG, 2022

Legend

- Proposed Housing Element Sites
- Clayton Sphere of Influence
- Clayton City Boundary
- NWI Wetlands
- Alameda Whipsnake - Final Critical Habitat
- East Contra Costa County NCCP/HCP
- HCP Preserve System

General Vegetation Types:

- | | |
|---|--|
| Barren | Gray Pine |
| Blue Oak | Non-Native/Ornamental Grass |
| Chamise | Riparian Mixed Hardwood |
| Coast Live Oak | Urban/Developed (General) |
| Coyote Brush | Warm Grasslands |

**Figure 4.4-1. Biological Resources
Constraints Map
Clayton Housing Element**

This Page Intentionally Left Blank.

**Table 4.4-1
Federal- and State-Listed Species and Other Special Status Speciesⁱ**

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
Amphibians	<i>Ambystoma californiense</i> pop. 1	California tiger salamander - central California DPS	FT, ST, WL	Cismontane woodland, Meadow & seep, Riparian woodland, Valley & foothill grassland, Vernal pool, Wetland	May be Present. Riparian woodlands and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Rana boylei</i>	foothill yellow-legged frog	SE, SSC	Aquatic, Chaparral, Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian Forest, Riparian woodland, Sacramento/San Joaquin flowing waters	May be Present. Riparian woodlands and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Rana draytonii</i>	California red-legged frog	FT, SSC	Aquatic, Artificial flowing waters, Artificial standing waters, Freshwater marsh, Marsh & swamp, Riparian Forest, Riparian scrub, Riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland	May be Present. Riparian woodlands and similar habitats are known to occur within the Planning Area that could support this species.
Birds	<i>Agelaius tricolor</i>	tricolored blackbird	ST, SSC	Freshwater marsh, Marsh & swamp, Swamp, Wetland	May be Present. Wetlands and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Aquila chrysaetos</i>	golden eagle	FP, WL	Broadleaved upland forest, Cismontane woodland, Coastal prairie,	May be Present. Woodlands, grasslands, and similar habitats are known to occur within

ⁱ Relevant Species Status Codes:

FE = Federally listed as endangered; FT = Federally Threatened; FCE = Federal Candidate Endangered; WL = Watch List; FD = Federally Delisted; FC = Federal Candidate

ST = State Threatened; SE = State-listed as Endangered; SD = State Delisted; SCE = State Candidate Endangered; SSC = California Special Concern species by CDFW; FP = Fully Protected; WL = Watch List

1B.1 = Plants rare, threatened, or endangered in California and elsewhere, seriously threatened in California; 1B.2 = Plants rare, threatened, or endangered in California or elsewhere, fairly threatened in California; 2B = Plants rare, threatened, or endangered in California but more common elsewhere; 4.2 = Plants of limited distribution, fairly threatened in California.

S = Considered a Sensitive Natural Community by CDFW

Source: California Natural Diversity Database. June 2022

4.4 – Biological Resources

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
				Great Basin grassland, Great Basin scrub, Lower montane coniferous forest, Pinon & juniper woodlands, Upper montane coniferous forest, Valley & foothill grassland	the Planning Area that could support this species.
	<i>Asio flammeus</i>	short-eared owl	SSC	Great Basin grassland, Marsh & swamp, Meadow & seep, Valley & foothill grassland, Wetland	May be Present. Wetlands, grasslands, and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Athene cunicularia</i>	burrowing owl	SSC	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran Desert scrub, Valley & foothill grassland	May be Present. Disturbed areas, scrublands, grasslands, and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Buteo regalis</i>	ferruginous hawk	WL	Great Basin grassland, Great Basin scrub, Pinon & juniper woodlands, Valley & foothill grassland	May be Present. Scrublands, grasslands, and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Buteo swainsoni</i>	Swainson's hawk	ST	Great Basin grassland, Riparian Forest, Riparian woodland, Valley & foothill grassland	May be Present. Riparian woodlands, grasslands, and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Circus hudsonius</i>	northern harrier	SSC	Coastal scrub, Great Basin grassland, Marsh & swamp, Riparian scrub, Valley & foothill grassland, Wetland	May be Present. Scrublands, grasslands, and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Coturnicops noveboracensis</i>	yellow rail	SSC	Freshwater marsh, Meadow & seep	May be Present. Wetlands and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Elanus leucurus</i>	white-tailed kite	FP	Cismontane woodland, Marsh & swamp, Riparian woodland, Valley & foothill grassland, Wetland	May be Present. Wetlands, grasslands, and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Eremophila alpestris actia</i>	California horned lark	WL	Marine intertidal & splash zone communities, Meadow & seep	May be Present. Wetlands and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Falco mexicanus</i>	prairie falcon	WL	Great Basin grassland, Great Basin scrub, Mojavean desert scrub,	May be Present. Scrublands, grasslands, and similar habitats are known to occur within

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
				Sonoran Desert scrub, Valley & foothill grassland	the Planning Area that could support this species.
	<i>Falco peregrinus anatum</i>	American peregrine falcon	FD, SD, FP	Various; including developed areas	May be Present. Disturbed areas, scrublands, grasslands, and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Geothlypis trichas sinuosa</i>	saltmarsh common yellowthroat	SSC	Marsh & swamp, tidally influenced waters (e.g., bays)	Not Expected. This species is known to occur within tidal waters, and the Planning Area is out of range for this species.
	<i>Laterallus jamaicensis coturniculus</i>	California black rail	ST, FP	Brackish marsh, Freshwater marsh, Marsh & swamp, Salt marsh, Wetland	May be Present. Wetlands and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Melospiza melodia maxillaris</i>	Suisun song sparrow	SSC	Marsh & swamp, Wetland	May be Present. Wetlands and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Melospiza melodia</i> pop. 1	song sparrow ("Modesto" population)	SSC	Artificial flowing waters, Freshwater marsh, Riparian forest, Riparian scrub, Riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters	May be Present. Riparian woodlands and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Nannopterum auritum</i>	double-crested cormorant	WL	Riparian forest, Riparian scrub, Riparian woodland	Not Expected. This species primarily occupies larger waters in the Bay area, and no occurrences are known within smaller waters like those in the Planning Area.
	<i>Rallus obsoletus obsoletus</i>	California Ridgway's rail	FE, SE, FP	Brackish marsh, Marsh & swamp, Salt marsh, Wetland	Not Expected. This species primarily occupies larger waters in the Bay area, and no occurrences are known within smaller waters like those in the Planning Area.
	<i>Sternula antillarum browni</i>	California least tern	FE, SE, FP	Alkali playa, Wetland	Not Expected. This species primarily occupies larger waters in the Bay area, and no occurrences are known within smaller waters like those in the Planning Area.
Fish	<i>Archoplites interruptus</i>	Sacramento perch	SSC	Aquatic, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters	Not Expected. Waters within the Planning Area are seasonally or intermittently flooded, and do not likely contain sufficient water flows that could support this fish species.

4.4 – Biological Resources

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
	<i>Hypomesus transpacificus</i>	Delta smelt	FT, SE	Aquatic, Estuary	Not Expected. Waters within the Planning Area are seasonally or intermittently flooded, and do not likely contain sufficient water flows that could support this fish species.
	<i>Oncorhynchus mykiss irideus</i> pop. 11	steelhead - Central Valley DPS	FT	Aquatic, Sacramento/San Joaquin flowing waters	Not Expected. Waters within the Planning Area are seasonally or intermittently flooded, and do not likely contain sufficient water flows that could support this fish species.
	<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	SSC	Aquatic, Estuary, Freshwater marsh, Sacramento/San Joaquin flowing waters	Not Expected. Waters within the Planning Area are seasonally or intermittently flooded, and do not likely contain sufficient water flows that could support this fish species.
	<i>Spirinchus thaleichthys</i>	longfin smelt	FCE, ST	Aquatic, Estuary	Not Expected. Waters within the Planning Area are seasonally or intermittently flooded, and do not likely contain sufficient water flows that could support this fish species.
Invertebrates	<i>Apodemia mormo langei</i>	Lange's metalmark butterfly	FE	Interior dunes	Not Expected. Interior dune habitats are not known to occur within the Planning Area.
	<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE	Valley & foothill grassland, Vernal pool, Wetland	Not Expected. Vernal pools or similar habitats that could support this species are not likely present at any of the RHNA Sites.
	<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	Valley & foothill grassland, Vernal pool, Wetland	Not Expected. Vernal pools or similar habitats that could support this species are not likely present at any of the RHNA Sites.
	<i>Danaus plexippus</i>	Monarch Butterfly	FC	Various	May be Present. Disturbed areas, scrublands, grasslands, and similar habitats are known to occur within the Planning Area that could support this species.
	<i>Lepidurus packardii</i>	vernal pool tadpole shrimp	FE	Valley & foothill grassland, Vernal pool, Wetland	Not Expected. Vernal pools or similar habitats that could support this species are not likely present at any of the RHNA Sites.
Mammals	<i>Antrozous pallidus</i>	pallid bat	SSC	Chaparral, Coastal scrub, Desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Riparian woodland, Sonoran Desert	May be Present. Riparian woodlands and similar habitats are known to occur within the Planning Area that may support this species.

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
				scrub, Upper montane coniferous forest, Valley & foothill grassland	
	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	SSC	Broadleaved upland forest, Chaparral, Chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, Lower montane coniferous forest, Meadow & seep, Mojavean desert scrub, Riparian Forest, Riparian woodland, Sonoran Desert scrub, Sonoran thorn woodland, Upper montane coniferous forest, Valley & foothill grassland	May be Present. Riparian woodlands and similar habitats are known to occur within the Planning Area that may support this species.
	<i>Lasiurus blossevillei</i>	western red bat	SSC	Cismontane woodland, Lower montane coniferous forest, Riparian Forest, Riparian woodland	May be Present. Riparian woodlands and similar habitats are known to occur within the Planning Area that may support this species.
	<i>Neotoma fuscipes annectens</i>	San Francisco dusky-footed woodrat	SSC	Chaparral, Redwood	May be Present. Chaparral and similar habitats are known to occur within the Planning Area that may support this species.
	<i>Nyctinomops macrotis</i>	big free-tailed bat	SSC	Valley & foothill grassland, rocky outcrops, cliffs	May be Present. Grasslands and similar habitats are known to occur within the Planning Area that may support this species.
	<i>Reithrodontomys raviventris</i>	salt-marsh harvest mouse	FE, SE, FP	Marsh & swamp, Wetland	Not Expected. This species is known only from the San Francisco Bay and its tributaries.
	<i>Taxidea taxus</i>	American badger	SSC	Alkali marsh, Alkali playa, Alpine, Alpine dwarf scrub, Bog & fen, Brackish marsh, Broadleaved upland forest, Chaparral, Chenopod scrub, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Desert dunes, Desert wash, Freshwater marsh, Great Basin grassland, Great Basin scrub, Interior dunes, lone formation, Joshua tree woodland, Limestone, Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Mojavean desert	May be Present. Multiple habitat types that could support this species are known to occur within the Planning Area.

4.4 – Biological Resources

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
				scrub, Montane dwarf scrub, North coast coniferous forest, Old-growth, Pavement plain, Redwood, Riparian forest, Riparian scrub, Riparian woodland, Salt marsh, Sonoran desert scrub, Sonoran thorn woodland, Ultramafic, Upper montane coniferous forest, Upper Sonoran scrub, Valley & foothill grassland	
	<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE, ST	Chenopod scrub, Valley & foothill grassland	May be Present. Grasslands and similar habitats are known to occur within the Planning Area that may support this species.
Campanula exigua Reptiles	<i>Anniella pulchra</i>	Northern California legless lizard	SSC	Chaparral, Coastal dunes, Coastal scrub	May be Present. Chaparral, scrublands, and similar habitats are known to occur within the Planning Area that may support this species.
	<i>Arizona elegans occidentalis</i>	California glossy snake	SSC	Chaparral, Desert scrub, Great Basin scrub, Desert wash, Pinon & juniper woodlands, Valley & foothill grassland	May be Present. Chaparral, scrublands, grasslands and similar habitats are known to occur within the Planning Area that may support this species.
	<i>Emys marmorata</i>	western pond turtle	SSC	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland	May be Present. Wetlands and other waters are known to occur within the Planning Area that may support this species.
	<i>Masticophis lateralis euryxanthus</i>	Alameda whipsnake	FT, ST	Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland	May be Present. Chaparral, woodlands, scrublands, grasslands, and similar habitats are known to occur within the Planning Area that may support this species.
	<i>Phrynosoma blainvillii</i>	coast horned lizard	SSC	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub, Desert wash, Pinon & juniper woodlands, Riparian scrub, Riparian woodland, Valley & foothill grassland	May be Present. Chaparral, woodlands, scrublands, grasslands and similar habitats are known to occur within the Planning Area that may support this species.

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
	<i>Thamnophis gigas</i>	giant gartersnake	FT, ST	Marsh & swamp, Riparian scrub, Wetland	May be Present. Riparian woodlands, wetlands and similar habitats are known to occur within the Planning Area that may support this species.
Plants (Dicots)	<i>Amsinckia grandiflora</i>	large-flowered fiddleneck	FE, SE, CRPR 1B.1	Cismontane woodland, Valley & foothill grassland	Not Expected. The Sites are not at elevations or within geographic range that is known to support this species; this species occurs largely east of the Planning Area.
	<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	California Rare Plant Rank (CRPR) 1B.2	Cismontane woodland, Coastal bluff scrub, Valley & foothill grassland,	Not Expected. The Planning Area is well out of the known geographic range for this species; this species occurs largely west of the Planning area within more coastally influenced areas.
	<i>Androsace elongata</i> ssp. <i>acuta</i>	California androsace	CRPR 4.2	Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland	May be Present. Chaparral, woodlands, scrublands, grasslands, and similar habitats are known to occur within the Planning Area that may support this species.
	<i>Arabis blepharophylla</i>	coast rockcress	CRPR 4.3	Broadleaved upland forest, Coastal bluff scrub, Coastal prairie, Coastal scrub; rocky areas	Not Expected. The Planning Area is well out of the known geographic range for this species, with the nearest location being found at the summit of Mt. Diablo.
	<i>Arctostaphylos auriculata</i>	Mt. Diablo manzanita	CRPR 1B.3	Chaparral, Cismontane woodland	Not Expected. The Sites are located largely within rural to urban sites that do not possess habitats that could support this species.
	<i>Arctostaphylos manzanita</i> ssp. <i>laevigata</i>	Contra Costa manzanita	CRPR 1B.2	Chaparral	Not Expected. The Sites are located largely within rural to urban sites that do not possess habitats that could support this species.
	<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch	CRPR 1B.2	Alkali playa, Valley & foothill grassland, Vernal pool, Wetland	Not Expected. The Sites are not known to possess alkaline soils that could support this species.
	<i>Atriplex coronata</i> var. <i>coronata</i>	crownscale	CRPR 4.2	Chenopod scrub, Valley and foothill grassland, Vernal pools; alkaline	Not Expected. The Sites are not known to possess alkaline soils that could support this species.
	<i>Atriplex depressa</i>	brittlescale	CRPR 1B.2	Alkali playa, Chenopod scrub, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland; alkaline	Not Expected. The Sites are not known to possess alkaline soils that could support this species.

4.4 – Biological Resources

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
	<i>Blepharizonia plumosa</i>	big tarplant	CRPR 1B.1	Valley & foothill grassland; clay	Not Expected. The Sites are not known to possess clay soils that could support this species.
	<i>Calandrinia breweri</i>	Brewer's calandrinia	CRPR 4.2	Chaparral, Coastal scrub; post-burn	Not Expected. The Sites are located largely within rural to urban sites that do not possess habitats that could support this species; this species is typically found in post-burn to disturbed hillside habitats.
	<i>Campanula exigua</i>	chaparral harebell	CRPR 1B.2	Chaparral, Ultramafic	Not Expected. The Sites are not known to possess ultramafic soils that could support this species.
	<i>Castilleja ambigua</i> var. <i>ambigua</i>	johnny-nip	CRPR 4.2	Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Valley and foothill grassland, Vernal pools	Not Expected. The Planning Area is well out of the known geographic range for this species; this species occurs largely west of the Planning area within more coastally influenced areas.
	<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	CRPR 1B.1	Valley & foothill grassland; alkaline	Not Expected. The Sites are not known to possess alkaline soils that could support this species.
	<i>Chloropyron molle</i> ssp. <i>molle</i>	soft salty bird's-beak	FE, SR, CRPR 1B.2	Marsh & swamp, Salt marsh, Wetland	Not Expected. The Sites are located largely within rural to urban sites that do not possess habitats that could support this species.
	<i>Cicuta maculata</i> var. <i>bolanderi</i>	Bolander's water-hemlock	CRPR 2B.1	Marsh & swamp, Salt marsh, Wetland	Not Expected. The Sites are located largely within rural to urban sites that do not possess habitats that could support this species.
	<i>Collomia diversifolia</i>	serpentine collomia	CRPR 4.3	Chaparral, Cismontane woodland; serpentine or rocky/gravelly substrates	Not Expected. The Sites are not known to possess serpentine or rocky/gravelly soils that could support this species.
	<i>Convolvulus simulans</i>	small-flowered morning-glory	CRPR 4.2	Chaparral, Coastal scrub, Valley and foothill grassland, clay, seeps, or serpentinite	Not Expected. The Sites are not known to possess clay, seeps, or serpentinite substrates that could support this species.
	<i>Cordylanthus nidularius</i>	Mt. Diablo bird's-beak	SR, CRPR 1B.1	Chaparral, Ultramafic	Not Expected. The Sites are well outside the known range of this species; this species is only known from the Mt. Diablo ranges.
	<i>Cryptantha hooveri</i>	Hoover's cryptantha	CRPR 1A	Interior dunes, Valley & foothill grassland (sandy)	Not Expected. The Sites are not known to possess dune or sufficiently sandy soils that could support this species.

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
	<i>Delphinium californicum</i> ssp. <i>interius</i>	Hospital Canyon larkspur	CRPR 1B.2	Chaparral, Cismontane woodland, Coastal scrub, Meadow & seep	Not Expected. The Sites are not located within the suitable elevation range for this species, the nearest localities are within the Mt. Diablo ranges.
	<i>Downingia pusilla</i>	dwarf downingia	CRPR 2B.2	Valley & foothill grassland, Vernal pool, Wetland	Not Expected. Vernal pools or similar habitats that could support this species are not likely present at any of the Sites.
	<i>Eriastrum ertterae</i>	Lime Ridge eriastrum	FCE, SCE, CRPR 1B.1	Chaparral; alkaline or sandy	Not Expected. Vernal pools or similar habitats that could support this species are not likely present at any of the Sites. This species is only known from the Lime Ridge area west of the Planning area.
	<i>Eriogonum nudum</i> var. <i>psychicola</i>	Antioch Dunes buckwheat	CRPR 1B.1	Interior dunes	Not Expected. The Sites are not known to possess dune soils that could support this species.
	<i>Eriogonum truncatum</i>	Mt. Diablo buckwheat	CRPR 1B.1	Chaparral, Coastal scrub, Valley & foothill grassland; sandy	Not Expected. The Sites are not known to possess sufficiently sandy soils that could support this species.
	<i>Eriogonum umbellatum</i> var. <i>bahiiforme</i>	bay buckwheat	CRPR 4.2	Cismontane woodland, Lower montane coniferous forest; rocky, serpentine	Not Expected. The Sites are not known to possess serpentine or rocky soils that could support this species.
	<i>Eriophyllum jepsonii</i>	Jepson's woolly sunflower	CRPR 4.3	Chaparral, Cismontane woodland, Coastal scrub; generally serpentine	Not Expected. The Sites are not known to possess serpentine soils that could support this species.
	<i>Eryngium jepsonii</i>	Jepson's coyote-thistle	CRPR 1B.2	Valley & foothill grassland, Vernal pool, clay	Not Expected. Vernal pools or similar habitats that could support this species are not likely present at any of the Sites.
	<i>Erysimum capitatum</i> var. <i>angustatum</i>	Contra Costa wallflower	FE, SE, CRPR 1B.1	Interior dunes	Not Expected. The Sites are not known to possess dune soils that could support this species.
	<i>Eschscholzia rhombipetala</i>	diamond-petaled California poppy	CRPR 1B.1	Valley & foothill grassland; alkaline, clay	Not Expected. The Sites are not known to possess sufficiently alkaline or clay soils that could support this species; the Planning Area is well outside of the known range of this species.

4.4 – Biological Resources

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
	<i>Extriplex joaquinana</i>	San Joaquin spearscale	CRPR 1B.2	Alkali playa, Chenopod scrub, Meadow & seep, Valley & foothill grassland' alkaline	Not Expected. The Sites are not known to possess sufficiently alkaline soils that could support this species.
	<i>Galium andrewsii</i> ssp. <i>gatense</i>	phlox-leaf serpentine bedstraw	CRPR 4.2	Chaparral, Cismontane woodland, Lower montane coniferous forest; rocky, serpentine	Not Expected. The Sites are not known to possess serpentine or rocky soils that could support this species.
	<i>Helianthella castanea</i>	Diablo helianthella	CRPR 1B.2	Broadleaved upland forest, Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland; carbonate, openings, rocky, volcanic	Not Expected. The Sites are not known to possess ultramafic soils that could support this species.
	<i>Hesperervax caulescens</i>	hogwallow starfish	CRPR 4.2	Valley and foothill grassland, Vernal pools; alkaline	Not Expected. Vernal pools, alkaline, or similar habitats that could support this species are not likely present at any of the Sites.
	<i>Hesperolinon breweri</i>	Brewer's western flax	CRPR 1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland; serpentine	Not Expected. The Sites are not known to possess serpentine soils that could support this species.
	<i>Hoita strobilina</i>	Loma Prieta hoita	CRPR 1B.1	Chaparral, Cismontane woodland, Riparian woodland, Ultramafic; serpentine	Not Expected. The Sites are not known to possess serpentine soils that could support this species.
	<i>Isocoma arguta</i>	Carquinez goldenbush	CRPR 1B.1	Valley & foothill grassland	Not Expected. The Planning Area is well out of the known geographic range for this species; this species occurs largely west and north of the Planning area within more coastally influenced areas.
	<i>Juglans californica</i>	Southern California black walnut	CRPR 4.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland	May be Present. Riparian woodlands and similar habitats are known to occur within the Planning Area/Sites that may support this species.
	<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE, CRPR 1B.1	Alkali playa, Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland	Not Expected. Vernal pools, alkaline soils, or similar habitats that could support this species are not likely present at any of the Sites.
	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	CRPR 1B.2	Freshwater marsh, Marsh & swamp, Wetland	Not Expected. This Planning Area/Sites are out of the typical range of this species; this species typically occurs in marshes adjacent to bays or tidally influenced waters.
	<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	SR, CRPR 1B.1	Freshwater marsh, Marsh & swamp, Riparian scrub, Wetland	Not Expected. This Planning Area/Sites are out of the typical range of this species; this

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
					species typically occurs in marshes adjacent to bays or tidally influenced inland waters.
	<i>Limosella australis</i>	Delta mudwort	CRPR 2B.1	Brackish marsh, Freshwater marsh, Marsh & swamp, Riparian scrub, Wetland	Not Expected. This Planning Area/Sites are out of the typical range of this species; this species typically occurs in marshes adjacent to bays or tidally influenced inland waters.
	<i>Lupinus albifrons</i> var. <i>abramsii</i>	Abrams' lupine	CRPR 3.2	Broad-leaved upland forest, Chaparral, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; serpentine	Not Expected. The Sites are not known to possess serpentine or similar soils that could support this species.
	<i>Madia radiata</i>	showy golden madia	CRPR 1B.1	Cismontane woodland, Valley & foothill grassland	Not Expected. The Planning Area is well out of the known geographic range for this species; this species occurs largely east of the Planning Area within hillsides of the San Joaquin Valley.
	<i>Malacothamnus hallii</i>	Hall's bush-mallow	CRPR 1B.2	Chaparral, Coastal scrub, Ultramafic	Not Expected. The Sites are not known to possess ultramafic soils that could support this species.
	<i>Microseris sylvatica</i>	sylvan microseris	CRPR 4.2	Chaparral, Cismontane woodland, Great Basin scrub, Pinyon and juniper woodland, Valley and foothill grassland; serpentine	Not Expected. The Sites are not known to possess serpentine or similar soils that could support this species; the nearest known location of this species is within the Mt. Diablo ranges.
	<i>Monolopia gracilens</i>	woodland woollythreads	CRPR 1B.2	Broadleaved upland forest, Chaparral, Cismontane woodland, North coast coniferous forest, Ultramafic, Valley & foothill grassland; serpentine	Not Expected. The Sites are not known to possess serpentine or similar soils that could support this species.
	<i>Navarretia gowenii</i>	Lime Ridge navarretia	CRPR 1B.1	Chaparral	Not Expected. Habitats that could support this species are not likely present at any of the Sites. This species is only known from clay soils the Lime Ridge area west of the Planning area, and Quinto Canyon (Stanislaus Co.)
	<i>Navarretia heterandra</i>	Tehama navarretia	CRPR 4.3	Valley and foothill grassland, Vernal pools	Not Expected. Vernal pools or similar habitats that could support this species are not likely present at any of the Sites.

4.4 – Biological Resources

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
	<i>Navarretia nigelliformis</i> ssp. <i>radicans</i>	shining navarretia	CRPR 1B.2	Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland; clay	Not Expected. The Sites are not known to possess clay soils or vernal pools that could support this species.
	<i>Oenothera deltoides</i> ssp. <i>howellii</i>	Antioch Dunes evening-primrose	FE, SE, CRPR 1B.1	Interior dunes	Not Expected. The Sites are not known to possess dune or sufficiently sandy soils that could support this species.
	<i>Phacelia phacelioides</i>	Mt. Diablo phacelia	CRPR 1B.2	Chaparral, Cismontane woodland, Ultramafic; rocky	Not Expected. The Sites are not known to possess ultramafic/rocky soils that could support this species.
	<i>Plagiobothrys hystriculus</i>	bearded popcornflower	CRPR 1B.1	Valley & foothill grassland, Vernal pool, Wetland	Not Expected. Vernal pools or similar habitats that could support this species are not likely present at any of the Sites.
	<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup	CRPR 4.2	Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland, Vernal pools	Not Expected. Vernal pools or similar habitats that could support this species are not likely present at any of the Sites.
	<i>Sanicula saxatilis</i>	rock sanicle	SR, CRPR 1B.2	Broadleaved upland forest, Chaparral, Valley & foothill grassland; rocky, scree, talus	Not Expected. The Sites are not known to possess rocky, scree, talus substrates that could support this species.
	<i>Senecio aphanactis</i>	chaparral ragwort	CRPR 2B.2	Chaparral, Cismontane woodland, Coastal scrub; alkaline	Not Expected. The Sites are not known to possess alkaline or similar substrates that could support this species.
	<i>Senecio hydrophiloides</i>	sweet marsh ragwort	CRPR 4.2	Lower montane coniferous forest, Meadows and seeps	Not Expected. The Sites are not known to possess marsh-like substrates that could support this species.
	<i>Sidalcea keckii</i>	Keck's checkerbloom	FE, CRPR 1B.1	Cismontane woodland, Ultramafic, Valley & foothill grassland; clay, serpentine	Not Expected. The Sites are not known to possess clay or serpentine soils or vernal pools that could support this species.
	<i>Spergularia macrotheca</i> var. <i>longistyla</i>	long-styled sand-spurrey	CRPR 1B.2	Marsh & swamp, Meadow & seep; alkaline	Not Expected. The Sites are not known to possess alkaline or similar substrates that could support this species.
	<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewelflower	CRPR 1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland; serpentine	Not Expected. The Sites are not known to possess serpentine soils that could support this species.
	<i>Streptanthus hispidus</i>	Mt. Diablo jewelflower	CRPR 1B.3	Chaparral, Valley & foothill grassland; rocky	Not Expected. The Sites are not known to possess rocky or similar substrates that could support this species; this species is only known from the Mt. Diablo ranges.

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
	<i>Symphotrichum lentum</i>	Suisun Marsh aster	CRPR 1B.2	Brackish marsh, Freshwater marsh, Marsh & swamp, Wetland;	Not Expected. This Planning Area/Sites are out of the typical range of this species; this species typically occurs in marshes adjacent to large bodies of water or tidally influenced waters.
	<i>Trifolium hydrophilum</i>	saline clover	CRPR 1B.2	Marsh & swamp, Valley & foothill grassland, Vernal pool, Wetland	Not Expected. The Sites are not known to contain vernal pools or waters sufficiently mesic enough to support this species.
	<i>Tropidocarpum capparideum</i>	caper-fruited tropidocarpum	CRPR 1B.1	Valley & foothill grassland (alkaline hills)	Not Expected. The Sites are not known to possess alkaline or similar substrates that could support this species.
	<i>Viburnum ellipticum</i>	oval-leaved viburnum	CRPR 2B.3	Cismontane woodland, Valley & foothill grassland	Not Expected. The Sites are located at lower elevations than this species is expected to occur.
Plants (Monocots)	<i>Calochortus pulchellus</i>	Mt. Diablo fairy-lantern	CRPR 1B.2	Chaparral, Cismontane woodland, Riparian woodland, Valley & foothill grassland	Not Expected. The Sites are not known to possess ultramafic soils that could support this species.
	<i>Calochortus umbellatus</i>	Oakland star-tulip	CRPR 4.2	Broad-leaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; serpentine	Not Expected. The Sites are not known to possess serpentine soils that could support this species.
	<i>Eleocharis parvula</i>	small spikerush	CRPR 4.3	Marshes and swamps	Not Expected. The Sites are out of the known range of this species; the nearest locations of this species are within tidally-flooded marshes and swamps within the coastal bays.
	<i>Fritillaria agrestis</i>	stinkbells	CRPR 4.2	Chaparral, Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland; clay, serpentinite (sometimes)	Not Expected. The Sites are not known to possess serpentine or clay soils that could support this species.
	<i>Fritillaria liliacea</i>	fragrant fritillary	CRPR 1B.2	Cismontane woodland, Coastal prairie, Coastal scrub, Ultramafic, Valley & foothill grassland; serpentinite	Not Expected. The Sites are not known to possess serpentine soils that could support this species.
	<i>Lilium rubescens</i>	redwood lily	CRPR 4.2	Broad-leaved upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest; roadsides/serpentine	Not Expected. The Sites are not known to possess serpentine soils that could support this species.

4.4 – Biological Resources

Type	Scientific Name	Common Name	Federal, State, or Other Status	General Habitat	Probability to occur within the Planning Area and/or Housing Inventory Sites
	<i>Piperia michaelii</i>	Michael's rein orchid	CRPR 4.2	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal scrub, Lower montane coniferous forest	Not Expected. This species typically prefers vegetation associations that are not known within the Planning Area; the nearest occurrence for this species is within Mt. Diablo.
	<i>Puccinellia simplex</i>	California alkali grass	CRPR 1B.2	Chenopod scrub, Meadow & seep, Valley & foothill grassland, Vernal pool	Not Expected. Vernal pools, alkaline soils, or similar habitats that could support this species are not likely present at any of the Sites.
	<i>Stuckenia filiformis</i> ssp. <i>alpina</i>	northern slender pondweed	CRPR 2B.2	Marsh & swamp, Wetland	Not Expected. This species prefers larger waterways than those that are known to occur within the Planning Area. The nearest location of this species is within the Mt. Diablo ranges.
Natural Communities	Stabilized Interior Dunes	Stabilized Interior Dunes	S	--	Not Expected. The Sites have not been reported to have interior dune soils, and therefore, this type of habitat is not expected.
	Serpentine Bunchgrass	Serpentine Bunchgrass	S	--	Not Expected. The Sites have not been reported to have serpentine soils, and therefore this type of habitat is not expected.
	Valley Needlegrass Grassland	Valley Needlegrass Grassland	S	--	Not Expected. Perennial grasslands and similar habitats are known to occur within the Planning Area, but is not known at the Sites.
	Coastal Brackish Marsh	Coastal Brackish Marsh	S	--	Not Expected. The Planning area is not adjacent to the coast and, therefore, this type of habitat is not expected.
<p>Relevant Species Status Codes: FE = Federally listed as endangered; FT = Federally Threatened; FCE = Federal Candidate Endangered; WL = Watch List; FD = Federally Delisted; FC = Federal Candidate ST = State Threatened; SE = State-listed as Endangered; SCE = State Candidate Endangered; SSC = California Special Concern species by CDFW; FP = Fully Protected; WL = Watch List; SD = State Delisted 1B.1 = Plants rare, threatened, or endangered in California and elsewhere, seriously threatened in California; 1B.2 = Plants rare, threatened, or endangered in California or elsewhere, fairly threatened in California; 2B = Plants rare, threatened, or endangered in California but more common elsewhere; 4.2 = Plants of limited distribution, fairly threatened in California. S = Considered a Sensitive Natural Community by CDFW Source: California Natural Diversity Database. June 2022</p>					

Table 4.4-2
Vegetation Communities and Landcover (Conservation Land Network)^{vii}

Vegetation or Landcover Type (CLN 2.0, NWI 2022)	Description (CLN 2.0, NWI 2022)
Barren	This landcover type typically is devoid of vegetation, and typically found in urban areas.
Blue Oak	This vegetation type is dominated by blue oak (<i>Quercus douglassi</i>) with a grassland understory, generally with sparse cover by shrubs and herbs.
Chamise	This vegetation type is dominated by chamise (<i>Adenostoma fasciculatum</i> var. <i>fasciculatum</i>), typical of chaparral type habitats.
Coast Live Oak	This vegetation type is dominated by Coast Live Oak (<i>Quercus agrifolia</i>) and secondarily by other oaks and hardwoods
Coyote Brush	This vegetation type is dominated by Coyote Brush (<i>Baccharis pilularis</i>), which is often a core component of riparian and coastal sage scrub type habitats
Gray Pine	This vegetation type is dominated by Gray/Foothill Pine (<i>Pinus sabiniana</i>) and may contain some blue oak with an understory of shrubs and grasses.
Non-Native / Ornamental Grass	This landcover type consists of areas of planted and grasses, such as those within golf courses or parks.
Riparian Mixed Hardwood	This vegetation type may variously be dominated by willow (<i>Salix</i> sp.), cottonwood, white alder, and/or red alder.
Urban/Developed (General)	This landcover type consists of areas that have been highly disturbed by human activity, and nearly devoid of natural habitat value due to the presence of built structures, roads, or other development.
Warm Grasslands	This vegetation type is dominated by both annuals, primarily grasses, and varying amounts of native perennials.
Riparian/Wetland	These areas are mapped by the USFWS National Wetlands Inventory (NWI) and consists of habitats that are saturated for all or a portion of the year.

This Page Intentionally Left Blank.

4.4.2 Regulatory Framework

Federal

Endangered Species Act (FESA) (1973)

FESA, as amended, provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under FESA. FESA has the following four major components: (1) provisions for listing species; (2) requirements for consultation with the USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA NMFS); (3) prohibitions against "take" (defined as harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species; and (4) provisions for permits that allow incidental "take." FESA also discusses recovery plans and the designation of critical habitat for listed species. Section 7 requires federal agencies, in consultation with, and with the assistance of the USFWS or NOAA NMFS, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. Both the USFWS and NOAA NMFS share the responsibility for administration of FESA.

Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 *et seq.*), Title 50 Code of Federal Regulations (CFR) Part 10

The MBTA prohibits taking, killing, possessing, transporting, and importing of migratory birds, parts of migratory birds, and their eggs and nests, except when specifically authorized by the Department of the Interior.^{viii} As used in the act, the term "take" is defined as, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." With a few exceptions, most birds are considered migratory under the MBTA. Disturbances that cause nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend would be in violation of the MBTA.

The Clean Water Act Sections 404 and 401

The United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under section 404 of the Clean Water Act (CWA) (33 U.S. Code [USC] 1344). Waters of the United States are defined in Title 33 Code of Federal Regulations (CFR) Part 328.3(a) and include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The lateral limits of jurisdiction in those waters may be divided into three categories – territorial seas, tidal waters, and non-tidal waters – and is determined depending on which type of waters is present (Title 33 CFR Part 328.4(a), (b), (c)). Activities in waters of the United States regulated under section 404 include fill for development, water resource projects (e.g., dams and levees), infrastructure developments (e.g., highways, rail lines, and airports) and mining projects. Section 404 of the CWA requires a federal permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from section 404 regulation (e.g., certain farming and forestry activities).

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a water quality certification from the state in which the discharge originates. The discharge is required to comply with the applicable water quality standards. A certification

obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The EPA has delegated responsibility for the protection of water quality in California to State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB).

The National Pollutant Discharge Elimination System (NPDES)

This program requires permitting for activities that discharge pollutants into waters of the United States. This includes discharges from municipal, industrial, and construction sources. These are considered point-sources from a regulatory standpoint. Generally, these permits are issued and monitored under the oversight of the SWRCB and administered by each RWQCB. Construction activities that disturb 1 acre or more (whether a single project or part of a larger development) are required to obtain coverage under the state's General Permit for Dischargers of Storm Water Associated with Construction Activity. All dischargers are required to obtain coverage under the Construction General Permit. The activities covered under the Construction General Permit include clearing, grading, and other disturbances. The permit requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of Best Management Practices (BMPs) with a monitoring program. Development projects under the proposed HEU will require coverage under the Construction General Permit.

State

California Endangered Species Act (CESA)(1984)

CESA expands on the original National Plant Protection Act of 1977 (NPPA) and enhanced legal protection for plants, but the NPPA remains part of the California Fish and Game Code (CFGC). To align with FESA, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into CESA as threatened species but did not do so for rare plants. Thus, these laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. The CDFW implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the CNDDDB, a computerized inventory of information on the general location and status of California's rarest plants, animals, and natural communities. During the CEQA review process, the CDFW is given the opportunity to comment on the potential of the proposed Project to affect listed plants and animals.

Fully Protected Species and Species of Special Concern

The classification of "fully protected" was the CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The CFGC sections (fish at Section 5515, amphibian and reptiles at Section 5050, birds at Section 3511, and mammals at Section 4700) dealing with "fully protected" species states that these species "...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," although take may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

Species of special concern (SSC) are broadly defined as animals not listed under FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by

CDFW, land managers, consulting biologists, and others. It is intended to focus attention on these species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, as well as focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under CEQA during project review.

California Fish and Game Code Sections 3503 and 3513

According to Section 3503 of the CFGC, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrow [*Passer domesticus*] and European Starling [*Sturnus vulgaris*]). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered a “take” by CDFW.

California Fish and Game Code Sections 1600-1603

Under Section 1602 of CFGC, CDFW has authority over any proposed activity that may substantially modify a river, stream, or lake. CDFW requires notification for any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. The CDFW typically considers a river, stream, or lake to include its riparian vegetation, but it may also extend to its floodplain. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life.” This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as “on, or pertaining to, the banks of a stream;” therefore, riparian vegetation is defined as, “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself.”

If the CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement (LSAA) will be prepared, which includes reasonable conditions necessary to protect those resources. The applicant may then proceed with the activity in accordance with the final LSAA. Section 1602 does not extend to isolated wetlands and waters, such as small ponds not located on drainages.

Native Plant Protection Act (1977) (CFGC Sections 1900 through 1913)

The NPPA enacted the CDFW to carry out the Legislature’s intent to “preserve, protect and enhance rare and endangered plants in this State.” The NPPA is administered by the CDFW, which has the authority to designate native plants as endangered or rare and to protect them from “take.”

Sensitive Plants – California Native Plant Society

The California Native Plant Society (CNPS), a non-profit plant conservation organization, publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California. The Inventory assigns plants to the following categories:

- 1A Presumed extinct in California;
- 1B Rare, threatened, or endangered in California and elsewhere;
- 2 Rare, threatened, or endangered in California but more common elsewhere;
- 3 Plants for which more information is needed – A review list; and
- 4 Plants of limited distribution – A watch list.

Additional endangerment codes are assigned to each taxon as follows:

- .1 Seriously endangered in California (over 80% of occurrences threatened/high degree of immediacy of threat).
- .2 Fairly endangered in California (20-80% occurrences threatened).
- .3 Not very endangered in California (<20% of occurrences threatened or no current threats known).

Plants on Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that qualify for listing by CDFW and/or other state agencies (e.g., California Department of Forestry and Fire Protection). As part of the CEQA process, such species should be fully considered, as they meet the definition of threatened or endangered under the NPPA and Sections 2062 and 2067 of the CFGC. California Rare Plant Rank (CRPR) 3 and 4 species are considered to be plants about which more information is needed or are uncommon enough that their status should be regularly monitored. Such plants may be eligible or may become eligible for state listing, and CNPS and CDFW recommend that these species be evaluated for consideration during the preparation of CEQA documents.

Sensitive Natural Communities

Sensitive natural communities are habitats that are either unique in constituent components, of relatively limited distribution in the region, or of particularly high wildlife value. These communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies or regulations, or by the CDFW or the USFWS. The CNDDDB identifies a number of natural communities as rare, which are given the highest inventory priority. Impacts to sensitive natural communities and habitats must be considered and evaluated under the CEQA (CCR: Title 14, Div. 6, Chap. 3, Appendix G)

Natural Community Conservation Planning Act

The Natural Community Conservation Planning (NCCP) program of the CDFW takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP program, established pursuant to the 1991 NCCP Act (Fish and Game Code Section 2800 *et seq.*) is broader in its orientation and objectives than CESA or FESA. While CESA and FESA are designed to identify and protect species that have already declined in significant numbers, the NCCP program seeks to prevent species listing by focusing on the long-term stability of wildlife and plant communities.

Section 401 of the Clean Water Act

RWQCB regulates activities in “waters of the state,” including wetlands, through section 401 of the CWA. “Waters of the state” are defined by the Porter-Cologne Water Quality Control Act (see

below) as “any surface water or groundwater, including saline waters, within the boundaries of the state.” While the USACE administers permitting programs that authorize impacts to “waters of the US,” any USACE permit authorized for a project would be invalid unless the RWQCB has issued a project-specific water quality certification or waiver of water quality. A water quality certification requires a finding by the RWQCB that the activities permitted by the USACE will not violate water quality standards individually or cumulatively over the term of the issued USACE permit.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Act (Porter-Cologne Act) (California Water Code Section 13260) requires “any person discharging waste, or proposing to discharge waste, within any region that could affect the “waters of the state” to file a report of discharge” with the RWQCB through an application for waste discharge. The RWQCB protects all waters in its regulatory scope but has special responsibility for isolated wetlands and headwaters. These water bodies have high resource value, are vulnerable to filling, and may not be regulated by other programs (e.g., Section 404 of the CWA).

Local

East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP)

The East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCC HCP/NCCP or plan) is structured to provide effective policy to protect natural resources in eastern Contra Costa County all while optimizing and improving the environmental permitting process for endangered species impacts from development. The Plan gives Contra Costa County (County), the Contra Costa County Flood Control and Water Conservation District (County Flood Control District), the East Bay Regional Park District (EBRPD), the cities of Brentwood, Clayton, Oakley, and Pittsburg, and the Implementing Entity (East Contra Costa County Habitat Conservancy) the authority to implement the Plan (collectively, the Permittees) and manage endangered species permitting for activities and projects they perform or approve in the region. Comprehensive species, wetlands, and ecosystem conservation are included in the plan.

The ECCC HCP/NCCP requires that all applicants submit a standard application for coverage to the appropriate permittee (e.g., the City of Clayton and others). The ECCC HCP/NCCP requires that an applicant document how the avoidance and minimization measures included in Chapter 6 of the ECCC HCP/NCCP are incorporated into proposed development projects. The plan requires that planning survey reports are developed and implemented to avoid and minimize impacts to sensitive resources (i.e., landcover types, covered and no-take plants, suitable habitats for covered species, uncommon vegetation/landscape features, and jurisdictional waters) including identifying, mapping, and quantifying the impact of the covered activities on these sensitive resources. The plan also requires that applicants detail the methods proposed for pre-construction species surveys (see plan Section 6.3.2 for species list) and describe: 1) the avoidance and minimization measures to be implemented in development projects (including project-specific refinements to measures described in Chapter 6 and additional measures not included in the plan); 2) the construction monitoring methods (including frequency, duration, and specific activities to be monitored); and 3) the authority of the construction monitor to modify activities as needed to avoid or minimize the impacts of the covered activity.

Conditions included in the plan on covered activities include a number of landscape-level, natural community-level, and species-level protection measures including:

4.4 – Biological Resources

- Minimizing development footprint to open space (including minimizing impacts to vegetation communities)
- Establishment of stream setbacks
- Establishment of fuel management buffer(s) to protect preserves and property
- Incorporate urban-wildland interface design elements
- Maintain hydrologic conditions and minimize erosion
- Avoid direct impacts on extremely rare plants, fully protected wildlife species, or covered migratory birds
- Implement best management practices for rural road maintenance
- Implement best management practices for flood control facility maintenance
- Design requirements for covered roads outside the urban development area (including siting requirements, design requirements for wildlife movement and impact minimization construction requirements)
- Wetland, Pond, and Stream Avoidance and Minimization
- Species-level measures for Townsend's Big-Eared Bat, San Joaquin Kit Fox, Golden Eagle, Western Burrowing Owl, Swainson's Hawk, Giant Garter Snake, California Tiger Salamander, California Red-legged Frog, covered shrimp, and covered plants (including details of species-specific protocol requirements for planning surveys, pre-construction surveys, construction monitoring)

City of Clayton Municipal Code and Ordinances

The City of Clayton has adopted the implementing ordinance (Ordinance No. 412) of the ECCC HCP/NCCP and added Chapter 16.55 to the Clayton Municipal Code (CMC), which details implementation of and compliance with the ECCC HCP/NCCP. CMC Chapter 16.55 fully details the process for application for coverage, project requirements, fees (including fees for development, wetland mitigation, and administration), land or other in lieu fee options, City administration of the Plan, and enforcement. This process guarantees project-level review of potential environmental impacts to ensure compliance with the ECC HCP/NCCP for both wetlands and sensitive species, as well as regional wetland permitting, and Endangered Species Act take authorization for Covered Species and mitigation for projects that meet the requirements of the ECCC HCP/NCCP.

Development and Wetland Mitigation Fees are collected from the applicant for the purpose of offsetting project impacts as part of implementation of the ECCC HCP/NCCP, and these fees are used for the acquisition management and monitoring of lands to benefit covered species and other sensitive biological resources. Development Fees are calculated based on the area (e.g., acreage) and location of the affected development project, and Wetland Mitigation Fees are calculated by evaluating type and area of jurisdictional areas (wetlands, waters, riparian vegetation). Land and other options in lieu of fees may be considered on a case-by-case basis by the City of Clayton but must be determined to be comparable to the benefits of the Wetland Mitigation fees.

As a permittee of the ECCC HCP/NCCP, the City of Clayton requires the following administration and application procedures:

- The Director administers and applies provisions of the plan, including reviewing take authorization applications, verifying fees, prior to issuing the first construction permit
- Project Applicants must submit take authorization to the Director simultaneously with the request for approving the development application.
- The application can be determined complete if the following information is provided (quoted from Section 16.55.040): “
 1. *Description of the Affected Development Project, including maps, detailed information on the project footprint, extent of construction and extent of any ongoing maintenance activities subject to the HCP/NCCP.*
 2. *One or more reports documenting the methods and results of planning surveys and the methods of applicable pre-construction surveys and construction monitoring, in accordance with Chapter 6 of the HCP/NCCP. The Director may allow specific components of the required surveys, including some or all of the results of planning surveys and the methods of applicable pre-construction surveys and construction monitoring, to be provided subsequent to the submittal of the initial application and prior to approval of the development project; however, the application for take authorization is not complete until all items listed in this paragraph have been submitted.*
 3. *Evidence of compliance or planned compliance with avoidance and minimization, and conservation measures, in accordance with Chapter 6 of the HCP/NCCP.*
 4. *Quantification of the anticipated acreage of land permanently disturbed, consistent with Chapters 6.2 and 9.3.1 of the HCP/NCCP.*
 5. *Estimate of HCP/NCCP implementation fees due and/or documentation of proposed land dedication and/or proposed habitat restoration or creation,...*
 6. *Other information as determined by the Director in accordance with the HCP/NCCP.*
 7. *Payment of the HCP/NCCP administration fee,”*
- The City may grant take authorization if the following occurs satisfactorily: (quoted from Section 16.55.040): “
 1. *The application for take authorization is deemed complete.*
 2. *The conditions of approval for the project require compliance with all terms and conditions of the Implementing Agreement, the HCP/NCCP, and the state and federal permits that apply to the project. Such terms and conditions include but are not limited to the following:*
 - *a. Payment of the required HCP/NCCP implementation fees and/or approval by the City of an offer of land dedication and/or habitat restoration or creation,...*
 - *b. Compliance with all relevant surveys, monitoring, avoidance, minimization, and conservation measures determined by the Director to apply to the project, pursuant to Chapter 6 of the HCP/NCCP.*
 3. *The City makes a determination that extension of take authorization is consistent with the HCP/NCCP, the Implementing Agreement, the state and federal permits,*

all applicable federal, state and local laws and regulations, and the constitutions of the United States and the State of California.

4.4.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to biological resources if it would:

- a) 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 the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
- c) 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;
- d) 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;
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.4.4 Impacts and Mitigation Measures

This section describes potential impacts related to biological resources which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Special Status Species Protections

Impact BIO-1 – Would the HEU 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 the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Analysis of Impacts

Since the Planning Area is covered by the ECCC HCP/NCCP, implementation of conservation measures described in Chapter 6.4 of the ECCC HCP/NCCP will be required as part of future development project approvals granted by the City pursuant to the HEU. The ECCC HCP/NCCP requires submission and approval of an HCP/NCCP application, including implementing planning and/or preconstruction biological surveys on a project-level basis and fee payment to offset potential development project impacts. Each Housing Inventory Site identified in Exhibit 4.4-1 would require individual applications and evaluations based on site plans that will be developed in the future. Further, compliance with the ECC HCP/NCCP would require setbacks for sensitive habitats (e.g., wetlands) that may support sensitive species identified in this analysis. It is expected that no additional mitigation for each project would be needed, and potential impacts

caused by zoning updates are less than significant, assuming appropriate implementation of the ECCC HCP/NCCP is conducted on a project-level basis.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Sensitive Natural Communities

Impact BIO-2 – Would the HEU have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

Analysis of Impacts

Since the Planning Area is covered by the ECCC HCP/NCCP, implementation of conservation measures described in Chapter 6.4 of the ECCC HCP/NCCP will be required as part of future development project approvals granted by the City pursuant to the HEU. No known new sensitive communities are expected to be found within the Planning Area or Sites, which is mostly urban and rural. Riparian/Wetland habitat is evaluated during the HCP/NCCP application process, including implementing jurisdictional delineations on a project-level basis. Each Housing Inventory Site identified in Exhibit 3-4 that potentially possesses jurisdictional areas would require individual applications and evaluations based on site plans that will be developed in the future. Further compliance with the ECC HCP/NCCP would require setbacks for jurisdictional areas, including sensitive riparian habitats. It is expected that no additional mitigation for each project would be needed, and potential impacts caused by the proposed General Plan and zoning updates are less than significant, assuming appropriate implementation of the ECCC HCP/NCCP is conducted on a project-level basis for future entitlement requests, in accordance with Chapter 16.55 of Clayton Municipal Code.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Wetland Conservation

Impact BIO-3 – Would the HEU 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?

Analysis of Impacts

Since the Planning Area is covered by the ECCC HCP/NCCP, implementation of conservation measures described in Chapter 6.4 of the ECCC HCP/NCCP will be required as part of future development project approvals granted by the City pursuant to the HEU. The ECCC HCP/NCCP requires submission and approval of an HCP/NCCP application, including implementing jurisdictional delineations on a project-level basis. Each Housing Inventory Site identified in Exhibit 4.4-1 that potentially possesses wetlands would require individual applications based on site plans which are not available for review. Further compliance with the ECC HCP/NCCP and

coverage under the USACE Regional General Permit would require setbacks for jurisdictional areas. No other mitigation can be identified at the program level of review although, beyond compliance with HCP/NCCP requirement in CMC Chapter 16.55 additional mitigation is not expected at the project-level, future site-specific development proposals.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Fish and Wildlife Movement

Impact BIO-4 – Would the HEU 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?

Analysis of Impacts

The HEU does not directly entitle any development that would interfere substantially with the movement of any native resident or migratory fish or wildlife species with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. No documented wildlife corridors are known within the Planning Area. Requests for development on each Housing Inventory Site identified in Exhibit 4.4-1 would require individual applications and evaluations based on site plans that will be developed in the future to ensure compliance with the ECCC HCP/NCCP. It is expected that no additional mitigation for each development project would be needed, and potential impacts caused by the proposed General Plan and zoning amendments are less than significant, assuming appropriate implementation of the ECCC HCP/NCCP is conducted on a project-level basis for future entitlement requests, in accordance with Chapter 16.55 of Clayton Municipal Code.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Conflicts with Local Biological Resources Plans

Impact BIO-5 – Would the HEU conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Analysis of Impacts

The HEU does not conflict with any local policies or ordinances protecting biological resources. The City of Clayton has adopted the implementing ordinance (Ordinance No. 412) of the ECCC HCP/NCCP and added Chapter 16.55 to the Clayton Municipal Code, which details implementation of and compliance with the ECCC HCP/NCCP for projects. The ECCC HCP/NCCP requires submission and approval of an HCP/NCCP application, including implementing planning and/or preconstruction biological surveys on a project-level basis and fee payment to offset potential project impacts. Further, the HEU does not conflict with and would not repeal any measures included in the City's Municipal Code or General Plan with respect to biological resources protection. It is expected that no additional mitigation for each development

project would be needed, and potential impacts caused by the proposed General Plan and zoning amendments are less than significant, assuming appropriate implementation of the ECCC HCP/NCCP is conducted on a project-level basis for future entitlement requests, in accordance with Chapter 16.55 of Clayton Municipal Code.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Habitat Conservation Plans

Impact BIO-6 – Would the HEU conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Analysis of Impacts

The City of Clayton has fully adopted the ECCC HCP/NCCP, including enacting municipal codes, and permitting processes to promote and comply with the measures required of the ECCC HCP/NCCP. The HEU would not conflict with nor repeal the requirements of the ECCC HCP/NCCP, and all evaluations for development proposals for each Housing Inventory Site will be evaluated on an individual basis through the ECCC HCP/NCCP process to ensure compliance. It is expected that no additional mitigation for each future development project would be needed, and potential impacts caused by the General Plan amendments and zoning updates are less than significant, assuming appropriate implementation of the ECCC HCP/NCCP is conducted on a project-level basis for future entitlement requests, in accordance with Chapter 16.55 of Clayton Municipal Code.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Cumulative Impacts

Would the HEU cause substantial adverse cumulative impacts with respect to Biological Resources?

Analysis of Impacts

The HEU would not contribute to substantial adverse cumulative impacts to biological resources, as the Housing Inventory Sites are primarily in a developed area covered by the ECCC HCP/NCP. The ECCC HCP/NCCP requires submission and approval of an HCP/NCCP application, including implementing planning and/or preconstruction biological surveys on a project-level basis and payment of Habitat Conservation Plan Implementation Fees (CMC Section 15.55.060(c)) to offset potential project impacts, including potential cumulative impacts. It is expected that no additional mitigation for each future development project would be needed, and potential impacts caused by the proposed General Plan and zoning updates are less than significant, assuming appropriate implementation of the ECCC HCP/NCCP is conducted on a project-level basis for future entitlement requests, in accordance with Chapter 16.55 of Clayton Municipal Code.

4.4 – Biological Resources

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

This Page Intentionally Left Blank.

4.4.5 References

- i East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan (ECCC HCP/NCCP, Contra Costa County 2006)
- ii California Department of Fish and Wildlife. 2022. California Natural Diversity Database (CNDDDB), 7.5-minute quadrangle for *Clayton* (where the study area occurs) and the surrounding 8 quadrangles including *Tassajara*, *Diablo*, *Antioch South*, *Antioch North*, *Walnut Creek*, *Honker Bay*, *Vine Hill*, and *Las Trampas Ridge*. Web: <https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data> [Accessed May 2022].
- iii California Native Plant Society. Rare Plant Inventory. 7.5-minute quadrangle for *Clayton* (where the study area occurs) and the surrounding 8 quadrangles including *Tassajara*, *Diablo*, *Antioch South*, *Antioch North*, *Walnut Creek*, *Honker Bay*, *Vine Hill*, and *Las Trampas Ridge*. Web: <http://rareplants.cnps.org> [Accessed May 2022].
- iv USFWS. Birds of Conservation Concern. Web: <https://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php> [Accessed May 2022].
- v USFWS. IPaC: Information or Planning and Consultation. Web: <https://ecos.fws.gov/ipac/> [Accessed May 2022].
- vi USFWS. National Wetlands Inventory: Wetlands Mapper. Web: <https://www.fws.gov/wetlands/data/Mapper.html> [Accessed May 2022].
- vii Conservation Lands Network CLN 2.0 Vegetation Map in *CLN Explorer 2.0* Web: <https://www.bayarealands.org/explorer-tool/> [Accessed May 2022].
- viii USFWS. Migratory Bird Treaty Act Protected Species. Web: <https://www.fws.gov/birds/management/managed-species/migratory-bird-treaty-act-protected-species.php> [Accessed May 2022].

4.5 – CULTURAL RESOURCES

This EIR chapter addresses potential impacts to archaeologic and historic resources associated with implementation of the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). The chapter will evaluate whether the HEU will cause a substantial adverse change in the significance of a historic resource, destroy a unique archaeological resource, or disturb human remains.

4.5.1 *Environmental Setting*

The Planning Area is located in north-central Contra Costa County, approximately 20 miles east of downtown Oakland. The City of Clayton is located at the base of the north slope of Mt. Diablo.

Historic Beginnings

Prior to European colonization, the area that is now known as Mt. Diablo State Park was considered sacred by local tribes. The Planning Area was occupied by the Chupcan tribe and Volvon tribe. The tribes were disrupted in the 1700s and 1800s, when Spanish arrived in the region with missionaries and began capturing Native Americans. Mt. Diablo is named as such due to Spanish colonists naming it ‘the thicket of the devil’ after failing to track several Native Americans they were attempting to seize.¹

In the 1850s, many European settlers from the east coast traveled to California. One such settler was Joel Clayton, who moved to California in 1850 to pursue dairy ranching and mining. In 1856, the rest of his family joined him, and in 1857, the Claytons settled in the Diablo Valley and laid the foundation for the City of Clayton.² The City prospered in the 1860s during a coal mining boom in Contra Costa County.

Many of the oldest buildings in Clayton are in the commercial city center, in the Town Center area. Many buildings here were built in the 1800s and early 1900s.³ The Planning Area has a variety of local historic points of interest, as shown in Exhibit 4.5-1 below. Live Oak Cemetery, where many of Clayton’s earliest settlers are buried, also has the grave of the town founder, Joel Clayton. The Clayton Club Saloon is the oldest continuously operated business in Clayton having been established in 1874. Other historical structures include Clayton Jail built in 1884, the Growler business space built in the 1870s, the Pioneer Inn built in 1857, along with Endeavor Hall, a hall originally built as a Methodist church in the 1860s, which has since served as a church, public meeting hall, and community space. Another historic point of interest is the site of Clayton’s original two-room school established in 1857.

The Planning Area also contains national and Californian points of historical interest. Clayton Vineyards-DeMartini Winery is listed on the United States National Register of Historic Places as well as the California Historical Resources Registry.⁴ DeMartini Winery was built in 1885 during an expansion of wineries in Contra Costa County and was rehabilitated in 1997 for reuse as Clayton’s City Hall. Keller Ranch is listed on the California Historical Resources Registry.⁵ The location of Keller Ranch is believed to have been a principal village site of the Chupcan or Volvon people prior to European settlement, and became a ranch in 1910 when Henry and Elodia Keller

purchased the property from the Estate of Joel Clayton. It remains as a “a rare surviving building of this period and a fine example of custom home building of the early twentieth century.”⁶

The town’s cultural history is of central importance. In 1959, Clayton citizens began to discuss incorporation with the goal of preserving the City’s historic and rural identity. Their initial attempt failed, but they were successful in 1964, incorporating to prevent annexation that would divide the town.⁷

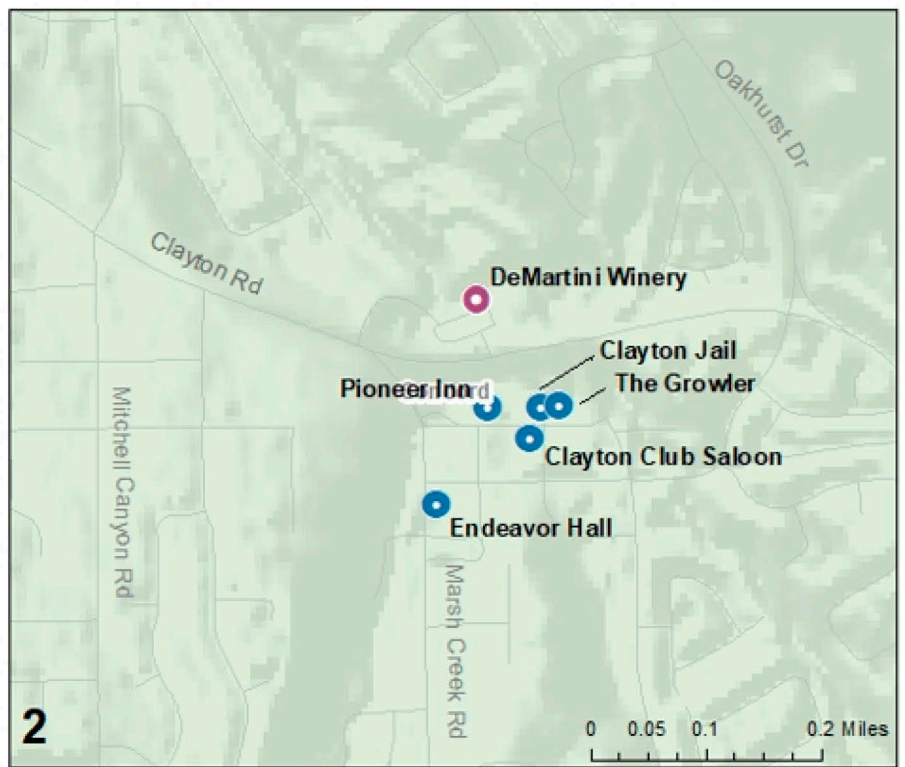
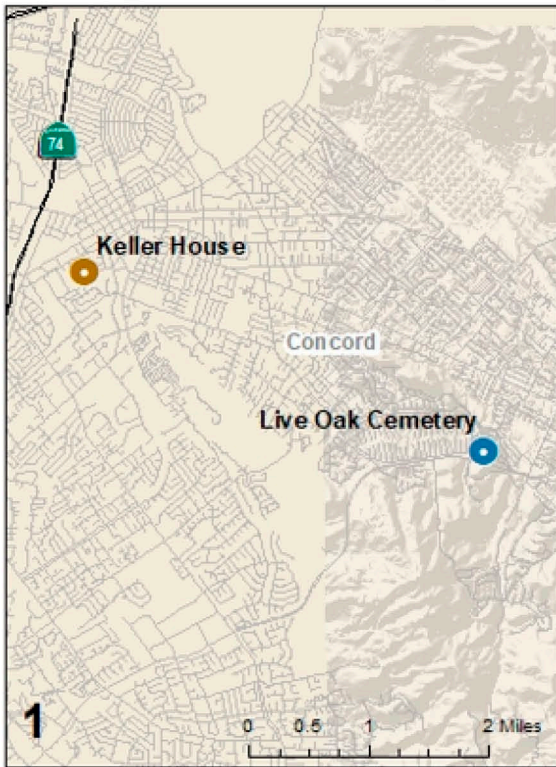
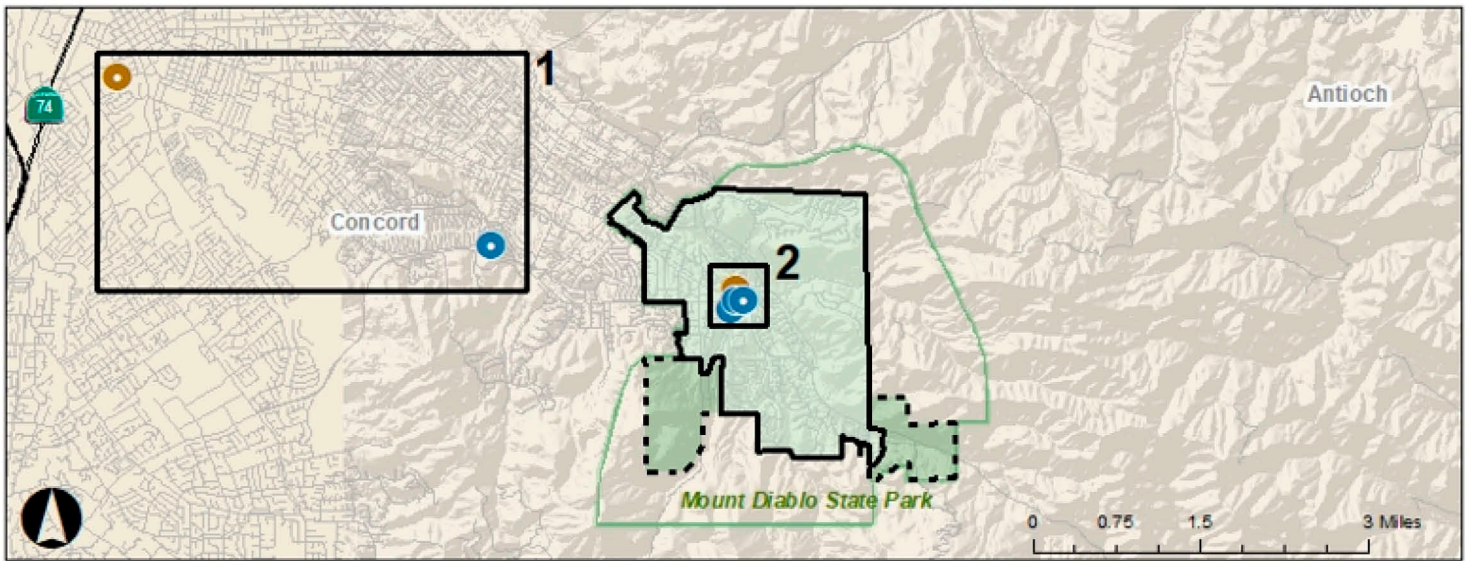
Archaeological Resources

Prior to western settlement, areas within the Planning Area were occupied by Native Americans. The nearby Julpun saw Mt. Diablo as the birthplace of the world, the Northern Miwok tribe saw it as a supernatural being, and the Central Miwok tribe included the mountain in their renewal ceremonies. According to Mission records, the Volvon tribe lived on the peak of Mt. Diablo, and held territory to the east along Marsh Creek, and in what is now the City of Clayton.⁸ The Chupcan tribe also held areas to the north of Mt. Diablo, where Clayton is today.⁹

Mt. Diablo and the surrounding area is known to contain artifacts from the local Native American tribes, including mortar scars and obsidian arrows.¹⁰ The Planning Area is likely to contain artifacts from the Chupcan Tribe, and possibly other local tribes as well, particularly in the southern portion of the Planning Area closer to Mt. Diablo.




Notice of Preparation (NOP) Comments and Tribal Consultation

No comments on the NOP were received pertaining to cultural resources. Consistent with Public Resources Code Section 21080.3.1 (Assembly Bill 52 [2014]) and Government Code Section 65352 (Senate Bill 18 [2004]), the Native American Heritage Commission recommended consultation with California Native American Tribes, and the City notified local tribes of the proposed HEU on April 20, 2022 via email. Only one tribal representative responded to the request for consultation, Corrina Gould, Tribal Chair, of the Confederated Villages of Lisjan Nation. Ms. Gould requested copies of the documentation for the HUE, and in response, the City directed the tribal representatives to the City webpage where the draft Housing Element and its related documents had been posted. The City did not receive any other or subsequent requests for information within the 90 days following the April 20, 2022 invitation to consult.



Sources: Clayton Historical Society, National Parks, California State Parks

Basemap Features

-  Clayton City Boundary
-  Clayton Sphere of Influence
-  Planning Area

Historic Features




-  National Register of Historic Places
-  Local Points of Interest
-  California Register of Historic Resources

Exhibit 4.5-1 Historic Landmarks

Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.

4.5.2 Regulatory Framework

Federal

National Historic Preservation Act of 1966

Enacted in 1966, the National Historic Preservation Act (NHPA) (16 U.S. Code [U.S.C.] Sections 470 *et seq.*) declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer (SHPO), provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assist Native American tribes in preserving their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP).

NHPA establishes the nation's policy for historic preservation and sets in place a program for the preservation of historic properties by requiring federal agencies to consider effects to significant cultural resources (i.e., historic properties) prior to undertakings.

National Environmental Policy Act of 1969 (16 U.S.C. 4321, and 4331-4335, as amended) (NEPA)

The act establishes guidelines to “preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice.” All projects that are subject to NEPA are subject to compliance with Section 106 of the NHPA and NEPA requirements concerning cultural resources.

Section 106 of the Federal Guidelines

Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the NRHP and that the ACHP and SHPO must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800, on such undertakings.

National Register of Historic Places

The NRHP was established by the NHPA of 1966 as “an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment.” The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, or association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history.
- Criterion B: It is associated with the lives of persons who are significant in our past.
- Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values;

or represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

Native American Graves Protection and Repatriation Act (NAGPRA) of 1990

The NAGPRA of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996 and 1996a, as amended) and Native American Graves and Repatriation Act of 1990 (25 U.S.C. 3001 *et seq.*, as amended)

These acts establish as national policy that traditional religious practices and beliefs, sacred sites (including right of access), and the use of sacred objects shall be protected and preserved. Native American remains are further protected by the Native American Graves Protection and Repatriation Act of 1990.

Secretary of the Interior's Standards

The Secretary of the Interior is responsible for establishing professional standards and providing guidance related to the preservation and protection of all cultural resources listed in, or eligible for listing in, the National Register of Historic Places. The Secretary of the Interior's Standards for the Treatment of Historic Properties apply to all grants-in-aid projects assisted through the National Historic Preservation Fund, and are intended to be applied to a wide variety of resources, including buildings, structures, sites, objects, and districts. The standards address four different levels of treatment: preservation, rehabilitation, restoration, and reconstruction.

Certified Local Government Program

The Certified Local Government (CLG) Program is a national program developed under the National Historic Preservation Act that is designed to encourage the direct participation of a local government in the identification, registration, and preservation of historic properties located within the jurisdiction of the local government. A local government may become a CLG by developing and implementing a historic preservation program and commission, based on federal and state standards.

State

California Environmental Quality Act (CEQA)

CEQA (Public Resources Code [PRC] Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations [CCR] Section 15000 *et seq.*) provides criteria to evaluate

whether a building, structure, object, or site is significant. Under CEQA Guidelines Section 15064.5(a), historic resources include the following those meeting the criteria listed below.

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC Section 5024.1, Title 14 CCR, Section 4850 *et seq.*)

(2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in an historical resource survey meeting the requirements of PRC Section 5024.1(g), shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, providing the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historic Resources (PRC Section 5024.1; Title 14 CCR, Section 4852) including the following:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- (B) Is associated with the lives of persons important in our past;
- (C) 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
- (D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to PRC Section 5020.1(k)), or identified in an historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Section 5020.1(j) or 5024.1. In accordance with CEQA, properties designated or eligible at all levels are deserving of protection by a lead agency when any undertaking proposes to demolish or alter any such property.

Typically, to be considered an historic resource under CEQA, the structure in question must at least be considered eligible for local listing. However, in some cases a structure may be considered ineligible, such as after detailed historic or architectural assessment, and thus would no longer be considered an historic resource under CEQA.

California Register of Historical Resources

Created in 1992 and implemented in 1998, the California Register of Historical Resources (CRHR) is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate properties that are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1). Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks (CHLs) numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of

Historical Interest program, identified as significant in historic resources surveys, or designated by local landmarks programs may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria (PRC Section 5024.1(c)):

- Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Criterion 2: It is associated with the lives of persons important in our past.
- Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
- Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Resources that have achieved significance within the past 50 years also may be eligible for inclusion in the CRHR, provided that enough time has lapsed to obtain a scholarly perspective on the events or individuals associated with the resource.

California Historical Landmarks (CHLs)

CHLs are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource must also be approved for designation by the County Board of Supervisors or the City or Town Council in whose jurisdiction it is located, be recommended by the State Historical Resources Commission, or be officially designated by the Director of California State Parks. The specific standards in use now were first applied in the designation of CHL No. 770. CHLs No. 770 and above are automatically listed in the CRHR.

To be eligible for designation as a Landmark, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California); or
- Associated with an individual or group having a profound influence on the history of California. A prototype of, or an outstanding example of, a period, style, architectural movement or construction or one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical

Interest (Point or Points) designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a Landmark and a Point. If a Point is later granted status as a Landmark, the Point designation will be retired. In practice, the Point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a Point, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type within the local geographic region (city or county).
- Associated with an individual or group having a profound influence on the history of the local area.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

Native American Heritage Commission, Public Resources Code Sections 5097.9–5097.991

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands.¹¹ Under PRC Section 5097.9, a state policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites or sacred shrines located on public property.¹² PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner. PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.¹³

California Native American Graves Protection and Repatriation Act of 2001

Codified in the California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection Act (CalNAGPRA) is consistent with the federal NAGPRA. Intended to “provide a seamless and consistent state policy to ensure that all California Indian human remains, and cultural items be treated with dignity and respect,” the CalNAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The act also provides a process for non–federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

Native American Heritage Commission (NAHC)

The NAHC, established in 1976, was created in response to efforts by Native Americans to protect their burial grounds from destruction. The NAHC authorizes Most Likely Descendants the right to determine the treatment, disposition, and analysis of Native American remains. Among the functions of the NAHC is maintenance of lists of Native American Contacts and Most Likely Descendants.

California Senate Bill (SB) 18 (2004)

California Government Code Section 65352.3 incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native

American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB18 (Burton) requires public notice to be sent to tribes listed on the Native American Heritage Commission's SB18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in PRC Sections 5097.9 and 5097.993 that may be affected by the proposed adoption or amendment to a general or specific plan.

California Assembly Bill (AB) 52 (2014)

Codified into state law in 2014, AB 52 (Gatto) specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. AB 52 requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. AB 52 specifies examples of mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources. The bill makes the above provisions applicable to CEQA projects that have a notice of preparation or a notice of negative declaration filed or mitigated negative declaration on or after July 1, 2015. AB 52 amends Sections 5097.94 and adds Sections 21073, 21074, 2108.3.1., 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to the California PRC, relating to Native Americans.

Health and Safety Code, Sections 7050 and 7052

State Health and Safety Code (HSC) Section 7050.5 declares that, in the event of the discovery of human remains outside a dedicated cemetery, all ground disturbances must cease, and the county coroner must be notified.¹⁴ HSC Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.¹⁵

Penal Code, Section 622.5

California Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Local

Clayton General Plan

The City's existing General Plan specifies the following goals, objectives, and policies for the community's historic and archaeological or tribal resources:

Land Use Element

Goal 1. To provide a mixture of land uses that responds to needs of the City of Clayton.

Goal 7. To enhance the sense of identity and pride in and to encourage historical awareness of Clayton.

Goal 9. To create and maintain an attractive Town Center area and to make it the commercial, civic, and heritage focus for the community.

Objective 1. To retain the rural character of Clayton through a predominance but not exclusive use of single-family, low-density residential development balancing needs of the housing element and preservation of open space.

Policy 1d. Preserve historic structures and open space areas with uses such as community facilities, bed and breakfast facilities, or large single-family homes.

Objective 7. To promote community amenities within the Keller Ranch development.

Policy 7b. Support establishment of a Heritage Center that would permit uses that support historical heritage and community activity within the Town Center.

Community Design Element

Goal 1. To maintain the rural and historical character of Clayton’s neighborhoods.

Goal 2. To establish an attractive and vibrant pedestrian-friendly Town Center with a mixture of commercial, civic, recreational, and residential uses.

Overall Community Design

Objective 1. To protect historical structures and sites of historical significance.

Policy 1a. Develop criteria for designating sites of historical significance.

Policy 1c. Ensure renovations of historic buildings and structures retain the building or structure’s historic character.

Policy 1d. Pursue measures to promote attention to historic sites and structures.

Objective 12. To integrate design elements into projects which provide focal points for the community.

Policy 12a. Maintain an inventory of important downtown features, historic sites, structures, etc.

Policy 12b. Use existing historic buildings and structures in the Town Center as the basis for and overall design themes in the Town Center.

Policy 12c. Ensure historic buildings in the Town Center which retain their historic character are incorporated into commercially-viable uses, re-uses, or adaptations.

Implementation Measure 1. Develop criteria for designating sites of historical significance.

Clayton Municipal Code (CMC)

CMC Chapter 15.10, Building Code with Amendments, Section 15.10.060, Repair Criteria for Historic Buildings or Structures, provides guidelines as to repairing historic buildings that have been damaged in an emergency or disaster (e.g., an earthquake) This municipal code section does not refer directly to the Secretary of the Interior’s standards for evaluating and reconstructing

historic structures, but does refer to Part 8, Title 24, California Code of Regulations, which is the State of California Historic Building Code.

4.5.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the General Plan Update would have a significant impact related to historic, cultural resources if it would:

- a) Cause a substantial adverse change in the significance of a historic resource as defined by CEQA Guidelines Section 15064.5;
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines section 15064.5;
- c) Disturb any human remains, including those interred outside of dedicated cemeteries?

4.5.4 Impacts and Mitigation Measures

This section describes potential impacts related to historic resources, archaeological resources, and human remains which could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

Historic Resources

Impact CUL-1 – Would the HEU cause a substantial adverse change in the significance of a historic resource pursuant to Section 15064.5?

Analysis of Impacts

As described in Section 4.5.1, the Planning Area has a variety of local historic points of interest and landmarks and the town's cultural history is of central importance. The Planning Area has a long-established history of settlement and contains many historic resources. Future development under the HEU could result in adverse impacts or removal of historic buildings or resources, especially in the downtown portions of the City, if such development occurred on sites with historic resources. However, none of the 6th cycle housing inventory sites are identified as containing cultural resources as shown on Exhibit 4.5-1. In addition, the General Plan Community Design Element contains goals, objectives and policies which maintain the rural and historical character of Clayton's neighborhoods and protect historical structures and sites of historical significance. The City's existing Municipal Code also contains Historic Preservation Guidelines which implement these goals and policies. These goals and their attendant objectives and policies will help protect existing historical resources within Clayton and support local ordinances requiring maintenance of development and use for historic sites and structures that preserve the character of historic sites and adjacent areas (CMC Section 17.34.010(E) – Resource Overlay District-Specific Purposed) and requiring historic buildings and structures be repaired pursuant to the California Historic Building Code (CMC Section 15.10.060 – Repair Criteria for Historic Buildings or Structures). These goals and their attendant objectives and policies are supported by the City Municipal Code with its specific criteria for determining local historic resources and landmarks. With implementation of the General Plan goals and policies, as well as the existing preservation guidelines in the Municipal Code, potential impacts to historic resources by future development within the Planning Area will be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Archaeological Resources

Impact CUL-2 – Would the HEU cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Analysis of Impacts

As detailed in Section 4.5.1 above, prior to western settlement, areas within the Planning Area were occupied by Native Americans. The nearby Julpun saw what is now known as Mt. Diablo as the birthplace of the world, the Northern Miwok tribe saw it as a supernatural being, and the Central Miwok tribe included the mountain in their renewal ceremonies. According to Mission records, the Volvon tribe lived on the peak of Mt. Diablo, and held territory to the east along Marsh Creek, and in what is now the City of Clayton. The Chupcan tribe also held areas to the north of Mt. Diablo, where Clayton is today. Mt. Diablo and the surrounding area is also known to contain artifacts from the local Native American tribes, including mortar scars and obsidian arrows. The Planning Area is likely to contain artifacts from the Chupcan and Lisjan Tribes, and possibly other local tribes as well, particularly in the southern portion of the Planning Area closer to Mt. Diablo. Therefore, future development in the Planning Area, especially on vacant land, has a high probability of uncovering prehistoric (archaeological) resources. Neither the General Plan nor the Municipal Code contain any goals, objectives, or policies related to archaeological/Native American resources. For these reasons, Mitigation Measure CUL-1 is required to ensure that potential impacts to these resources are reduced to less than significant. With implementation of Mitigation Measure CUL-1, potential impacts to archaeological resources by future development would be less than significant.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

MM CUL-1: Prior to the issuance of a grading permit, the grading plan shall include a requirement (via notation) indicating that if cultural resources, or human remains are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the area of discovery and the contractor shall immediately notify the City of the discovery. In such case, the City, at the expense of the project applicant, shall retain the services of a qualified archaeologist and/or qualified tribal monitor for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist and/or tribal monitor shall be required to submit to the City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the archaeologist and/or tribal monitor, shall not be allowed until the preceding steps have been taken.

Level of Significance After Mitigation

Less than significant.

Human Remains

Impact CUL-3 – Would the HEU disturb any human remains, including those interred outside of formal cemeteries?

Analysis of Impacts

There are no formal cemeteries within the Planning area. The nearest formal cemetery is Live Oak Cemetery in the City of Concord. However, Native Americans have occupied this region for thousands of years, and the Planning Area has been developed by European settlers since the mid 1800's. Therefore, it is possible that human remains could be discovered during excavation for development, especially on previously undisturbed sites, resulting in a potentially significant impact.

HSC Section 7050.5 requires that, if human remains (or remains that may be human) are discovered on a project site during grading or earthmoving, the construction contractors, project archaeologist, and/or designated Native American Monitor shall immediately stop all activities within 100 feet of the find. The project proponent must then immediately inform the County Coroner and the City of the find. The coroner is permitted to examine the remains under HSC Section 7050.5(b) to determine if the remains are those of a Native American. If human remains are determined as those of Native American origin, the applicant must comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the Native American Heritage Commission (NAHC) as outlined in PRC Section 5097. The coroner then contacts the NAHC to determine the Most Likely Descendant (MLD) who will conduct an inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The disposition of the remains is to be overseen by the MLD to determine the most appropriate means of treating the human remains and any associated grave artifacts, in consultation with the property owner and the lead agency (in this case the City of Clayton).

CEQA requires the City and any project developer, including the City if it is a public works project, to comply with the HSC Section 7050.5 and PRC 5097 if human remains are found during excavation. These statutes require careful consideration of tribal resources, including Native American human remains, which may be present within the Planning Area. As detailed in Section 4.5.2 above, the City is in compliance with the established Native American consultation procedures of SB 18 and AB 52. The City must also comply with existing state regulations (HSC Section 7050.5 and PRC 5097) with respect to disturbing human remains, including those interred outside of a formal cemetery, as detailed above. Mitigation Measure CUL-2 would ensure proper handling and removal of any potential buried human remains that could be uncovered as a result of development under the proposed HEU. Compliance with state law regarding human remains, Native American consultation processes described above, as well as adherence to Mitigation Measures recommended herein, would ensure that potentially significant impacts related to buried human remains and tribal cultural resources would be less than significant.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

MM CUL-2 Pursuant to State Health and Safety Code Section 7050.5(c) and State Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop within 100 feet of the vicinity of the find, and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the Most Likely Descendant (MLD). The MLD shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. Additional work shall not take place in the immediate vicinity of the find, which shall be identified by the qualified archaeologist at the applicant's expense, until the preceding actions have been implemented.

Level of Significance After Mitigation

Less than significant.

Cumulative Impacts

Impact CUL-4 – Would the HEU cause substantial adverse cumulative impacts with respect to cultural resources?

Analysis of Impacts

The General Plan Community Design Element contains goals, objectives and policies which maintain the rural and historical character of Clayton's neighborhoods and protect historical structures and sites of historical significance. These goals and their attendant objectives and policies will help protect existing historical resources within Clayton as well as investigate potential new resources that should be classified as historical. The City's existing Municipal Code also contains Historic Preservation Guidelines that implement these goals and policies. Consistent with federal and state laws, the General Plans of the surrounding jurisdictions have similar goals and policies to protect cultural resources within their boundaries, as well. In addition, state law requires the City and surrounding jurisdictions to notify Native American representatives if tribal human remains are discovered. Finally, Mitigation Measures have been incorporated to ensure that impacts to archaeological and Native American resources are reduced to less than significant. For these reasons, potential cumulative impacts to cultural resources would be less than significant, and future development in the City of Clayton under the HEU would not make a significant contribution to any cumulative regional impacts on cultural resources.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measures CUL-2 and CUL-2.

Level of Significance After Mitigation

Less than significant.

4.5.5 References

- ¹ California State Parks Foundation. Explore California: Mt. Diablo State Park. <https://www.calparks.org> [Accessed March 2022].
- ² Clayton Historical Society & Museum. Clayton History. <https://claytonhistory.org> [Accessed March 2022].
- ³ City of Clayton. General Plan Diagram, January 2017. <https://claytonca.gov> [Accessed March 2022].
- ⁴ US National Park Service. National Register Database and Research. <https://www.nps.gov> [Accessed March 2022].
- ⁵ California Office of Historic Preservation. California Historical Resources. <https://ohp.parks.ca.gov> [Accessed March 2022].
- ⁶ Clayton Historical Society & Museum. Clayton History: Keller Ranch. <https://claytonhistory.org> [Accessed March 2022].
- ⁷ City of Clayton. History of Clayton: The Incorporation of Clayton. <https://claytonca.gov> [Accessed March 2022].
- ⁸ Museum of the San Ramon Valley. The Bay MiWok Language and Land. <https://museumsrv.org> [Accessed March 2022].
- ⁹ State Parks. Mt. Diablo State Park Visitor Brochure. <https://www.parks.ca.gov> [Accessed March 2022].
- ¹⁰ California State Parks Foundation. Explore California: Mt. Diablo State Park. <https://www.calparks.org> [Accessed March 2022].
- ¹¹ California Public Resources Code Section 5097. *Native American Heritage Commission*. (1977). <https://nahc.ca.gov/codes/california-public-resources-code-5097-9/>.
- ¹² California Public Resources Code Section 5097. *Native American Heritage Commission*. (1977). <https://nahc.ca.gov/codes/california-public-resources-code-5097-9/>.
- ¹³ California Public Resources Code Section 5097. *Native American Heritage Commission*. (1977). <https://nahc.ca.gov/codes/california-public-resources-code-5097-9/>.
- ¹⁴ California Health and Safety Code, Section 7050.5. (1939). https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC§ionNum=7050.5.
- ¹⁵ California Health and Safety Code, Section 7050.5. (1939). https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC§ionNum=7050.5.

4.6 – ENERGY

This chapter provides information on the environmental and regulatory energy setting of the Planning Area and evaluates the potential energy impacts associated with implementation of the City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). Energy resources are closely tied to impacts discussed in the Air Quality (Section 4.3) and Greenhouse Gas (Section 4.9) analyses in this EIR. As such, many of the values presented in this Section reflect values derived from the emissions modeling conducted for the project. Refer to Appendix C for detailed greenhouse gas (GHG) emissions estimates and information on energy usage (MIG, 2022).

4.6.1 Environmental Setting

Energy is primarily categorized into three areas: electricity, natural gas, and fuels used for transportation. According to the U.S. Energy Information Administration (USEIA), California is the most populous state in the U.S., representing 12 percent of the total national population, has the largest economy, and is second only to Texas in total energy consumption. However, California has one of the lowest per capita energy consumption levels in the U.S. This is a result of California’s mild climate, extensive efforts to increase energy efficiency, and implementation of alternative technologies. California leads the nation in electricity generation from solar, geothermal, and biomass resources.¹

Electricity

In 2020, the California electric system generated 272,576 gigawatt-hours (GWh) of electricity. Approximately 70 percent of this generation occurred in-state (190,913 GWh), while approximately 30 percent was imported to the California system but generated outside the state (81,663 GWh). Approximately one-third of California’s total power mix was from renewable sources.² In 2020, Contra Costa County consumed approximately 8,622 GWh of electricity, about 3 percent of the state’s total electricity generated that year³.

Pacific Gas and Electric (PG&E) is the utility provider in Clayton.⁴ In the 2017 fiscal year, PG&E sold approximately 61,397 GWh of electricity to customers within its service territory, with approximately 33 percent of this electricity coming from renewable resources.^{5,6}

Based on the CalEEMod emissions estimates prepared for the HEU (see Section 4.8.4 and Appendix C), modeled residential and commercial land uses in the City consumed approximately 26.3 total GWh of electricity in 2020. Based on a service population (SP) of 11,954, the City’s 2020 energy consumption efficiency was 2,197 kilowatt-hours (KWh) per year per service population (KWh/yr/SP).

Natural Gas

California accounts for less than 1 percent of total U.S. natural gas reserves and production; however, almost two-thirds of California households use natural gas for home heating. In 2020, California consumed about 12,332 million therms of natural gas.ⁱ In the same year, Contra Costa

ⁱ One therm is equal to approximately 100,000 British thermal units (BTUs) or 0.1 million BTUs (MMBTU).

4.6 – Energy

County consumed approximately 1,062 million therms of natural gas, accounting for approximately 8 percent of statewide consumption, while accounting for approximately 3 percent of the statewide population.^{7, 8}

PG&E provides natural gas service to the Planning Area. PG&E natural gas services service central and northern California, over 70,000 square miles, and provides natural gas for residential, commercial, and industrial markets.⁹

Based on the CalEEMod emissions estimates prepared for the HEU (see Section 4.8.4 and Appendix C), modeled residential and commercial land uses in the City consumed approximately 1.85 million therms per year (or approximately 185,075 MMBTUs). Based on a service population of 11,954, the City's per capita natural gas consumption in 2020 was approximately 0.1 therms/yr/SP (or approximately 12.9 MMBTUs/yr/SP).

Transportation

California's transportation sector consumed approximately 77.9 MMBTUs of energy per capita in 2019, which ranked 38th in the nation.¹⁰ Most gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet state-specific formulations required by the California Air Resources Board (CARB).

According to the Board of Equalization, statewide taxable sales figures indicate a total of 15,365 million gallons of gasoline and 3,086 million gallons of diesel fuel were sold in 2019 (CEC, 2021). Although exact estimates are not available by County, retail fuel outlet survey data indicates Contra Costa County accounted for approximately 2.7 percent and 1.3 percent of total statewide gasoline and diesel sales, respectively, in 2020.¹¹

Using vehicle miles traveled (VMT) estimates contained in the traffic and VMT analysis prepared for the HEU, the existing land uses in the City are estimated to generate approximately 478,740 total daily VMT under 2020 conditions. The estimated fuel consumption in Clayton in 2020 is shown in Table 4.6-1 below.

**Table 4.6-1
Estimated Vehicle Fuel Consumption (2020)**

Metric	Daily Vehicle Fuel Consumption
	2020 Existing
Total Diesel Consumption (gallons)	3,474
Total Gasoline Consumption (gallons)	19,106
Total Petroleum Consumption (gallons)	22,580
Total Electricity Consumption (kWh)	3,750
Service Population	11,954
Petroleum Consumption Efficiency (gal/day/SP)	1.89
Source: MIG, 2022 (See Appendix C)	

4.6.2 Regulatory Framework

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal 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, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards.

Energy Independence and Security Act (EISA) of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law. In addition to setting increased Corporate Average Fuel Economy (CAFE) standards for motor vehicles, the act also includes the following provisions related to energy efficiency:

- Renewable fuel standards (RFS)
- Appliance and lighting efficiency standards
- Building energy efficiency

This federal legislation requires ever-increasing levels of renewable fuels to replace petroleum. The U.S. Environmental Protection Agency (EPA) is responsible for developing and implementing regulations to ensure transportation fuel sold in the United State contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act of 2007 (EISA), the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of our nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline;
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel and set separate volume requirements for each one.
- EISA required the U.S. EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces (U.S. EPA, 2015).

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

Federal Vehicle Standards

In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of carbon dioxide (CO₂) in model year 2025, on an average industry fleetwide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons (MT) and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.¹²

State

Title 24 Energy Standards

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although 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 nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality.” The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC).

CALGreen Code contains both mandatory and voluntary measures. For non-residential land uses, there are 39 mandatory measures including, but not limited to exterior light pollution reduction, wastewater reduction by 20 percent, and commissioning of projects over 10,000 square feet. Two tiers of voluntary measures apply to non-residential land uses, for a total of 36 additional elective measures.

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2019 standards focused on three key areas: proposing new requirements for installation of solar photovoltaics for newly constructed low-rise residential buildings; updating current ventilation and Indoor Air Quality (IAQ) requirements; and extending Title 24 Part 6 to apply to healthcare facilities. The 2019 Building Energy Efficiency Standards were approximately 53 percent more efficient than the 2016 Title 24 Energy Standards for residential development and approximately 30 percent more efficient for non-residential development. The 2022 standards, which were adopted in August 2021, go into effect January 1, 2023. The 2022 Building Energy Efficiency Standards focuses on establishing or expanding standards for electric heat pumps, for single-family homes to be electric-ready for solar photovoltaic systems and battery storage, and for ventilation systems.¹³

Executive Order B-30-15, Senate Bill 32, and Assembly Bill 197 (Statewide Interim GHG Targets)
California Executive Order (EO) B-30-15 (April 29, 2015) set an “interim” statewide emission target to reduce greenhouse emissions to 40 percent below 1990 levels by 2030, and directed state agencies with jurisdiction over GHG emissions to implement measures pursuant to statutory authority to achieve this 2030 target and the 2050 target of 80 percent below 1990 levels. Specifically, the EO directed CARB to update the Scoping Plan to express this 2030 target in metric tons.

To achieve this ambitious target, Governor Brown identified five key goals for reducing GHG emissions in California through 2030:

- Increase the amount of renewable electricity provided state-wide to 50 percent.
- Double energy efficiency savings achieved in existing buildings and make heating fuels cleaner.
- Reduce petroleum use in cars and trucks by up to 50 percent.
- Reduce emissions of short-lived climate pollutants.
- Manage farms, rangelands, forests, and wetlands to increasingly store carbon.

Assembly Bill (AB) 197 (September 8, 2016) and Senate Bill (SB) 32 (September 8, 2016) codified into statute the GHG emissions reduction targets of at least 40 percent below 1990 levels by 2030 as detailed in EO B-30-15. AB 197 also requires additional GHG emissions reporting that is broken down to sub-county levels and requires CARB to consider the social costs of emissions impacting disadvantaged communities.

Renewables Portfolio Standard (RPS) Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. The *2003 Integrated Energy Policy Report* recommended accelerating that goal to 20 percent by 2010, and the *2004 Energy Report Update* further recommended increasing the target to 33 percent by 2020. The state's *Energy Action Plan* also supported this goal. In 2006, under SB 107, California's 20 percent by 2010 RPS goal was codified. The legislation required retail sellers of electricity to increase renewable energy purchases by at least 1 percent each year

with a target of 20 percent renewables by 2010. Publicly-owned utilities set their own RPS goals, recognizing the intent of the legislature to attain the 20 percent by 2010 target.

On November 17, 2008, Governor Schwarzenegger signed EO S-14-08 requiring “[a]ll retail sellers of electricity [to] serve 33 percent of their load with renewable energy by 2020.” The following year, EO S-21-09 directed CARB, under its AB 32 authority, to enact regulations to achieve the goal of 33 percent renewables by 2020.

In October 2015, Governor Brown signed SB 350 to codify ambitious climate and clean energy goals. One key provision of SB 350 is for retail sellers and publicly-owned utilities to procure “half of the state’s electricity from renewable sources by 2030.”

The state’s RPS program was further strengthened by the passage of SB 100 in 2018. SB 100 revised the state’s RPS Program to require retail sellers of electricity to serve 50 percent and 60 percent of the total kilowatt-hours sold to retail end-use customers from renewable energy sources by 2026 and 2030, respectively, and requires 100 percent of all electricity supplied to come from renewable sources by 2045.

Executive Order B-55-18

On September 10, 2018, Governor Brown signed EO B-55-18, to achieve carbon neutrality by moving the State of California to 100 percent clean energy by 2045. This Executive Order also includes specific measures to reduce GHG emissions via clean transportation, energy-efficient buildings, directing cap-and-trade funds to disadvantaged communities, and better management of the state’s forest land.

Low Carbon Fuel Standard (LCFS) Regulation

CARB initially approved the LCFS regulation in 2009, identifying it as one of the nine discrete early action measures in the *2008 Scoping Plan* to reduce California’s GHG emissions. The LCFS regulation defines a Carbon Intensity, or “CI,” reduction target (or standard) for each year. The initial LCFS regulation required a reduction of at least 10 percent in the CI of California’s transportation fuels by 2020. In 2018, CARB approved amendments to the LCFS regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030, adding new crediting opportunities to promote zero-emission vehicle (ZEV) adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector. Under the 2018 amendments, the LCFS regulation now requires a reduction of at least 20 percent in CI by 2030 and beyond.

Assembly Bill 1493, Advanced Clean Cars Program, Executive Order B-48-18, and Executive Order N-79-20

With the passage of AB 1493 (Pavley I) in 2002, California launched an innovative and pro-active approach for dealing with GHG emissions and climate change at the state level. AB 1493 requires CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards apply to automobiles and light trucks from 2009 through 2016. Although litigation was filed challenging these regulations and the EPA initially denied California’s related request for a waiver, a waiver was granted. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 among light-duty vehicles.

In January 2012, CARB approved the Advanced Clean Cars (ACC) Program (formerly known as Pavley II) for model years 2017-2025. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations and the ZEV regulation. The Program combines the control of smog,

soot, and global warming gases with requirements for greater numbers of zero-emission vehicles into a single package of standards. By 2025, new automobiles under California’s ACC Program will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

EO B-48-18, issued by Governor Brown in January 2018, establishes a target to have five million ZEVs on the road in California by 2030. This EO is supported by the state’s 2018 ZEV Action Plan Priorities Update, which expands upon the state’s 2016 ZEV Action Plan. While the 2016 plan remains in effect, the 2018 update functions as an addendum, highlighting the most important actions state agencies are taking in 2018 to implement the directives of EO B-48-18.

EO N-79-20, issued by Governor Newsom in September 2020, set a goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. It also set a goal that 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks. In addition, this EO set a goal to transition to 100 percent zero-emission off-road vehicles and equipment in the state by 2035 where feasible.

4.6.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to energy if it would:

- a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.6.4 Impacts and Mitigation Measures

This section describes potential impacts related to energy resources.

Energy Consumption

Impact ENG-1 – Would the HEU result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Analysis of Impacts

Implementation of the HEU would increase the demand for electricity and natural gas within the City and gasoline consumption in the region during construction and operation of new land use developments.

Electricity

Construction Use. Temporary electric power would be required at various construction sites throughout the city as growth occurs under the HEU. Electricity would be consumed by lighting and electronic equipment (e.g., computers) located in trailers used by construction crews, and by small, off-road equipment (e.g., compressors) used during development activities. However, the electricity used for such activities would be temporary and would have a negligible contribution to the overall energy consumption in the City.

Operational Use. Development facilitated under the HEU would require electricity for multiple uses, including, but not limited to: building heating and cooling, lighting, appliance use (e.g., washer, dryer, microwave, etc.), and other electronics (e.g., televisions). In addition, electricity use would also increase with greater adoption and reliance on electric vehicles. As described in Section 4.8.4, CalEEMod was used to estimate emissions from energy uses. Electricity consumption from land uses associated with the HEU were determined through CalEEMod. Vehicle electricity consumption was determined using fuel efficiency, which was calculated through VMT and energy consumption data (in kWh/day) from EMFAC2021 (v1.0.2), and VMT estimates from the traffic analysis (see Appendix C). Table 4.6-2 summarizes changes in electricity consumption that would occur over the next approximately 20 years of growth envisioned by the HEU.

**Table 4.6-2
Estimated HEU Electricity Consumption**

Metric	Electricity Consumption (MWh)				
	2020 Existing	2040 Without HEU	2040 With HEU	2020 to 2040 HEU Change	2040 Without HEU to 2040 With HEU Change
Land Use Electricity Consumption	26,265	26,834	30,161	3,896	3,327
Vehicle Electricity Consumption	1,369	10,064	11,553	10,173	1,489
Total Electricity Consumption	27,634	36,898	41,714	14,069	4,816
Service Population (SP)	11,954	12,233	14,397	2,443	2,164
Electricity Consumption Efficiency (MWh/yr/SP)	2.31	3.02	2.90	0.59	-0.12
Source: MIG, 2022 (see Appendix C).					

As shown in Table 4.6-2, Year 2040 modeled electricity consumption with the HEU would be approximately 4,816 GWh more than the electricity consumption without the HEU; however, on an efficiency basis, electricity consumption would decrease by approximately 3.9 percent from 3.02 MWh/yr/SP to 2.90 GW/yr/SP.

As discussed in Section 4.6.2, CARB's Scoping Plan considers the use of electricity is an essential component of California's climate strategy. Therefore, electricity use is a necessary utility to support the implementation of the HEU. Furthermore, as shown in Table 4.6-2, electricity consumption in Year 2040 would be more efficient with the HEU than without the HEU conditions. This indicates that new development approved under the HEU would use and consume electricity in an efficient manner. In addition, new development and land use turn over would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6, of the California Code of Regulations (the CALGreen Code), which would decrease estimated electricity consumption in new and/or retrofitted structures from current modeled conditions, further increasing the efficient use of electricity resources. For these reasons, the potential electricity consumed by future housing projects would not be wasteful, inefficient, or unnecessary. This impact is considered less than significant. It is noted Mitigation Measures GHG-3 to GHG-5, which would reduce electricity consumption by lowering VMT and increase energy efficiency in buildings, could further reduce the less than significant magnitude of the HEU's electricity consumption.

Natural Gas

Construction Use. Substantial natural gas consumption is not anticipated to occur during construction activities that could occur with HEU implementation. Fuels used for construction would generally consist of diesel and gasoline, which are discussed in the next subsection. Potential natural gas use during construction activities associated with future growth would not substantially contribute to overall energy consumption in the city, and would not be unnecessary, inefficient, or wasteful.

Operational Use. Natural gas consumption from development associated with the HEU would be required for various purposes, such as space and water heating in buildings. CalEEMod was used to estimate natural gas consumption associated with HEU implementation. Table 4.6-3 summarizes the estimated changes in natural gas consumption associated with the implementation of the HEU.

**Table 4.6-3
Estimated HEU Natural Gas Consumption**

Metric	Natural Gas Consumption (MMBtu)				
	2020 Existing	2040 Without HEU	2040 With HEU	2020 to 2040 HEU Change	2040 Without HEU to 2040 With HEU Change
Total Natural Gas Consumption	185,075	188,015	207,597	22,522	19,582
Service Population (SP)	11,954	12,233	14,397	2,443	2,164
Natural Gas Consumption Efficiency (MMBtu/yr/SP)	15.48	15.37	14.42	-1.06	-0.95
Source: MIG, 2022 (See Appendix C)					

Based on the demand calculations shown in Table 4.6-3, modeled natural gas consumption in 2040 with the HEU would be approximately 19,582 MMBtu more than the natural gas consumption in 2040 without the HEU; however, on an efficiency basis, natural gas consumption is estimated to decrease by approximately 6.2 percent from 15.4 MMBTU/yr/SP (without the HEU) to 14.4 MMBTU/yr/SP (with the HEU).

Natural gas consumption is a necessary step in moving towards a cleaner energy grid and meeting California's climate goals. The Draft 2022 Scoping Plan states (pg. 158), "While the electricity sector is using less fossil fuel due to increasing amounts of renewables, in the near term, fossil gas generation will continue to play a critical role in grid reliability until other clean, dispatchable alternatives are available and can be deployed."¹⁴ Therefore, natural gas consumption is a necessary utility to support implementation of the HEU. In addition, the natural gas consumption per service population would decrease in 2040 with the HEU as compared to conditions without the HEU, primarily due to an increase in higher density residential units, which are smaller in size and generally use less natural gas for space heating and other purposes, as well as overall increases in efficiency in appliances and building systems installed in new development. Clayton would therefore achieve greater efficiency in natural gas consumption with the implementation of the HEU than without the HEU. This indicates that new development approved under the HEU would use and consume natural gas in an efficient manner. In addition, new development and land use turn over would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6, of the California Code of Regulations (the CALGreen Code), which would decrease estimated natural gas consumption in new and/or

retrofitted structures from current modeled conditions, further increasing the efficient use of natural gas resources. For these reasons, the potential natural gas use consumed by future housing projects would not be wasteful, inefficient, or unnecessary. This impact is considered less than significant.

It is noted Mitigation Measures GHG-1 and GHG-2, which would require city-specific zero net energy (ZNE) efforts and prohibit natural gas in new development if a ZNE ordinance is not developed, could further reduce the less than significant magnitude of the HEU's natural gas consumption.

Diesel and Gasoline Fuel

Construction Use. Diesel and gasoline fuels, also referred to as petroleum in this subsection, would be consumed during construction activities as the city grows under the HEU. Fuel use by construction equipment would be the primary energy resource consumed during development activities, and VMT associated with the transportation of construction materials (e.g., deliveries) and worker trips would also result in petroleum consumption. Whereas on-site, heavy-duty construction equipment and delivery trucks would predominantly use diesel fuel, construction workers would generally rely on gasoline-powered vehicles to travel to and from construction sites. State regulations such as LCFS would reduce the carbon intensity of transportation-related fuels, and all construction projects would be required to comply with CARB's Airborne Toxic Control Measures, which restrict heavy-duty diesel vehicle idling to five minutes. Since petroleum use during construction would be temporary at each location and required to conduct development activities, it would not be unnecessary, wasteful, or inefficient.

Operational Use. The development of HEU housing sites would consume fuel in the form of petroleum (i.e., gasoline and diesel) over the next approximately 20 years. The trips that consume fuel would primarily be attributable to people traveling to or from Clayton for work, shopping, school, or other reasons. The amount of fuel these trips would consume was estimated using 2040 Contra Costa County emissions inventory data from EMFAC2021 v1.0.2 and VMT estimates prepared for the HEU (see Section 4.17, Transportation). The estimated diesel and gasoline fuel consumption associated with implementation of the HEU is summarized in Table 4.6-4.

As shown in Table 4.6-4, daily diesel and gasoline fuel consumption in 2040 with the HEU is anticipated to be approximately 2,487 gallons and 15,600 gallons, respectively. Compared to 2040 conditions without the HEU, this represents an increase of approximately 321 gallons of diesel fuel consumed, daily, and an increase of approximately 2,011 gallons of gasoline fuel consumed, daily.ⁱⁱ However, overall petroleum consumption per service population is expected to decrease approximately 2.3 percent, from 1.29 gallons of fuel/day/SP under 2040 conditions without the HEU to 1.26 gallons of fuel/yr/SP under 2040 with HEU conditions. Total VMT and vehicle fuel use in the City is generally anticipated to increase over the next approximately 20 years, while VMT per capita is anticipated to decrease.

ⁱⁱ These estimates are based on average fuel economy in Contra Costa County during the 2040 calendar year.

Table 4.6-4
Estimated HEU Vehicle Fuel Consumption

Metric	Vehicle Fuel Consumption (Gallons Per Day)				
	2020 Existing	2040 Without HEU	2040 With HEU	2020 to 2040 HEU Change	2040 Without HEU to 2040 With HEU Change
Total Diesel Consumption	3,474	2,167	2,487	-995	319
Total Gasoline Consumption	19,106	13,589	15,600	-3,500	2,011
Total Petroleum Consumption	22,580	15,756	18,087	-4,495	2,330
Service Population	11,954	12,233	14,397	2,443	2,164
Petroleum Consumption Efficiency (gal/day/SP) ^(A)	1.89	1.29	1.26	-0.63	-0.03
Source: MIG, 2022 (See Appendix C), Fehr and Peers 2022 (A) Totals may not equal due to rounding					

Petroleum-fueled vehicles are necessary for transportation while the state enacts its long-term plans to shift to non-petroleum vehicles. In addition, petroleum-fueled vehicles will become more efficient over time, as shown by modeling of 2020 Existing Conditions, 2040 Without HEU conditions, and 2040 With HEU conditions. The HEU's petroleum consumption is therefore not wasteful or unnecessary.

As shown in Table 4.6-4, petroleum consumption per service population would slightly decrease with the implementation of the HEU. Since the efficiency of petroleum consumption would improve under the 2040 with HEU conditions compared to 2040 without HEU conditions, the HEU's use of petroleum would not be considered wasteful or inefficient. This impact would be less than significant.

It is noted Mitigation Measures GHG-3 to GHG-5 would support the transition to electric vehicles and reduce vehicles trips and VMT, decreasing petroleum consumption and further reducing the less than significant magnitude of the HEU's petroleum consumption.

Level of Significance Before Mitigation

Less than significant. As described in the preceding analysis, the HEU would not result in the wasteful, inefficient, or unnecessary consumption of energy resources.

Mitigation Measures

None required. No significant impact has been identified, though it is noted that Mitigation Measures GHG-1 to GHG-5 would further reduce the magnitude of the less than significant impact.

Renewable Energy

Impact ENG-2 – Would the HEU conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Analysis of Impacts

The HEU would not conflict with nor obstruct a state or local plan adopted for the purposes of increasing renewable energy or energy efficiency. The Title 24 Building Code contains energy efficiency standards for residential and non-residential buildings. These standards address electricity and natural gas efficiency in lighting, water, heating, and air conditioning, as well as the effects of the building envelope (e.g., windows, doors, walls and roofs, etc.) on energy consumption. The 2019 Title 24 Building Code required the installation of solar panels on new residential development under three stories. The latest update to these standards, codified in 2022, extends solar requirements and introduces battery storage requirements to additional building types, including high-rise multifamily buildings, office buildings, and retail buildings. The City would enforce the 2019 Title 24 Building Code during design review and building permit approval processes. Other state plans, such as increasing the RPS portfolio, and increasing fuel efficiency and the number of electric vehicles on the road, would be implemented at the state level.

As shown in Section 4.6.2, the HEU includes policies to ensure future development of housing sites does not conflict with renewable energy plans. For example, Policy 6.2 promotes the use of clean, energy-efficient appliances in new homes. In addition, the HEU would implement mitigation measures that would support renewable energy and energy efficiency, and further reduce a less than significant impact. Mitigation Measure GHG-1 would require the City to consider the adoption of a Zero Net Energy ordinance, and Mitigation Measure GHG-5 would require project-level GHG assessments for the HEU's housing projects that could result in incorporating on-site renewable energy generation into the project design.

For the reasons listed above, the HEU would comply with applicable state standards and would not impede any plan related to increasing renewable energy or energy efficiency.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required. No significant impact has been identified, though it is noted Mitigation Measures GHG-1 to GHG-5 would further reduce the magnitude of the less than significant impact.

Cumulative Impacts

Impact ENG-3 – Would the HEU cause substantial adverse cumulative impacts with respect to energy?

Analysis of Impacts

The analysis presented in Impact ENG-1 and ENG-2 is cumulative in nature. As described in the analyses, the HEU would not result in the unnecessary, inefficient, or wasteful use of energy resources. The HEU would not conflict with or obstruct a state or local plan for increasing renewable energy or energy efficiency.

Level of Significance Before Mitigation

Less than Significant.

Mitigation Measures

None required. No significant impact has been identified, though it is noted Mitigation Measures GHG-1 to GHG-5 would reduce energy consumption from electricity, natural gas, and petroleum, further reducing the less than significant impact.

4.6.5 References

- ¹ United States Environmental Protection Agency. *California State Energy Profile*. (2021). <https://www.eia.gov/state/?sid=CA>. [Accessed March 2022].
- ² California Energy Commission (CEC). *2020 Total System Electric Generation in Gigawatt Hours*. (2021). <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation> [Accessed March 17, 2022].
- ³ California Energy Commission (CEC). *California Energy Consumption Database – Electricity Consumption by County*. Query parameters: County – All, Sector – All Year – 2020. (2021) <http://ecdms.energy.ca.gov/elecbycounty.aspx> [Accessed March 17, 2022].
- ⁴ City of Clayton. New Residents. <https://claytonca.gov/new-residents/> [Accessed March 17, 2022].
- ⁵ Pacific Gas and Electric Company. *PG&E Overview*. (2018). https://www.pgecorp.com/corp_responsibility/reports/2018/bu01_pge_overview.html [Accessed March 2022].
- ⁶ Pacific Gas and Electric Company. *Clean Energy*. (2018). https://www.pgecorp.com/corp_responsibility/reports/2018/bu06_clean_energy.html [Accessed March 2022].
- ⁷ California Energy Commission. *Gas Consumption by County*. (2022). <http://www.ecdms.energy.ca.gov/gasbycounty.aspx> [Accessed March 2022].
- ⁸ California Department of Finance. *E-4 Population Estimates for Cities, Counties, and the State, 2021-2022 with 2020 Census Benchmark*. (2022). <https://dof.ca.gov/forecasting/demographics/estimates/e-4-population-estimates-for-cities-counties-and-the-state-2021-2022-with-2020-census-benchmark/> [Accessed July 2022].
- ⁹ Pacific Gas and Electric Company. *Learn About the PG&E Natural Gas System*. (2022). https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/natural-gas-system-overview.page [Accessed March 2022].
- ¹⁰ United States Energy Information Administration (USEIA). *Energy Use Estimates Per Capita by End Use Sector, Ranked by State, 2018*. (2021). [https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/rank_use_capita.html&sid=USUnited States - SEDS - U.S. Energy Information Administration \(EIA\)](https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/rank_use_capita.html&sid=USUnited States - SEDS - U.S. Energy Information Administration (EIA)) [Accessed May 29, 2021].
- ¹¹ California Energy Commission (CEC). *2019 California Annual Retail Fuel Outlet Report Results (CEC-A15)*. (2020). <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting> [Accessed September 22, 2020]
- ¹² United States Environmental Protection Agency and National Highway Traffic and Safety. *Medium- and Heavy-Duty Fuel Efficiency Standards*. (2016). <https://www.transportation.gov/briefing-room/epa-and-dot-finalize-greenhouse-gas-and-fuel-efficiency-standards-heavy-duty-trucks> [Accessed May 1, 2019].
- ¹³ Energy Commission Adopts Updated Building Standards to Improve Efficiency, Reduce Emissions From Homes and Businesses. (2021). <https://www.energy.ca.gov/news/2021-08/energy-commission-adopts-updated-building-standards-improve-efficiency-reduce-0> [Accessed March 17, 2022].
- ¹⁴ California Air Resources Board (CARB). *Draft 2022 Scoping Plan Update*. (2022). <https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf> [Accessed July 2022].

4.7 – GEOLOGY AND SOILS

This EIR chapter addresses geology and soils impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”) including earthquake fault rupture, seismic hazards, liquefaction, landslides, soil erosion and unstable soils. Potential impacts to paleontological resources are also analyzed in this chapter.

4.7.1 *Environmental Setting*

Seismic Activity

The Bay Area is an area well known for its earthquake faults and seismicity. The region straddles two tectonic plates: the North American Plate and the Pacific Plate. Movement along this boundary has resulted in many earthquakes from the region’s numerous faults. Exhibit 4.7-1 (Regional Faults and Historic Earthquakes) shows the location of the Planning Area in relation to regional faults and illustrates earthquake magnitudes in the area. The Hayward Fault is located west of the Planning Area in the East Bay. The San Andreas Fault is also nearby, running along the western coast of California. The Mt. Diablo Fault lies to the southwest of the Planning Area, the Concord - Green Valley Fault is west of the Planning Area, and the Greenville Fault runs through the eastern portion of the Planning Area.¹

Unmapped faults or faults that are relatively distant from the Planning Area can produce earthquakes that may have damaging impacts on Clayton. One significant earthquake affecting the Planning Area was the 1989 Loma Prieta Earthquake (magnitude 6.9). The old buildings in the City withstood the shaking, and the Planning Area remained largely unaffected.²

Other historic earthquakes have affected the Planning Area. A magnitude 7.8 earthquake in 1906 centered around the Gulf of the Farallones, just a few miles offshore of San Francisco, reported to have caused notable damage to the Bay Area, although Clayton made it through with only minimal damage.³ A primary source reported ‘No chimneys were thrown down, and no dishes nor glassware were knocked off shelves, but milk in pans was skimmed by the rocking motion’ at the northern base of Mt. Diablo, in the City of Clayton.⁴

Ground Shaking

Ground shaking is the movement of the earth’s surface in response to a seismic event and, in general, is the primary cause for the collapse of buildings and other structures, injury, and loss of life. The intensity of the ground shaking is a function of the magnitude of the earthquake, distance from the fault movement, the characteristics of the surface and subsurface, geology, and a community’s building types. Because of the Planning Area’s proximity to several previously-identified faults, the Planning Area will undoubtedly experience earthquake-related ground shaking in the future.⁵ As shown in Exhibit 4.7-2 (Local Seismic Hazards), this ground shaking could result in local seismic hazards such as landslides, liquefaction, settlement/expansive soils, subsidence and soil erosion within the Planning Area.

Landslides and Liquefaction

Liquefaction is a phenomenon that occurs when water-laden, loose, and cohesionless soils are subject to intense seismic shaking and form a quicksand- or fluid-like soil condition below the ground surface. As a result, structural damage may occur as building foundations lose ground support. Liquefaction typically occurs in areas where the groundwater is less than 30 feet from the surface and where the soils are composed of predominantly poorly-consolidated fine sand.

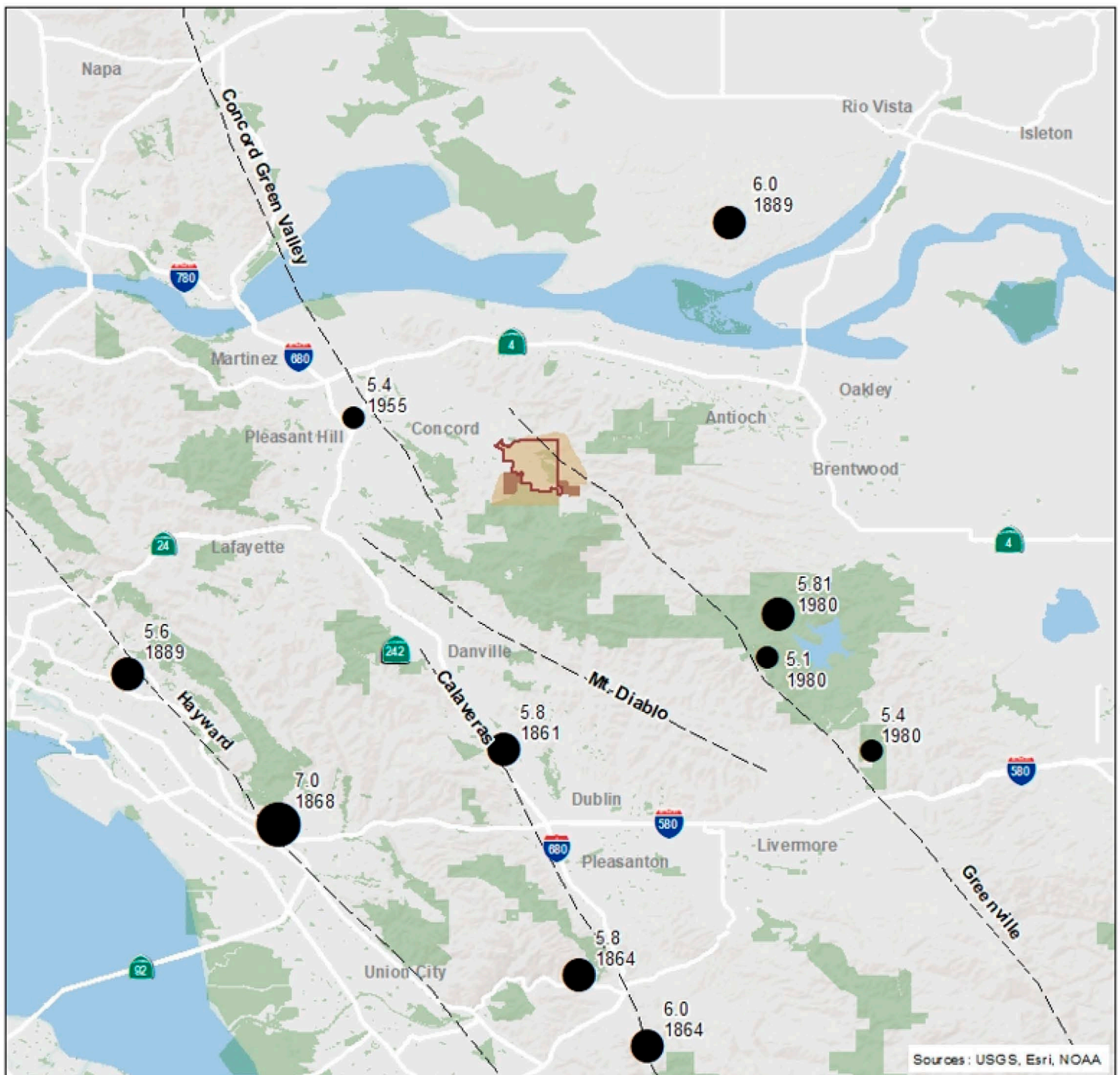
A landslide is the downhill movement of masses of earth material under the force of gravity. The factors contributing to landslide potential are steep slopes, unstable terrain, and proximity to earthquake faults. Landslides and liquefaction represent two seismically-induced hazards. Earthquake-induced landslides are secondary earthquake hazards that occur from ground shaking. Seismically-induced slope failure can be expected within the south and southwest of the Planning Area, near Mt. Diablo and the CEMEX Clayton Quarry, as well as in the hillier northern and eastern portions of the Planning Area. Clayton is considered a fault, landslide, and liquefaction zone due to its proximity to faults, soil composition, and terrain.⁶

Settlement/Expansive Soils

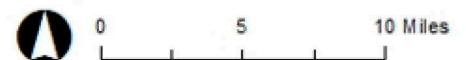
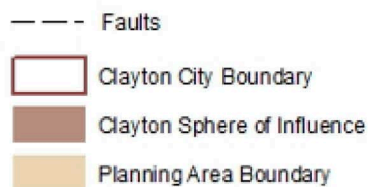
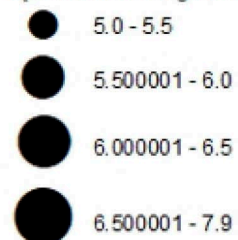
Settlement of the ground may occur in poorly-consolidated or particular soils or improperly compacted fills during earthquake shaking, though the problem could also arise during heavy rains. Consequently, structural damage may take place. Expansive soils tend to swell with soil moisture increase and shrink during soil moisture decrease. The volume changes that the soils undergo in this repetitive process can stress and damage slabs and foundations if precautionary measures are not taken. Differential settlement can result from expansive soils if a foundation is constructed on two materials having different settling/expansion characteristics, such as rock and soil. The soil types in the Planning Area are primarily Altamont-Fontana Complex, Los Osos clay loam, and Perkins gravelly loam, with smaller percentages of Zamora silty clay loam, Los Gatos loam, Gilroy clay loam, and Capay clay.⁷ Clay soils are generally expansive.

Subsidence

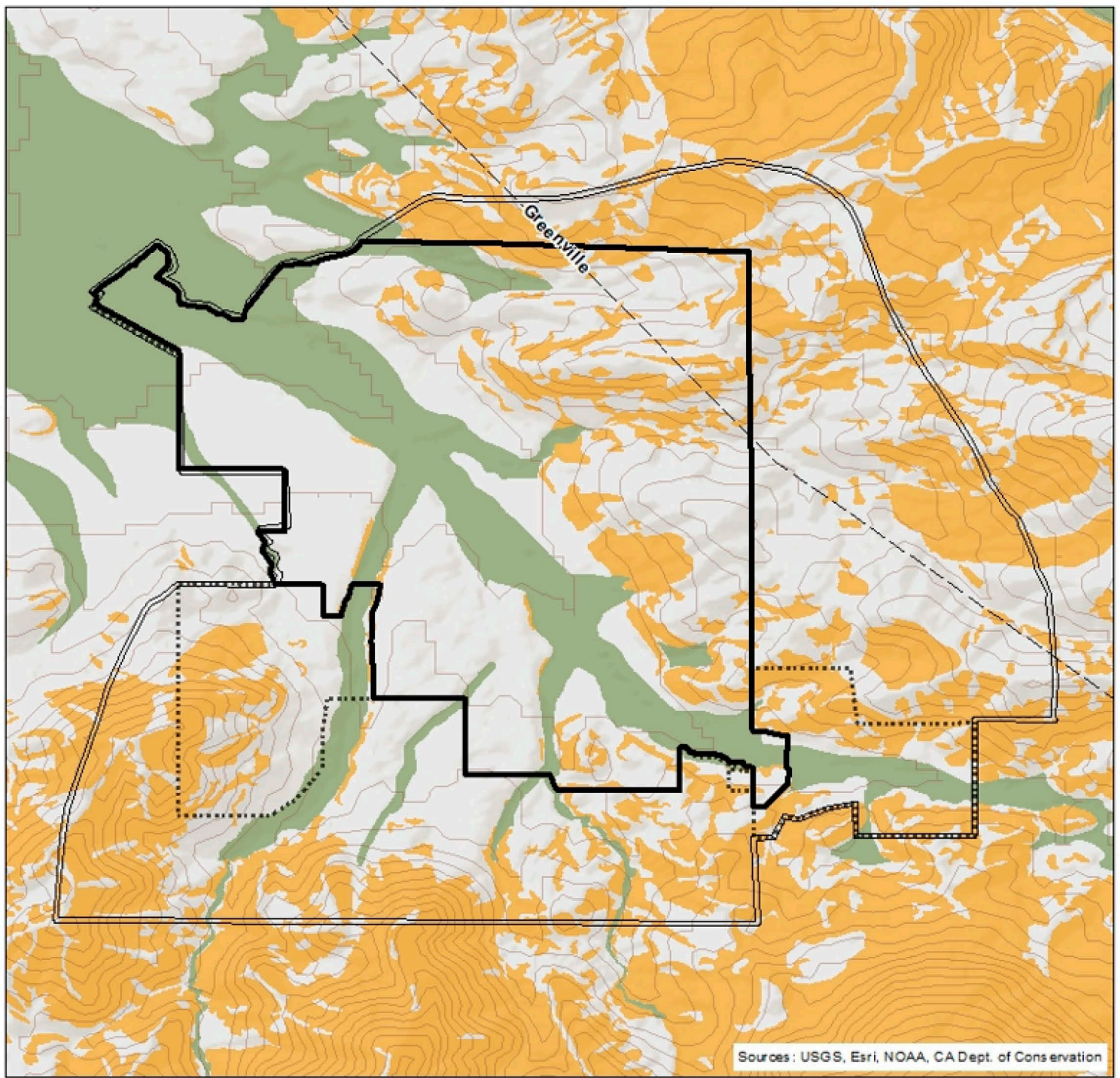
Subsidence is the lowering of the land surface caused by a variety of man-made and natural causes. Subsidence can be caused by the natural compaction of soil due to passage of time, ground shaking due to strong vibrations by earthquakes, and by underground erosion from rapid groundwater flow or excessive groundwater withdrawal. Subsidence in the form of compaction of an aquifer is one of the consequences of excessive groundwater withdrawal. The water itself supports part of the load of the overlying materials and keeps the grains of the aquifer loosely packed. When water is removed from the intergranular spaces, the weight of the overlying rocks packs the grains of soil together more closely. This cannot only permanently reduce the capacity of the aquifer, but can also cause serious lowering, or subsidence, of the ground overlying the aquifer. Areas most vulnerable to this type of subsidence are those underlain by loose, compressible clay-rich soils, in an area with excessive groundwater withdrawal and general lowering of the water table. There are several wells in the northwest of the Planning Area in a small neighborhood of older large-lot single-family residences, and a well in the center of the City that is used for landscape irrigation. Many of these wells are all listed as remediation/groundwater monitoring wells.⁸



Epicenters & Magnitude



This Page Intentionally Left Blank.



This Page Intentionally Left Blank.

Soil Erosion

Erosion is a natural process that occurs over time and can be caused by either wind or water moving over soils. The natural erosion process is an important factor in building up fertile valley soils. However, soil erosion can become a problem when human activities accelerate the rate at which soils are being displaced. Non-point sources including impervious surfaces, unsound farming practices, over-grazing, construction activities, and road construction (particularly unpaved roads) can all accelerate the rate at which soils are removed from hillsides. Point sources such as industrial wastewater discharges, mining activities, wastewater treatment plants, commercial and residential land uses, and agricultural operations can affect erosion rates through increased storm water velocity, disturbance of natural drainage patterns, and water discharges. Soil erosion can leave silt-choked streams, gullied hillsides, and damaged farmland. Erosion may be a concern in the Planning Area, especially during initial grading stages of future development under the proposed HEU.

The Oakhurst Geological Hazard Abatement District (GHAD) exists within the City of Clayton.⁹ A geologic hazard abatement district is a mechanism to respond to broadly-defined geologic hazards, including but not limited to earthquakes, landslides, soil erosion, and other unnatural movement of earth.¹⁰ The City Council acts as the Board of Directors for the Oakhurst GHAD, and it is administered by the General Manager.

Paleontological Resources

Paleontology is a branch of geology that studies the life forms of the past, especially prehistoric life forms, through the study of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this section, paleontological resources are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints, from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

The University of California Museum of Paleontology (UCMP) specimens database lists nearly 15,000 Middle Miocene to Late Pleistocene vertebrate records for Contra Costa County. The UCMP localities database includes 29 Miocene-Pleistocene sites within the Mt. Diablo Quadrangle map. In addition, there are over 2,000 known paleontological resources within Contra Costa County.

Paleontological resources preserve an aspect of the Bay Area's scientific prehistory that is important in understanding the development of the region as a whole. Protection of potential paleontological resources can be achieved by estimating the probability of finding such resources in the project area, looking for formations in which they occur, and taking precautions, such as construction monitoring in areas with equivalent or similar formations, to avoid damaging sites.

4.7.2 Regulatory Framework

Federal

National Earthquake Hazards Reduction Program

Established by Congress in 1977, the National Earthquake Hazards Reduction Program (NEHRP) leads the federal government's efforts to reduce the fatalities, injuries, and property losses caused by earthquakes. The four basic NEHRP goals are:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

In its initial NEHRP authorization, and in subsequent reauthorizations, Congress has recognized that several key federal agencies can contribute to earthquake mitigation efforts.

Federal Antiquities Act of 1906

Subsection 8.16.2 of this Act protects paleontological resources on federal lands.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Special Studies Zones Act was signed into law in 1972 (in 1994, it was renamed the Alquist-Priolo Earthquake Fault Zoning Act.) The primary purpose of the Act is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The Act dictates that cities and the State Geologist are to delineate "Earthquake Fault Zones" with setbacks along faults that are "sufficiently active" and "well defined."¹¹

California Government Code Section 65302(g)

This statute requires cities' and counties' general plans to include a safety element that provides for the protection of the community from unreasonable risks associated with the effects of seismically-induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards. The element must also include mapping of known geologic or seismic hazards.

Seismic Hazard Mapping Act

The Alquist-Priolo Earthquake Fault Zoning Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. In 1990, the state legislature passed the Seismic Hazards Mapping Act (SHMA), which addresses non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction and seismically-induced landslides. The California Geological Survey (CGS) is the principal state agency charged with implementing the Act. Pursuant to the SHMA, the CGS is directed to provide local governments with seismic hazard zone maps that identify areas susceptible to liquefaction, earthquake-induced landslides and other ground failures.¹² The goal is to minimize loss of life and property by identifying and mitigating seismic hazards. The seismic hazard zones delineated by the CGS are referred to as "zones of required investigation."¹³ Site-specific geological hazard investigations are required by the SHMA when construction projects fall within these areas.

Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas.

California Building Code

The state regulations protecting structures from seismic hazards are contained in the California Code of Regulations, Title 24 (the California Building Code [CBC]), which is updated on a triennial basis. These regulations apply to public and private buildings in the state. Provisions of the CBC address (among other topics) fire safety, access for disabled persons, and seismic-resistant construction design.

California Environmental Quality Act (CEQA)

CEQA has a single directive on paleontology in Appendix G – the Environmental Checklist Form, in which it asks whether the project would “directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.” CEQA requires that impacts to paleontological resources be assessed and mitigated on all discretionary projects, public and private under Subsection 8.16.2.2 of the federal Antiquities Act of 1906.

California Public Resources Code Chapter 1.7, Section 5097.5 (Stats. 1965, c. 1136, p. 2792)

This statute defines any unauthorized disturbance or removal of a fossil site or fossil remains on public land as a misdemeanor and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources under CEQA Subsection 8.16.2.2 of the federal Antiquities Act of 1906.

Surface Mining and Reclamation Act (SMARA) of 1975

The California Public Resource Code, Division 2: Geology, Mines and Mining, Chapter 9: The California Surface Mining and Reclamation Act (SMARA), mandates that the State Board of Mining and Geology Board (SMGB) and Division of Mines and Geology (DMG) prepare a mineral resource report for each county in California. SMARA regulates the permitting of mining operations, provides for inspections during the life of the mine, and contains provisions to ensure that remediation occurs after completion of mining operations.

Regional

Association of Bay Area Governments (ABAG,) Multi-Jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area

ABAG adopted its Multi-Jurisdictional Local Hazard Mitigation Plan (*Taming Natural Disasters*) as an overall strategy to maintain and enhance disaster response of the region, as well as to fulfill the requirements of the Federal Disaster Mitigation Act of 2000. Each partner jurisdiction (including Clayton) is required to submit an “annex” document that contains jurisdiction-specific hazard mitigation strategies to attach to the Multi-Jurisdictional Plan. The ABAG Plan focuses on: (1) identifying natural hazards the community and region face (e.g., earthquakes, severe weather); (2) assessing the community’s and region’s vulnerability to these hazards; and (3) identifying specific preventive actions that can be taken to reduce the risk from the hazards. The City adopted its Local Hazard Mitigation Plan and formally adopted the ABAG plan in December 2021.¹⁴ Adoption of the ABAG Multi-Jurisdictional Plan allows the City to become eligible for federal disaster assistance.

Local

City General Plan

Government Code Section 65302.1 requires that a safety element be included in every California jurisdiction's general plan. The safety element establishes policies and programs for the protection of the community from fires, flooding, geologic and other natural and human caused hazards. The City's 2000 Safety Element¹⁵ contains the following goals, objectives, and policies regarding geology, seismic hazards, and soil conditions:

Goal 1. To reduce potential risk to new development by proper planning and to minimize existing risk through coordinated City-County actions.

Geologic Hazards

Objective 1. To provide means to minimize geologic hazards to property from unstable hillside slopes and reclaimed areas.

Policy 1a. Evaluate extensions of land uses into areas characterized by slopes of 15% and/or slopes indicating instability through geologic studies with regard to the safety hazard prior to land use decisions such as General Plan amendments, rezonings, or project approvals.

Policy 1b. Restrict development on slopes over 26% as they are not suitable for types of development that require extensive grading or other land disturbance without adequate analysis.

Policy 1c. Prevent contouring of slopes greater than 3:1 without special mitigation or circumstance.

Policy 1d. Require hillside lots to be designed to provide a stable, buildable site and driveway and parking location.

Policy 1e. Require roads constructed in slope areas to be engineered to standards to prevent excessive maintenance and repair costs.

Policy 1f. Prevent slope cuts that may undermine the toe of the slope.

Objective 2. To reduce public exposure to geologic risk.

Policy 2a. Identify boundaries of all known areas with geologic instability.

Policy 2b. Designate as Open Space any areas with severe geologic limitations which cannot be mitigated.

Policy 2c. Require soils/geologic studies for any areas with potential risk of ground failure prior to development.

Policy 2d. Prepare a constraints map(s) identifying the location of geologic constraints including slope instability, expansive soil and high erosion potential.

Policy 2e. Cooperate with other jurisdictions to monitor changes in geologic conditions.

Objective 3. To reduce the potential for manmade hazards to interact with natural geologic hazards.

Policy 3a. Consider the relationship between manmade hazards and existing geologic hazards in land use decisions.

Policy 3b. Provide adequate protection to utility lines and pipelines placed in areas of geologic hazard.

Policy 3c. Review placement of structures and facilities in areas of geologic hazard and the effects of construction and operation of those facilities.

Objective 4. To determine the level of risk that the community is willing to accept in the form of exposure and to identify and mitigate geologic hazards.

Policy 4a. Prevent development that increases risk exposure to persons or existing development.

Policy 4b. Identify the potential and level of risk for development located in areas of geologic or other constraints.

Policy 4c. Develop a rigorous procedure of technical review and inspection of proposed mitigation measures in areas of geologic hazard.

Policy 4d. Identify every potentially hazardous structure in the City, particularly critical facilities in high to medium risk areas for landslide, earthshaking or flooding.

Seismic Hazards

Objective 5. To continue to pursue information regarding the location of faults within the planning area.

Policy 5a. Establish a development constraints map(s) with all known information regarding fault location for development reviews.

Policy 5b. Require identification and mitigation studies prior to development where there is probable cause to assume the location of a fault.

Objective 6. To provide adequate identification of potential seismic effects in relation to the setting for development.

Policy 6a. Identify the extent of intensity of ground shaking from vicinity faults.

Policy 6b. Identify areas susceptible to liquefaction.

Policy 6c. Identify areas susceptible to subsidence.

Objective 7. To establish an appropriate level of risk mitigation to seismic activity.

Policy 7a. Maintain seismic standards at a level of construction commensurate with the risk.

Policy 7b. Prepare an inventory of structures where structural mitigation is necessary.

Policy 7c. Establish a setback for development adjacent to the fault.

Policy 7d. Reinforce and anchor all parapets, chimneys, signs, appendages and facades, to withstand ground shaking.

Clayton Municipal Code

The Clayton Municipal Code (CMC) addresses the following aspects of geologic and soil constraints: Title 15, Buildings and Construction; Chapter 15.02, California Building Code with Amendments; and Chapter 15.60, Grading Rules and Regulations.¹⁶ CMC Title 16, Land Development and Subdivision, establishes requirements for developments in new subdivisions to be connected to public water and sewer systems, unless exemptions are made by the City Council. Any proposed new well or wastewater treatment system in the City would be subject to the permitting requirements of the County Health Officer in accordance with CMC Title 13, Water and Sewers.

4.7.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to geology and soils 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; or
 - 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 HEU, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (2021), 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; or
- f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

4.7.4 Impacts and Mitigation Measures

This section describes potential impacts which could result from the implementation of the HEU and recommends mitigation measures as needed to reduce significant impacts.

Faults, Liquefaction, and Seismic-Related Ground Failure

Impact GEO-1 –Does the HEU 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; or iv) Landslides?

Analysis of Impacts

There are a number of geologic, seismic, soil constraints in and around the Planning Area. The Greenville Faultline intersects the northeastern portion of Clayton, and the Concord-Green Valley and Mt. Diablo fault lines neighbor the City to the west and southwest, respectively. Regional earthquakes in the Bay Area have and will continue to lead to moderate ground shaking in Clayton. Soil composition and seismic activity can induce slope failure and the occurrence of landslides in parts of the Planning Area, and more specifically, within the steeper south and southwest portions of Clayton located against Mt. Diablo and the quarry, and the neighborhoods around the hills in the north and east sections of the City. There is a large liquefaction zone diagonally located within Clayton. This liquefaction zone is associated with Mt. Diablo Creek, Mitchell Creek, and Donner Creek among other smaller bodies that flow down from Mt. Diablo State Park and the surrounding hills, eventually converging within the City. The liquefaction zone expands at the northwestern corner of the City, greatly increasing in surface area once outside of Clayton in neighboring Concord. Clayton may experience liquefaction in the event of seismic activity due to local and regional faults, as well as sandy soil composition associated with local creek beds. Clayton's location and physical surroundings can present potential geological hazards. In addition, the Oakhurst Geological Hazard Abatement District is located in the northeastern portion of the City because of slope and soil erosion in the area. None of the proposed housing sites are located within the district, and as such, the impact would be less than significant.

The Safety Element of the current General Plan contains goals and policies that acknowledge these potential risks and require structures to provide adequate level of safety and mitigation for the community. Objective 6 and Policies 6a-6c provide for the adequate identification of potential seismic effects in relation to areas susceptible to liquefaction and subsidence. Objective 7 and Policies 7a-7d establish specific mitigation for seismic activity such as requiring fault setbacks and reinforcing structural externalities that may be susceptible to ground shaking. The City requires the identification of areas susceptible to ground shaking as well as liquefaction. The City also restricts development of land with a slope of 26 percent or greater, and an evaluation of any development expansion on instable and/or 15 percent slopes. Any areas with severe geologic limitations are designated as Open Space.

In addition to the General Plan, the California Building Code (CBC) has guidelines on building design and construction based on seismic constraints and expected ground shaking throughout California. The City's Municipal Code (CMC) includes the CBC, the California Residential Code,

and the California Existing Building Code. Chapter 15.60 of Title 15 of the CMC, Grading Rules and Regulations, has guidelines for soil and geology engineering reports for new developments in the City. Development projects are subject to slope guidelines and seismic design constraints in accordance with the state's building codes, if applicable. With implementation of the above General Plan objectives and policies, the CBC, and guidelines for development on slopes and fault-lines in the municipal code, potential impacts related to geologic and seismic constraints on future development within the Planning Area would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None Required.

Soil Erosion

Impact GEO-2 – Would the HEU result in substantial soil erosion or the loss of topsoil?

Analysis of Impacts

Much of the northeastern portions of the City are in landslide zones. These slopes in and around the City can be subject to erosion. Additionally, large liquefaction zones intersect the City from the southeastern corner to the northwestern. Soils in and surrounding Clayton's creek systems are susceptible to erosion by water. Local soil erosion can happen in the Planning Area as future developments occur under the HEU on vacant and/or undeveloped land.

The Safety Element of the General Plan includes language on public safety with regards to possible soil erosion in the area. Objective 2, Policy 2d instructs the preparation of constraint maps identifying the location of geologic constraints including slope instability, expansive soil and high erosion potential. These maps are part of the Oakhurst GHAD's mandate. Areas with severe geologic limitations are designated as Open Space.

Chapters 15.58, 15.60, and 15.70 of the CMC establish measures and requirements to prevent soil erosion. Chapter 15.58 addresses flood hazards such as soil erosion in Clayton's floodways. Chapter 15.60 details planning and grading regulations regarding soil erosion, which includes that exposed banks and slopes of any fill/excavation need to be protected from erosion through planting, walls or terraces, or other approved method. All erosion control standards are subject to approval by the City Engineer. Additionally, an applicant that has ceased work before completion of a project for any reason must take all necessary measures to stabilize the site and leave the area in a condition protects adjoining properties from erosion and other instabilities. Chapter 15.70 outlines the necessity of trees to the aesthetic and physical characteristics of Clayton, including their importance in mitigating soil erosion. With implementation of the above objectives, policies and regulations for erosion control in the municipal code, potential impacts related to erosion from future development within the Planning Area would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Slope Stability and Landslides

Impact GEO-3 – Would the HEU be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the HEU, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Analysis of Impacts

As indicated previously, the City of Clayton has a number of geologic, seismic, and soil constraints. The Greenville Faultline cuts through the northeastern corner of the City, and several faults run parallel to the Planning Area. Clayton and the greater Bay Area region overall regularly experience ground shaking from seismic activity. Future seismic events could trigger landslides, liquefaction, or subsidence. Liquefaction zones exist along Clayton creeks and tributaries. The loose, sandy alluvium soils found in these types of waterways create conditions for liquefaction during moderate to severe seismic activity.

Other portions of the City are characterized by clay loam type soils and can be susceptible to subsidence. Areas vulnerable to subsidence are underlain by compressible clay-rich soils and excessive groundwater withdrawal. As previously stated, there is a well in the center of Clayton and several in the northwestern portion. However, these wells are categorized as remediation/groundwater monitoring wells, are used for landscape irrigation, or serve a small cluster of older houses built along on a private lane in the City. More recently-built single-family residences in the City, as well as single-lot multifamily residential developments, have been connected to public water lines in adjacent public rights-of-way, consistent with the intent of CMC Section 16.20.053. Any proposed new well or wastewater treatment system in the City would be subject to the permitting and water quality and yield requirements of the County Health Officer in accordance with CMC Title 13, Water and Sewers.

Slopes in the northeastern and eastern parts of Clayton may be subject to landslides as a result of seismic activity (refer to Impact GEO-1 for details of liquefaction and landslides). Due to the presence of local and regional faults, sandy soils, and shallow groundwater, portions of the City may experience subsidence, liquefaction, or landslides during strong seismic events. These seismic-related conditions could affect structures and their occupants of future development under the HEU. The CBC has guidelines on building design and construction based on seismic constraints and expected ground shaking throughout California. During the City's existing development review process, proposed private projects are evaluated against the seismic design constraints of the CBC. With implementation of the above General Plan objectives and policies and the CBC and CMC, potential impacts related to seismically-induced constraints on future development within the Planning Area would be reduced to less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Expansive Soils

Impact GEO-4 – Would the HEU be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (2021), creating substantial direct or indirect risks to life or property?

Analysis of Impacts

Land within Clayton is characterized by varieties of clay loam soils, which are generally considered expansive soils. Clay-type soils that become saturated with water can become expansive, and could affect structures and occupants of future developments in the City under the HEU. The Safety Element of the current General Plan contains Objective 2, Policy 2d, which acknowledges the potential geologic risks of expansive soils, and requires the identification of areas where this risk can occur. In addition to the General Plan, the CBC has guidelines on building design and construction based on soil conditions and limitations in California. During the City's existing development review and building plan check process, proposed private projects are evaluated against the soil design constraints of the CBC. With implementation of the above General Plan objectives and policies and the California Building Code, potential impacts related to soil constraints, including expansive soils, would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Soil Drainage

Impact GEO-5 – Would the HEU have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Analysis of Impacts

As previously indicated, the Planning Area contains a number of soil constraints. Land in and around Clayton's creeks is an alluvium sediment, while other areas are made up of clay-loam varieties. There may be portions of the City where local soils may constrain the placement of septic tanks or similar wastewater treatment facilities. Soil constraints like those previously outlined could affect structures of future development under the HEU. The CBC has general guidelines on infrastructure design and construction based on soil conditions and limitations in California. During the City's existing development review and plan check process, proposed private projects are evaluated against the soil design constraints of the CBC, including those requiring septic or alternative wastewater treatment systems. The City's Municipal Code (MC) dictates in Chapter 15.56 that all excavations and openings, such as septic tanks, need to be filled with dirt, sand, or small rocks after the removal of a building. With implementation of the above General Plan objectives and policies, the CBC and the CMC, potential impacts related to soil constraints, including soils not capable of accommodating septic systems where proposed for future development within the Planning Area, would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Paleontological Resources***Impact GEO-6 – Would the HEU directly or indirectly destroy a unique paleontological resource or site or unique geological feature?***Analysis of Impacts

The University of California Museum of Paleontology (UCMP) specimens database lists nearly 15,000 Middle Miocene to Late Pleistocene vertebrate records for Contra Costa County. The UCMP localities database includes 29 Miocene-Pleistocene sites within the Mt. Diablo Quadrangle map. In addition, there are over 2,000 known paleontological resources within Contra Costa County. According to soils maps, the Planning Area is underlain in some areas with soils of the Middle Miocene to Late Pleistocene type, which have the potential to yield significant paleontological resources and could be impacted by project-related excavations should they continue to depths beneath the Holocene deposits. Pleistocene vertebrate localities are also particularly abundant in the area. The Planning Area should therefore be considered moderately sensitive for undiscovered paleontological resources. As such, sub-surface construction activities in excess of 10 feet in depth such as grading and trenching could result in a significant impact to unknown paleontological resources, such as fossils from mammoths, saber-toothed cats, rodents, reptiles, and birds, if encountered. This would represent of potentially significant impact related to destruction of paleontological resources, and mitigation is required.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

MM GEO-1 In the event that fossils or fossil-bearing deposits are discovered during grading or construction of the Project, excavations within 50 feet of the find shall be temporarily halted until the discovery is examined by a qualified paleontologist, in accordance with the applicable Society of Vertebrate Paleontology standards (Standard Procedures for the Assessment and Mitigation of adverse Impacts to Paleontological Resources, Society of Vertebrate Paleontology, 2010), and assessed for significance under CEQA. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.

Level of Significance After Mitigation

Implementation of MM GEO-1 would ensure a qualified paleontological monitor, as defined by the Society of Vertebrate Paleontology, is present during any ground disturbance activities that would penetrate Pleistocene (or older) deposits. If fossils or fossil-bearing deposits of Pleistocene age are discovered during construction, all excavation activity would cease within a 100-foot radius until a qualified paleontologist has the opportunity to evaluate the significance of the find and provide any recommendations deemed necessary to the County. This would reduce potential impacts to paleontological resources that may be discovered during project construction. Therefore, impacts related to destruction of paleontological resources or unique geologic features would be less than significant with mitigation.

Cumulative Impacts

Impact GEO-7 – Would the HEU cause substantial adverse cumulative impacts with respect to geology and soils?

Analysis of Impacts

The City of Clayton and its Planning Area contain a variety of geologic, seismic, and soil constraints. The Greenville Fault crosses through the northeastern portion of Clayton, and the Concord-Green Valley Fault intersects the neighboring city of Concord. Much of the eastern portion of the City and Planning Area, as well as the southern Planning Area are designated as landslide zones. Seismically-caused ground shaking in Clayton could trigger landslides. Seismic events in Clayton can create potential risks for liquefaction, subsidence with vulnerable soils. Expansive soils like clay loam in the city can affect future developments as well if they are saturated with water.

State law requires that the safety elements of city and county general plans, including Clayton's General Plan, address potential geologic and seismic constraints. The Safety Element of the current General Plan contains Objective 2 and its policies, which acknowledge potential geologic risks. Objectives in the Safety Element require structures to provide adequate levels of safety for the community. Specific actions related to seismic hazards in the Clayton General Plan include identifying geologic instabilities and soil constraints in the Planning Area. Objective 1 requires evaluation of development on certain slopes and restricts development on slopes over a specified grade in the Planning Area. Objective 6 of the Safety Element requires the identification of areas susceptible to ground shaking, liquefaction, and subsidence. Objective 7 establishes setbacks for developments adjacent to faults.

The Safety Element of the current General Plan as well as the CMC contain objectives, policies, and requirements that will continue to identify and protect the community from geologic and seismic risks and protect any possible paleontological resources.

The general plans for the surrounding cities and unincorporated areas in Contra Costa County are all required to identify potential risks from geologic and seismic conditions and to contain objectives and policies to address these risks and protect the public. These objectives and policies are intended to be consistent with state law. In addition to local general plans, the CBC has regulations on building design and construction based on seismic constraints and expected ground shaking throughout California.

In these ways, potential cumulative impacts to future development from geologic, seismic, and soil constraints would be minimized, and future development in the City of Clayton under the HEU would not make a significant contribution to any cumulative regional impacts on geologic, seismic, soil, or paleontological resources.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

This Page Intentionally Left Blank.

4.7.5 References

- 1 USGS. The San Andreas and Other Bay Area Faults. <https://earthquake.usgs.gov/education/haywardfault/> [Accessed March 2022].
- 2 Clayton Historical Society. Endeavor Hall. <https://claytonhistory.org> [Accessed March 2022].
- 3 USGS. Earthquakes, Faults, and Tectonics. <https://pubs.usgs.gov> [Accessed March 2022].
- 4 Online Archive of California. The California Earthquake of April 18, 1906: Report of the State Earthquake Investigation Commission, 1969. <https://oac.cdlib.org/> [Accessed March 2022].
- 5 California Department of Conservation. Geologic Map of California. <https://maps.conservation.ca.gov> [Accessed March 2022].
- 6 California Department of Conservation. CGS Information Warehouse: Regulatory Maps. <https://maps.conservation.ca.gov> [Accessed March 2022].
- 7 USDA Natural Resources Conservation Service. Soil Map. <https://websoilsurvey.nrcs.usda.gov> [Accessed March 2022].
- 8 California Water Board. Groundwater Ambient Monitoring and Assessment Program (GAMA) Well Location Map. <https://www.waterboards.ca.gov/gama/> [Accessed March 2022].
- 9 City of Clayton. *Geological Hazard Abatement District*. <https://claytonca.gov/engineering-and-public-works/geological-hazard-abatement-district/>. [Accessed May 2022].
- 10 California Department of Conservation. *Geologic Hazard Abatement Districts*. <https://www.conservation.ca.gov/cgs/Pages/GHAD.aspx>. [Accessed May 2022].
- 11 California Department of Conservation. *Fault Activity Map of California*. (2020). <http://maps.conservation.ca.gov/cgs/fam/> website [Accessed March 2022].
- 12 California Department of Conservation. *CGS Information Warehouse: Regulatory Maps*. <https://maps.conservation.ca.gov> [Accessed March 2022].
- 13 California Department of Conservation. *Map of Earthquake Zones of Required Investigation, Baldwin Park Quadrangle, California Geological Survey*. (1999). http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/BALDWIN_PARK_EZRIM.pdf. [Accessed March 2022].
- 14 City of Clayton. Local Hazard Mitigation Plan. <https://claytonca.gov/police/emergency-preparedness/>. [Accessed March 2022].
- 15 City of Clayton, *General Plan, Section VII, Safety Element*. (March 2000). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-VII-safety-element.pdf> [Accessed March 2022].
- 16 City of Clayton, *Municipal Code. Title 15, Buildings and Construction*; Chapter 15.02, California Building Code with Amendments; and Chapter 15.60, Grading Rules and Regulations. <https://library.municode.com/ca/clayton/codes/municipal%20code> [Accessed March 2022].

4.8 – GREENHOUSE GASES

This chapter describes the existing environmental and regulatory greenhouse gas (GHG) setting of the Planning Area and evaluates the potential GHG emissions impacts associated with City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). The chapter was prepared using methodologies and assumptions recommended by the Bay Area Air Quality Management District (BAAQMD), the regional air quality regulatory agency.¹ This GHG analysis has been closely coordinated with the Air Quality and Energy analyses in Sections 4.3 and 4.6 of this EIR. Please refer to Appendix C for detailed GHG emissions estimates (MIG, 2022).

4.8.1 Environmental Setting

Climate Change

Climate change is the distinct change in measures of climate for a long period of time. Climate change can result from natural processes and from human activities. Natural changes in the climate can be caused by indirect processes such as changes in the Earth’s orbit around the Sun or direct changes within the climate system itself (i.e., changes in ocean circulation). Human activities can affect the atmosphere through emissions of gases and changes to the planet’s surface. Emissions affect the atmosphere directly by changing its chemical composition, while changes to the land surface indirectly affect the atmosphere by changing the way the Earth absorbs gases from the atmosphere. The term “climate change” is preferred over the term “global warming” because “climate change” conveys the fact that other changes can occur beyond just average increase in temperatures near the Earth’s surface. Elements that indicate that climate change is occurring on Earth include:

- Rising of global surface temperatures by 1.3° Fahrenheit (°F) over the last 100 years
- Changes in precipitation patterns
- Melting ice in the Arctic
- Melting glaciers throughout the world
- Rising ocean temperatures
- Acidification of oceans
- Range shifts in plant and animal species

Climate change is intimately tied to the Earth’s greenhouse effect. The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet, and without it, life as we know it on Earth would not exist. Human activities since the beginning of the industrial revolution (approximately 150 years) have been adding to the natural greenhouse effect by increasing the gases in the atmosphere that “trap” energy, thereby contributing to an average increase in the Earth’s temperature. Human activities that enhance the greenhouse effect are detailed below.

Greenhouse Gases

Gases that “trap” heat in the atmosphere and affect regulation of the Earth’s temperature are known as “greenhouse gases”. Many chemical compounds in the Earth’s atmosphere exhibit the GHG property. GHG allow sunlight to enter the atmosphere freely. When the sunlight strikes the Earth’s surface, it is either absorbed or reflected back toward space. Earth, or materials near the

Earth's surface, that have absorbed energy from sunlight warm up during the daytime and emit infrared radiation back toward space during both the daytime and nighttime hours. GHG absorb this long-wave, infrared radiation and help keep the energy in the Earth's atmosphere.

GHG that contribute to climate regulation are a different type of pollutant than criteria or hazardous air pollutants because climate regulation is global in scale, both in terms of causes and effects. Some GHG are emitted to the atmosphere naturally by biological and geological processes such as evaporation (water vapor), aerobic respiration (carbon dioxide, or CO₂), and off-gassing from low-oxygen environments such as swamps or exposed permafrost (methane or CH₄). However, GHG emissions from human activities such as fuel combustion (e.g., CO₂) and refrigerants use (e.g., hydrofluorocarbons, or HFCs) significantly contribute to overall GHG concentrations in the atmosphere, climate regulation, and global climate change. Human production of GHG has increased steadily since pre-industrial times (approximately pre-1880), and atmospheric CO₂ concentrations have increased from a pre-industrial value of 280 parts per million (ppm) in the early 1800s to approximately 419 ppm in February 2022.² The effects of increased GHG concentrations in the atmosphere include increasing shifts in temperature and precipitation patterns and amounts, reduced ice and snow cover, sea level rise, and acidification of oceans. These effects in turn will impact food and water supplies, infrastructure, ecosystems, and overall public health and welfare.

The 1997 United Nations' Kyoto Protocol international treaty set targets for reductions in emissions of four specific GHG—CO₂, CH₄, nitrous oxide (N₂O), and sulfur hexafluoride (SF₆)—and two groups of gases—HFCs and perfluorocarbons (PFCs). These GHG are the primary GHG emitted into the atmosphere by human activities. Water vapor is also a common GHG that regulates the Earth's temperature; however, the amount of water vapor in the atmosphere can change substantially from day to day, whereas other GHG emissions remain in the atmosphere for longer periods of time. Black carbon consists of particles emitted during combustion; although a particle and not a gas, black carbon also acts to trap heat in the Earth's atmosphere. The most common GHG are described below.

- **Carbon Dioxide (CO₂)** is emitted and removed from the atmosphere naturally. Animal and plant respiration involves the release of CO₂ from animals and its absorption by plants in a continuous cycle. The ocean-atmosphere exchange results in the absorption and release of CO₂ at the sea surface. CO₂ is also released from plants during wildfires. Volcanic eruptions release a small amount of CO₂ from the Earth's crust. Human activities that affect CO₂ in the atmosphere include burning of fossil fuels, industrial processes, and product uses. Combustion of fossil fuels used for electricity generation and transportation is the largest source of CO₂ emissions in the United States. When fossil fuels are burned, the carbon stored in them is released into the atmosphere entirely as CO₂. Emissions from industrial activities also emit CO₂ such as cement, metal, and chemical production and use of petroleum produced in plastics, solvents, and lubricants.
- **Methane (CH₄)** is emitted from human activities and natural sources. Natural sources of CH₄ include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, soils, and wildfires. Human activities that cause CH₄ releases include fossil fuel production, animal digestive processes from farms, manure management, and waste management. It is estimated that 50 percent of global CH₄ emissions are human-generated. Releases from animal digestive processes at agricultural operations are the primary source of human-related CH₄ emissions. CH₄ is produced from landfills as solid waste decomposes. CH₄ is a primary component of natural gas and is emitted during its production, processing, storage, transmission, distribution, and use. Decomposition of organic material in manure stocks or in liquid manure management systems also releases

CH₄. Wetlands are the primary natural producers of CH₄ because the habitat is conducive to bacteria that produce CH₄ during decomposition of organic material.

- **Nitrous Oxide (N₂O)** is emitted from human sources such as agricultural soil management, animal manure management, sewage treatment, combustion of fossil fuels, and production of certain acids. N₂O is produced naturally in soil and water, especially in wet, tropical forests. The primary human-related source of N₂O is agricultural soil management due to use of synthetic nitrogen fertilizers and other techniques to boost nitrogen in soils. Combustion of fossil fuels (mobile and stationary) is the second leading source of N₂O, although parts of the world where catalytic converters are used (such as California) have significantly lower levels than those areas that do not.
- **Sulfur Hexafluoride (SF₆)** is commonly used as an electrical insulator in high-voltage electrical transmission and distribution equipment such as circuit breakers, substations, and transmission switchgear. Releases of SF₆ occur during maintenance and servicing as well as from leaks of electrical equipment.
- **Hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs)** are entirely human-made and are mainly generated through various industrial processes. These types of gases are used in aluminum production, semiconductor manufacturing, and magnesium production and processing. HFCs and PFCs are also used as substitutes for ozone-depleting gases like chlorofluorocarbons (CFCs) and halons.

In 1997, the United States (U.S.) was a signatory to the Kyoto Protocol; however, the treaty was not sent to Congress for ratification. Thus, while a signatory to the Kyoto Protocol, the U.S. is not an official party to this international agreement and is not subject to any emission reductions goals established pursuant to the Kyoto Protocol. Although the U.S. is not a party to this agreement, the GHG targeted for reduction by the Kyoto Protocol are also targeted under federal and state GHG reporting and emissions reduction programs.

GHG can remain in the atmosphere long after they are emitted. The potential for a particular greenhouse gas to absorb and trap heat in the atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is CO₂, which has a GWP of one. By comparison, CH₄ has a GWP of 25, which means that one molecule of CH₄ has 25 times the effect on global warming as one molecule of CO₂. Multiplying the estimated emissions for non-CO₂ GHG by their GWP determines their CO₂ equivalent (CO₂e), which enables a project's combined GWP to be expressed in terms of mass CO₂ emissions. The GWP and estimated atmospheric lifetimes of the common GHG are shown in Table 4-8-1.

Table 4.8-1
Global Warming Potential (GWP) of Common GHG (100-Year Horizon)

GHG	GWP ^(A)	GHG	GWP ^(A)
Carbon Dioxide (CO ₂)	1	Perfluorocarbons (PFCs)	
Methane (CH ₄)	25	CF ₄	6,500
Nitrous Oxide (N ₂ O)	298	C ₂ F ₆	9,200
Hydrofluorocarbons (HFCs)		C ₄ F ₁₀	7,000
HFC-23	14,800	C ₆ F ₁₄	7,400
HFC-134a	1,430	Sulfur Hexafluoride (SF ₆)	22,800
HFC-152a	140		
HCFC-22	1,700		
Source: First Update to the Climate Change Scoping Plan; CARB, 2014			
(A) GWPs are based on the United Nations Intergovernmental Panel on Climate Change (IPCC) 4 th Assessment Report. The 4 th Assessment Reports values have been presented to provided consistency with the statewide GHG emissions inventory presented in Table 4.8-2.			

Climate Change and California

The 2009 California Climate Adaptation Strategy prepared by the California Natural Resources Agency (CNRA) identified anticipated impacts to California due to climate change through extensive modeling efforts. General climate changes in California indicate that:

- California is likely to get hotter and drier as climate change occurs with a reduction in winter snow, particularly in the Sierra Nevada Mountain Range.
- Some reduction in precipitation is likely by the middle of the century.
- Sea levels will rise up to an estimated 55 inches.
- Extreme events such as heat waves, wildfires, droughts, and floods will increase.
- Ecological shifts of habitat and animals are already occurring and will continue to occur.³

It should be noted that changes are based on the results of several models prepared under different climatic scenarios; therefore, discrepancies occur between the projections and the interpretation. The potential impacts of global climate change in California are detailed below.

In January 2018, the CNRA adopted Safeguarding California Plan: 2018 Update, which builds on nearly a decade of adaptation strategies to communicate current and needed actions state government should take to build climate change resiliency. It identifies hundreds of ongoing actions and next steps that state agencies are taking to safeguard Californians from climate impacts within a framework of 81 policy principles and recommendations. The 2018 update also has two new chapters and incorporates a feature showcasing the many linkages among policy areas. A new “Climate Justice” chapter highlights how equity is woven throughout the entire plan⁴.

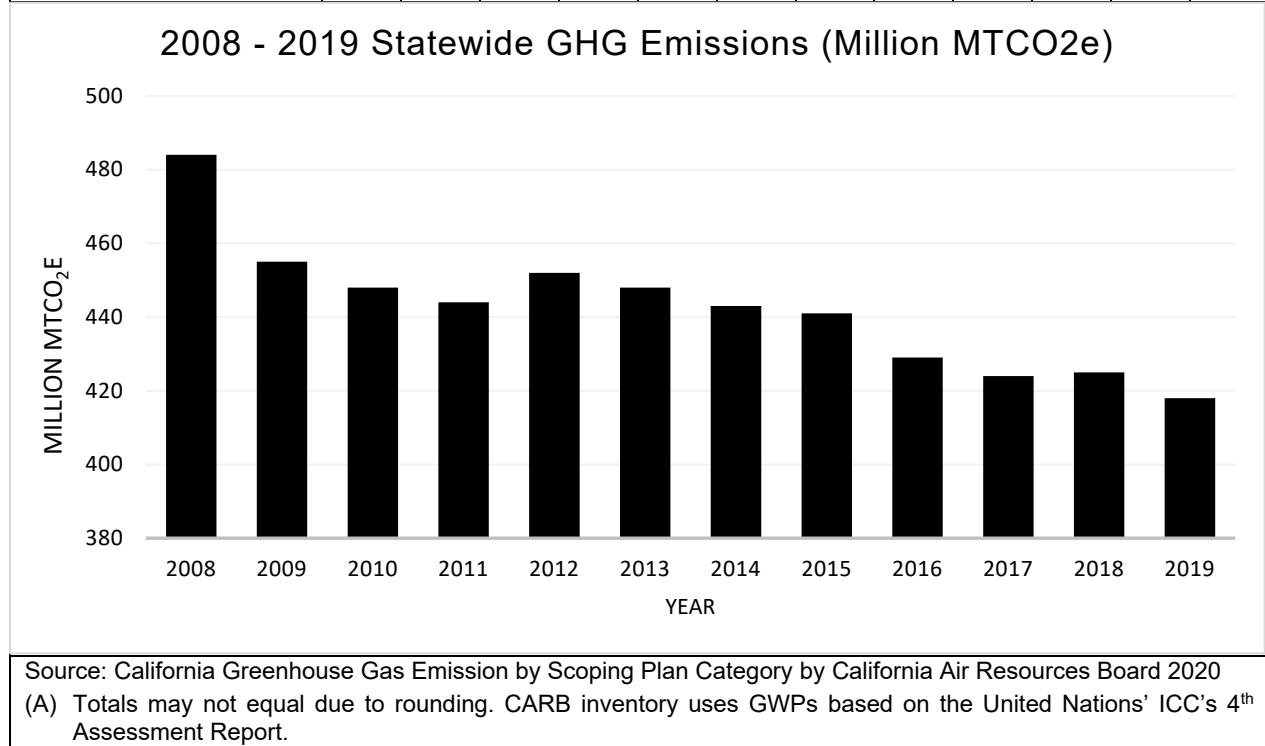
Statewide GHG Emissions

The California Air Resources Board (CARB) prepares an annual statewide GHG emission inventory using regional, State, and federal data sources, including facility-specific emissions reports prepared pursuant to the State’s Mandatory GHG Reporting Program. The statewide GHG emission inventory helps CARB track progress towards meeting the State’s Assembly Bill (AB) 32 GHG emissions target of 431 million metric tons of CO₂ equivalents (MTCO₂e), as well as establish and understand trends in GHG emissions.ⁱ Statewide GHG emissions for the 2009-2019 time period are shown in Table 4.8-2.

ⁱ CARB approved use of 431 million MTCO₂e as the state’s 2020 GHG emission target in May 2014. Previously, the target had been set at 427 million MTCO₂e.

Table 4.8-2
2008-2019 Statewide GHG Emissions (Million MTCO₂e)

Scoping Plan Sector	Year											
	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19
Agriculture	35	33	34	34	36	34	35	33	33	32	33	32
Commercial/ Residential	44	45	46	46	44	44	38	39	41	41	41	44
Electric Power	120	101	90	89	98	91	89	85	69	62	63	60
High GWP	12	12	14	15	16	17	18	19	19	20	21	21
Industrial	90	87	91	89	89	92	92	90	89	89	89	88
Recycling and Waste	8	9	9	9	9	9	9	9	9	9	9	9
Transportation	175	168	165	162	161	161	163	166	170	171	170	166
Total Million MTCO ₂ e ^(A)	484	455	448	444	452	448	443	441	429	424	425	418



As shown in Table 4.8-2, statewide GHG emissions have generally decreased over the last decade, with 2019 levels (418 million MTCO₂e) approximately 13.6 percent less than 2008 levels (484 million MTCO₂e) and below the state's 2020 reduction target of 431 million MTCO₂e. The transportation sector (166 million MTCO₂e) accounted approximately 40 percent of the state's total GHG emissions inventory (418 million MTCO₂e) in 2019.

Existing Planning Area GHG Emissions

The existing residential and commercial land uses within the Planning Area contribute to existing city, regional, and statewide GHG emissions. The Planning Area's existing residential GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1. Residential GHG emissions generated within the City primarily come from the following sources:

- **Small “area” sources.** Existing land uses generate emissions from small area sources that combust fuel, such as gasoline-powered landscaping equipment.
- **Energy use and consumption.** Existing land uses generate emissions from the combustion of natural gas in building water and space heating equipment, as well as industrial processes. Existing land uses also generated indirect GHG emissions from the purchased electricity.
- **Mobile sources.** Existing land uses generate emissions from vehicles travelling to and from the City.
- **Solid waste disposal:** Existing land uses generate GHG emissions from the transport and disposal of landfilled waste.
- **Water/wastewater:** Existing land uses generate GHG emissions from electricity used to supply water to land uses, and to treat the resulting wastewater generated.
- **Refrigerants:** Emissions from air conditioning and refrigeration equipment.

The Planning Area's existing residential GHG emissions were estimated using default emissions assumptions provided by CalEEMod, with the following project-specific modifications:

- **Land Use Development:** The default acreage and square footage associated with residential development within the Planning Area was adjusted to reflect existing development conditions (see Chapter 3, Project Description, Table 3-1).
- **Mobile Sources:** Mobile source emissions were estimated based on a combination of default and project-specific assumptions as described below:
 - **Trip Generation Rates:** CalEEMod weekday default trip generation rates were modified to reflect the trip generation estimates contained in the traffic and vehicle miles traveled (VMT) analysis prepared for the HEU (see Chapter 4.17). Weekend trip generation rates were not modified for the project.
 - **Trip Types:** CalEEMod default trips were modified to reflect a 100 percent primary trip type. This modification was made to reflect the use of project-specific total VMT estimates contained in the traffic and VMT analysis prepared for the HEU (see Chapter 4.17). Total VMT estimates already account for primary, diverted, and pass-by trips. Therefore, the project-specific trip distance calculated for the project (see below) should not be discounted for different trip types.
 - **Trip distances:** CalEEMod default trip lengths were modified based on the project-specific trip and VMT estimates contained in the traffic and VMT analysis prepared for the HEU (see Chapter 4.17).

The emissions generated by current land uses in the Planning Area are shown in Table 4.8-3. The emissions are shown for two scenarios:

- **Year 2020 (current conditions),** which are based on Year 2020 vehicle fleet characteristics (e.g., vehicle type, age, emission rates), and represent the emissions levels that exist at the time the Notice of Preparation was released for this EIR.

- **Year 2040 (future conditions)**, which are based on Year 2040 vehicle fleet characteristics and represent the projected emissions that land uses would generate in the future assuming residential growth continues in the City according to the existing General Plan. This scenario provides an estimate of how emissions would change in the Planning Area because of normal growth and the application of new regulations that would reduce motor vehicle emissions in the future. This scenario helps identify the potential change in emissions that would occur in Year 2040 with and without the HEU, as opposed to the change in emissions that would occur from regulatory requirements that would be in place whether or not the HEU is adopted.

**Table 4.8-3
Existing (2020) and Future (2040) Land Use GHG Emissions**

Source	GHG Emissions (Metric Tons / Year)			
	CO ₂	CH ₄	N ₂ O	Total MTCO ₂ e
Existing Land Use Operational Emissions in Year 2020 (Current Conditions)				
Mobile	61,558	3.5	3.0	62,689
Area	128	<0.1	<0.1	128
Energy	12,250	1.3	0.1	12,302
Water	453	5.3	0.1	625
Waste	103	10.3	0.0	362
Refrigerants	0.0	0.0	0.0	9.41
Total Existing GHG ^(A)	74,493	20.4	3.2	76,114
Existing GHG Efficiency (MTCO ₂ e/Capita) ^(B)				6.8
Existing GHG Efficiency (MTCO ₂ e/SP) ^(C)				6.4
Existing Land Use Operational Emissions in Year 2040 (Future Conditions)				
Mobile	47,011	1.6	1.8	47,596
Area	138	<0.1	<0.1	139
Energy	12,459	1.3	0.1	12,511
Water	457	5.5	0.1	635
Waste	107	10.7	0.0	374
Refrigerants	0.0	0.0	0.0	9.57
Total Existing GHG ^(A)	60,173	19.0	2.0	61,265
Existing GHG Efficiency (MTCO ₂ e/Capita) ^(B)				5.3
Existing GHG Efficiency (MTCO ₂ e/SP) ^(C)				5.0
Source: MIG, 2022 (see Appendix C)				
(A) Totals may not equal due to rounding.				
(B) The City's residential population is assumed to be 11,268 in 2020 and 11,547 in 2040.				
(C) Service Population is defined as the sum of the number of residents and number of jobs supported by the modeled land uses. The service population supported by the land uses is 11,954 in 2020 and 12,233 in 2040.				

4.8.2 Regulatory Framework

International and Federal

International Regulation and the Kyoto Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the “United Nations’ Framework Convention on Climate Change” agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHG in the United States. The plan currently consists of more than 50 voluntary programs for member nations to adopt.

Federal Regulation and the Clean Air Act

On December 7, 2009, the U.S. Environmental Protection Agency (EPA) issued an endangerment finding that current and projected concentrations of the six Kyoto GHGs in the atmosphere (CO₂, CH₄, N₂O, SF₆, HFCs, and PFCs) threaten the public health and welfare of current and future generations. This finding came in response to the Supreme Court ruling in *Massachusetts v. EPA*, which found that GHGs are pollutants under the federal Clean Air Act. As a result, the U.S. EPA issued its GHG Tailoring Rule in 2010, which applies to facilities that have the potential to emit more than 100,000 MTCO₂e. In 2014, the U.S. Supreme Court issued its decision in *Utility Air Regulatory Group v. EPA* (No. 12-1146), finding that the U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a “major” source required to obtain a permit pursuant to the “Clean Air Act’s Prevention of Significant Deterioration” or “Title V” operating permit programs. The U.S. EPA’s Greenhouse Gas Reporting Program requires facilities that emit 25,000 MTCO₂e or more of GHG to report their GHG emissions to the U.S. EPA to inform future policy decisionmakers.

The Current Administration

Former President Trump and the U.S. EPA during the time of the Trump administration stated their intent to halt various federal regulatory activities to reduce GHG emissions. President Biden, who took office in January 2021, and his administration have begun to strengthen federal policy once again around GHG emissions on a national level. California and other states are still challenging some federal actions undertaken during the time of the Trump administration that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. The timing and consequences of these types of federal decisions and potential responses from California and other states are speculative at this time.

The United States participates in the United Nations Framework Convention on Climate Change. While the United States signed the Kyoto Protocol, which would have required reductions in GHGs, Congress never ratified the protocol. The federal government chose voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science. In 2015, the Paris Agreement was adopted, which aims at keeping global temperature rise this century below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit temperature increase above an additional 1.5 degrees Celsius. The Agreement was signed by President Obama in April 2016, but the agreement does not contain enforcement provisions that would require U.S. Senate ratification. On November 4, 2019, Former President Trump formally began the process to leave the Paris Climate Agreement. In accordance with Article 28 of the Paris Agreement, that process was complete on November 4, 2020. As one of

his first acts in the Oval Office, President Biden signed an executive order to have the United States rejoin the Paris Climate Agreement. At this time, there are no federal regulations or policies pertaining to GHG emissions that directly apply to the project.

Federal Vehicle Standards

In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the U.S. EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, U.S. EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO₂ in model year 2025, on an average industry fleetwide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the U.S. EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 percent to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018–2027 for certain trailers, and model years 2021–2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons (MT) and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program⁵.

In August 2018, The U.S. EPA and NHTSA released a notice of proposed rulemaking called Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule).

On September 27, 2019, the U.S. EPA and the NHTSA published the SAFE Vehicles Rule Part One: One National Program.” (84 Fed. Reg. 51,310 (Sept. 27, 2019).) The Part One Rule revoked California’s authority to set its own GHG emissions standards and set zero emission vehicle mandates in California. As a result of the loss of the zero emission vehicles (ZEV) sales requirements in California, there may be fewer ZEVs sold and thus additional gasoline-fueled vehicles sold in future years⁶.

In April 2020, the U.S. EPA and NHTSA issued the SAFE Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (Final SAFE Rule) that relaxed federal GHG emissions and fuel economy standards. The Final SAFE Rule relaxed federal GHG emissions and Corporate Average Fuel Economy (CAFE) standards to increase in stringency at approximately 1.5 percent

per year from model year (MY) 2020 levels over MYs 2021–2026. The previously established emission standards and related “augural” fuel economy standards would have achieved approximately 4 percent per year improvements through MY 2025. The Final SAFE Rule affects both upstream (production and delivery) and downstream (tailpipe exhaust) CO₂ emissions⁷ and has been challenged by 23 states. The litigation is ongoing.

State

Assembly Bill 32 (California Global Warming Solutions Act) and Related GHG Goals

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 establishes the caps on statewide GHG emissions proclaimed in Executive Order (EO) S-3-05 and established the timeline for meeting State GHG reduction targets. The deadline for meeting the 2020 reduction target is December 31, 2020.

As part of AB 32, CARB determined 1990 GHG emissions levels and projected a “business-as-usual” (BAU)ⁱⁱ estimate for 2020, to determine the amount of GHG emission reductions that would need to be achieved. In 2007, CARB approved a statewide 1990 emissions level and corresponding 2020 GHG emissions limit of 427 million MTCO₂e (CARB, 2007). In 2008, CARB adopted its Climate Change Scoping Plan, which projects 2020 statewide GHG emissions levels of 596 million MTCO₂e and identifies numerous measures (i.e., mandatory rules and regulations and voluntary measures) that will achieve at least 174 million MTCO₂e of GHG reductions and bring statewide GHG emissions to 1990 levels by 2020.⁸

EO B-30-15, 2030 Carbon Target and Adaptation, issued by Governor Brown in April 2015, set a target of reducing GHG emissions by 40 percent below 1990 levels in 2030. To achieve this ambitious target, Governor Brown identified five key goals for reducing GHG emissions in California through 2030:

- Increase renewable electricity to 50 percent.
- Double energy efficiency savings achieved in existing buildings and make heating fuels cleaner.
- Reduce petroleum use in cars and trucks by up to 50 percent.
- Reduce emissions of short-lived climate pollutants.
- Manage farms, rangelands, forests, and wetlands to increasingly store carbon.

By directing State agencies to take measures consistent with their existing authority to reduce GHG emissions, EO B-30-15 establishes coherence between the 2020 and 2050 GHG reduction goals set by AB 32 and seeks to align California with the scientifically established GHG emissions levels needed to limit global warming below two degrees Celsius.

To reinforce the goals established through EO B-30-15, Governor Brown signed Senate Bill (SB) 32 and AB 197 on September 8, 2016. SB 32 made the GHG reduction target (to reduce GHG emissions by 40 percent below 1990 levels by 2030) a requirement, as opposed to a goal. AB 197 gives the State legislature additional authority over CARB to ensure the most successful strategies for lowering emissions are implemented, and requires CARB to, “protect the State’s most impacted and disadvantaged communities ...[and] consider the social costs of the emissions of greenhouse gases.”

ⁱⁱ BAU is a term used to define emissions levels without considering reductions from future or existing programs or technologies.

Scoping Plan

The CARB Scoping Plan is the comprehensive plan primarily directed at identifying the measures necessary to reach the GHG reduction targets stipulated in AB 32. The key elements of the 2008 Scoping Plan were to expand and strengthen energy efficiency programs, achieve a statewide renewable energy mix of 33 percent, develop a cap-and-trade program with other partners (including seven states in the United States and four territories in Canada) in the Western Climate Initiative, establish transportation-related targets, and establish fees⁸. CARB estimated that implementation of these measures will achieve at least 174 million MTCO₂e of reductions and reduce statewide GHG emissions to 1990 levels by 2020.⁸

In a report prepared on September 23, 2010, CARB indicated 40 percent of the reduction measures identified in the Scoping Plan had been secured⁹. Although the cap-and-trade program began on January 1, 2012 (after CARB completed a series of activities dealing with the registration process, compliance cycle, and tracking system), covered entities did not have an emissions obligation until 2013. In August 2011, the Scoping Plan was reapproved by CARB with the program's environmental documentation.

On February 10, 2014, CARB released the public draft of the "First Update to the Scoping Plan." "The First Update" built upon the 2008 Scoping Plan with new strategies and recommendations, and identified opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments¹⁰. "The First Update" defined CARB's climate change priorities over the next five years, and set the groundwork to reach post-2020 goals set forth in Executive Orders S-3-05 and B-16-12. It also highlighted California's progress toward meeting the 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. "The First Update" evaluated how to align the State's long-term GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. "The First Update" to the Scoping Plan was approved by the Board on May 22, 2014.

The second update to the scoping plan, the 2017 Climate Change Scoping Plan update¹¹, was adopted by CARB in December 2017. The primary objective for the 2017 Climate Change Scoping Plan is to identify the measures required to achieve the mid-term GHG reduction target for 2030 (i.e., reduce emissions by 40 percent below 1990 levels by 2030) established under EO B-30-15 and SB 32. The 2017 Climate Change Scoping Plan identifies an increased need for coordination among State, regional, and local governments to realize the potential for GHG emissions reductions that can be gained from local land use decisions. It notes that emissions reductions targets set by more than one hundred local jurisdictions in the state could result in emissions reductions of up to 45 million MTCO₂e and 83 million MTCO₂e by 2020 and 2050, respectively. To achieve these goals, the 2017 Scoping Plan Update includes a recommended plan-level efficiency threshold of 6 metric tons or less per capita by 2030 and no more than 2 metric tons per capita by 2050. The major elements of the 2017 Climate Change Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero emission vehicle (ZEV) buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewable Portfolio Standard (RPS) to 50 percent and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.

- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing CH₄ and hydrocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20 percent reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

The Draft 2022 Scoping Plan was released in May 2022.¹² The plan presents a scenario for California to meet the State goal of reducing GHG emissions 40 percent below 1990 levels by 2030 and to achieve carbon neutrality by 2045. The Draft 2022 Scoping Plan is expected to be finalized in the fall of 2022.

Senate Bill 375 (Sustainable Communities and Climate Protection Act)

In January 2009, California SB 375, known as the Sustainable Communities and Climate Protection Act, went into effect. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce greenhouse gas emissions and other air pollutants. SB 375 tasks CARB to set GHG reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

Plan Bay Area, initially adopted by the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) on July 18, 2013, is the integrated long-range transportation, land-use, and housing plan developed for the Bay Area pursuant to SB 375. The success of Plan Bay Area implementation is evaluated on 13 different goals with corresponding performance targets. One of these goals, reducing per-capita CO₂ emissions from cars and light-duty trucks by 15 percent by 2035, is directly related to GHG emissions.^{iii, iv, 13}

One of the most noteworthy aspects of Plan Bay Area is that the forecasted development pattern, also known as the preferred scenario, virtually accommodates all new development within the existing urbanized footprint of the Bay Area. Approximately 80 percent of new development anticipated in Plan Bay Area is located throughout nearly 200 different Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas nominated by jurisdictions in existing communities in areas where future growth would not increase urban sprawl. It is important to emphasize that although PDAs have been identified in the regional plan, individual jurisdictions throughout the Bay Area are not required to constrain future land use designations and development to the preferred scenario described in Plan Bay Area (i.e., lead agencies retain

ⁱⁱⁱ Per the efficiency metrics established by CARB, *Plan Bay Area* is required to demonstrate that the regional plan is capable of reducing per capita passenger vehicle and light duty truck CO₂ emissions by seven percent by 2020 and 15 percent by 2035, as compared to the 2005 baseline. Per SB 375, these reductions are required to be demonstrated without taking into account Pavley, LCFS, and any other Scoping Plan provisions adopted since 2007 that are expected to further reduce CO₂ emissions and result in a decrease in total CO₂ emissions over time.

^{iv} On March 22, 2018, CARB updated the goals for reducing per-capita CO₂ emissions from cars and light-duty trucks. For MTC/ABAG, the 2035 goal was increased from 15 percent to 19 percent for 2035.

the authority to approve land use designations and projects). Instead, the SCS must consider a local jurisdiction's General Plan. The City of Clayton does not have any PDAs.

An update to Plan Bay Area, titled Plan Bay Area 2040, was jointly approved by the ABAG Executive Board and by MTC on July 26, 2017. Unlike the 2013 version of Plan Bay Area, Plan Bay Area 2040 is a limited and focused update that reevaluates projected household and employment growth in the Bay Area over the next 24 years. The success of Plan Bay Area 2040 implementation is evaluated on the same 13 goals and performance targets as the 2013 version of Plan Bay Area. The 2017 update continues to provide a roadmap for accommodating expected growth in the Bay Area, and connecting it to a transportation investment strategy focused on moving the Bay Area toward key regional goals for the environment (e.g., state GHG reduction goals), economy, and social equity.¹⁴

On October 1, 2021, MTC and ABAG released Plan Bay Area 2050 which focused on the elements of Housing, Economy, Transportation, and Environment. Across these elements, there were a total of 35 strategies, which are long-term policies or investments, and 80 implementation actions, which contain advocacy and legislation, initiatives, and planning and research. Plan Bay Area 2050 projected that it would achieve a 20 percent reduction in GHG emissions from cars and light duty trucks by 2035 if all of its strategies were implemented, which would meet SB 375's GHG target.¹⁵

Senate Bill 350 (Clean Energy and Pollution Reduction Act) and Senate Bill 100

SB 350 was signed into Law in September 2015 and establishes tiered increases to the RPS. The Bill requires 40 percent of the state's energy supply to come from renewable sources by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

The State's RPS program was further strengthened by the passage of SB 100 in 2018. SB 100 revised the State's RPS Program to require retail sellers of electricity to serve 50 percent and 60 percent of the total kilowatt-hours sold to retail end-use customers be served by renewable energy sources by 2026 and 2030, respectively, and requires 100 percent of all electricity supplied to come from renewable sources by 2045.

Assembly Bill 1493

With the passage of AB 1493 (Pavley I) in 2002, California launched an innovative and pro-active approach for dealing with GHG emissions and climate change at the state level. AB 1493 requires CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards apply to automobiles and light trucks from 2009 through 2016. Although litigation was filed challenging these regulations and the U.S. EPA initially denied California's related request for a waiver, a waiver was granted. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 among light-duty vehicles. In January 2012, CARB approved the Advanced Clean Cars (ACC) program (formerly known as Pavley II) for model years 2017 through 2025. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations and the ZEV regulation. The program combines the control of smog, soot, and GHGs and requirements for greater numbers of zero-emission vehicles into a single package of standards.

Executive Order B-30-15, Senate Bill 32 & Assembly Bill 197 (Statewide Interim GHG Targets)

California EO B-30-15 (April 29, 2015) set an “interim” statewide emission target to reduce GHG emissions to 40 percent below 1990 levels by 2030 and directed state agencies with jurisdiction over GHG emissions to implement measures pursuant to statutory authority to achieve this 2030 target and the 2050 target of 80 percent below 1990 levels. Specifically, the EO directed CARB to update the Scoping Plan to express this 2030 target in metric tons. AB 197 (September 8, 2016) and SB 32 (September 8, 2016) codified into statute the GHG emissions reduction targets of at least 40 percent below 1990 levels by 2030 as detailed in EO B-30-15. AB 197 also requires additional GHG emissions reporting that is broken down to sub-county levels and requires CARB to consider the social costs of emissions impacting disadvantaged communities.

Executive Order B-55-18

Governor Brown issued EO B-15-18 on September 10, 2018, which directs the State to achieve carbon neutrality as soon as possible and no later than 2045, and achieve and maintain net negative emissions thereafter.

Center for Biological Diversity v. California Department of Fish and Wildlife

In its decision in *Center for Biological Diversity v. California Dept. of Fish and Wildlife (Newhall)* 62 Cal.4th 204 (2015), the California Supreme Court set forth several options that lead agencies may consider for evaluating the cumulative significance of a proposed project’s GHG emissions:

1. A calculation of emissions reductions compared to a BAU scenario based upon the emissions reductions in CARB’s Scoping Plan, including examination of the data to determine what level of reduction from BAU a new land use development at the proposed location must contribute in order to comply with statewide goals.
2. A lead agency might assess consistency with AB 32’s goals by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities.
3. Use of geographically specific GHG emission reduction plans to provide a basis for tiering and streamlining of project-level CEQA analysis.
4. A lead agency may rely on existing numerical thresholds of significance for GHG emissions, though use of such thresholds is not required.

Regional

Bay Area Air Quality Management District Clean Air Plan

On April 19, 2017, the BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate (2017 Clean Air Plan), which updates the adopted Bay Area 2010 Clean Air Plan, and continues to provide the framework for assuring that the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are attained and maintained in the Bay Area.¹ In addition to addressing criteria air pollutant concentrations and public exposure to toxic air contaminants, the 2017 Clean Air 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, consistent with GHG reduction targets adopted by the State of California. As opposed to focusing solely on the nearer 2030 GHG reduction target, the 2017 Clean Air Plan makes a concerted effort to imagine and plan for a successful and sustainable Bay Area in the year 2050. In 2050, the Bay area is envisioned as a region where:

- Energy efficient buildings are heated, cooled, and powered by renewable energy;
- The transportation network has been redeveloped with an emphasis on non-vehicular modes of transportation and mass-transit;
- The electricity grid is powered by 100 percent renewable energy; and

- Bay Area residents have adopted lower-carbon intensive lifestyles (e.g., purchasing low-carbon goods in addition to recycling and putting organic waste to productive use).

The 2017 Clean Air Plan includes a comprehensive, multipollutant control strategy that is broken up into 85 distinct measures and categorized based on the same economic sector framework used by CARB for the AB 32 Scoping Plan Update.^v The accumulation of all 85 control measures being implemented support the three overarching goals of the plan. These goals are:

- Attain all state and national air quality standards;
- Eliminate disparities among Bay Area communities in cancer health risk from toxic air contaminants; and
- Reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

Greenhouse Gas Plan Level Guidance

In May 2017, the BAAQMD published a new version of the CEQA Air Quality Guidelines, which included revisions made to address the Supreme Court's decision on the *California Building Industry Association v. BAAQMD* and contained the BAAQMD's recommendations to Lead Agencies for evaluating and assessing the significance of a project's potential greenhouse gas impacts.¹⁶

In March 2022, the BAAQMD published the CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans, which requires plans to show GHG reductions consistent with California's reduction targets in order to have a less than significant climate impact.

4.8.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the project would have a significant impact related to GHG emissions if it would:

- A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment;
- B. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases; or
- C. Cause substantial adverse cumulative impacts with respect to greenhouse gases.

The BAAQMD provides guidance on assessing and mitigating GHG emissions impacts. In April 2022, the BAAQMD adopted new CEQA thresholds for evaluating climate impacts from land use projects and plans.¹⁷ As described in Section 4.3.3, the proposed HEU is a planning-level document that does not authorize or approve any specific project and, therefore, is analyzed using the BAAQMD's plan-level guidance. Future development projects supported by the HEU could be analyzed using the project-level guidance contained in BAAQMD's CEQA Air Quality Guidelines. This guidance informs the evaluation of GHG emissions impacts presented below. The BAAQMD's plan- and project-level thresholds of significance are summarized in Table 4.8-4 and Table 4.8-5, respectively. The project-level thresholds are provided for information purposes only.

^v The sectors included in the AB 32 Scoping Plan Update are: stationary (industrial) sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants.

Table 4.8-4
BAAQMD Plan-Level GHG Thresholds of Significance

Pollutant	Plan-Level Thresholds of Significance for Operations	
GHG	Option A	Option B
	Meet the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045; or	Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).
Source: BAAQMD 2022		

Table 4.8-5
BAAQMD Project-Level GHG Thresholds of Significance

Pollutant	Plan-Level Thresholds of Significance for Operations	
GHG	Option A	Option B
	<p>Projects must include, at a minimum, the following project design elements:</p> <ol style="list-style-type: none"> 1. Project buildings will not include natural gas appliances or natural gas plumbing (in both residential and non-residential projects). 2. Project buildings will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA (Public Resources Code Section 21100(b)(3)) and the State CEQA Guidelines (Section 15126.2(b)). 3. Project-generated VMT will be reduced below regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally-adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA: <ol style="list-style-type: none"> i. Residential projects: 15 percent below the existing VMT per capita. ii. Office projects: 15 percent below the existing VMT per employee. iii. Retail projects: No net increase in existing VMT. 4. The project will comply with the off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2. 	Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).
Source: BAAQMD, 2022		

4.8.4 Impacts and Mitigation Measures

This section describes potential impacts related to GHG emissions and potential conflicts with a plan, policy, or regulation adopted for the purposes of reducing GHG emissions that could result from the implementation of the project and recommends mitigation measures as needed to reduce significant impacts.

GHG Emissions

Impact GHG-1 – Would the HEU generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or otherwise conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions?

Analysis of Impacts

The implementation of the HEU could result in construction and operational activities that would generate GHG Emissions. As described in more detail below, the GHG emissions that could be generated by the increase in housing planned for by the HEU would not be consistent with BAAMD-recommended CEQA thresholds of significance and the CARB Scoping Plan, even with the inclusion of feasible mitigation measures.

GHG Emissions

As shown in Section 3, Project Description, Table 3-1 and Table 3-2, the proposed HEU could result in an additional 868 dwelling units and 2,364 residents. It could also increase commercial building square space by approximately 20,000 square feet, leading to up to approximately 71 additional employees working in the City. The proposed HEU would not directly result in the construction of any development or infrastructure; however, future development supported by the HEU would result in construction-related GHG emissions. Construction activities would generate GHG emissions primarily from fuel combustion in equipment during demolition, site preparation, grading, building construction, paving, and architectural coating activities and in worker, vendor, and haul trips to and from future development projects. Such activities could occur intermittently at different sites within the Planning Area over the next approximately 15 to 20 years. The BAAQMD does not maintain thresholds of significance for assessing the significance of construction emissions, noting on page 10 of the Justification Report that GHG emissions from construction are a small portion of a project's lifetime GHGs.¹⁷ Accordingly, potential construction GHG emissions are not estimated in this EIR.

The proposed land uses envisioned by the HEU would result in operational GHG emissions from the same sources as existing land uses in the City, including the mobile, area, energy, and other sources described in Section 4.8.1. Mobile sources, including vehicle trips to and from land uses within the City, would result primarily in emissions of CO₂, with emissions of CH₄ and NO₂ also occurring in minor amounts. In addition to mobile sources, GHG emissions would also be generated from natural gas usage, electricity use, water conveyance and use, wastewater treatment, solid waste disposal, and refrigeration technologies. Natural gas use would result in the emission of two GHGs: CH₄ (the major component of natural gas) and CO₂ (from the combustion of natural gas). Electricity use associated with both the physical usage of the development, as well as the energy needed to transport water/wastewater, would result in the production of GHGs if the electricity is generated through non-renewable sources (i.e., combustion of fossil fuels). Solid waste generated by land uses within the City would contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy

when transporting and managing the waste and produce CH₄ from the decomposition of organic materials. Refrigeration technologies employ various HFCs and PFCs that can leak from systems into the atmosphere. Potential operational GHG emissions resulting from operation of the land uses proposed by the HEU were estimated using CalEEMod, Version 2022.1. The modeling is based on default data assumptions contained in CalEEMod, with the following project-specific modifications:

- **Land Use Development:** The default acreage, square footage, and population for proposed residential and commercial land use within the Planning Area were adjusted to reflect proposed development conditions under the HEU (see Chapter 3, Project Description, Table 3-2).
- **Mobile Sources:** Trip generation rates, trip types, and trip distances were adjusted using the same methodology described in Section 4.8.1 to reflect the information contained in the traffic and VMT analysis prepared for the HEU (see Chapter 4.17)

The total unmitigated GHG emissions estimated to occur under projected 2040 growth conditions are shown below in Table 4.8-6 and compared against the potential GHG emissions that could exist in 2040 if the HEU were not approved.

Table 4.8-6
2040 GHG Emissions With and Without HEU

Source	2040 GHG Emissions (MTCO ₂ e / Year) ^(A)		
	Without HEU	With HEU	Net Change ^(B)
Mobile	47,596	54,355	6,759
Area	139	177	38
Energy	12,511	13,864	1,353
Water	635	705	70
Waste	374	437	63
Refrigerants	9.6	10.7	1
Total ^(C)	61,265	69,548	8,283
GHG Efficiency (MTCO ₂ e/Capita) ^(D)	5.3	5.1	0.2
GHG Efficiency (MTCO ₂ e/SP) ^(E)	5.0	4.8	0.2

Source: MIG, 2022 (see Appendix C).

(A) 2040 emissions estimates with and without the HEU are based on residential and commercial land uses in the City (see Table 3-1 and Table 3-2). As noted in Section 4.8-1, the 2040 no project scenario assumes land uses remain substantially the same as under existing 2020 conditions.

(B) As described in Section 4.8.2, the State has adopted a number of plans and regulations that could reduce future GHG emissions, such as the LCFS and RPS programs. The 2040 emissions estimates with and without the HEU do not take credit for future emissions reductions that may occur due to the implementation of State Programs. This is because the reductions realized from these programs would, in general, apply equally to both existing and proposed land uses (e.g., LCFS reductions would affect the carbon content of fuels used by both existing and proposed land uses). Therefore, even though the total amount of GHG emissions could be lower than estimated, the net change in emissions is assumed to stay approximately the same as shown in this table for most sources. The exception to this could be building electrification standards, which would reduce emissions from new buildings but not necessarily existing buildings.

(C) Totals may not equal due to rounding.

(D) The City's residential population is assumed to be 11,547 in 2040 without HEU and 13,632 in 2040 with HEU.

(E) Service Population is defined as the sum of the number of residents and number of jobs supported by the modeled land uses. The service population supported by the land uses is 12,233 in 2040 without HEU and 14,397 with HEU.

As shown in Table 4.8-6, with adoption of the HEU, the City's residential and commercial land uses would emit approximately 69,548 MTCO₂e annually by 2040, an increase of 8,283 MTCO₂e above the emissions levels estimated to occur in 2040 without adoption of the HEU. On an efficiency basis, the adoption of the HEU would produce GHG emissions of 5.1 MTCO₂e/yr/capita and 4.8 MTCO₂e/yr/SP. Although GHG emissions in the City would be more efficient with the HEU on both a per capita (5.1 MTCO₂e/yr/capita with the HEU compared to 5.3 MTCO₂e/yr/capita without the HEU) and a service population basis (4.8 MTCO₂e/yr/capita with the HEU compared to 5.0 MTCO₂e/yr/capita without the HEU), this increase in efficiency would not be consistent with near- or long-term State GHG reduction goals, including the State's goal to reduce GHG emissions 40 percent below 1990 levels by 2030 and achieve carbon neutrality by 2045.^{vi}

The primary source of GHG emissions in the City under both 2040 emissions scenarios would be mobile sources. With the HEU, mobile sources would account for approximately 78 percent of total annual 2040 GHG emissions (54,355 MTCO₂e/year out of 69,548 MTCO₂e/year). The unmitigated mobile source emission estimates are conservative (i.e., likely to overestimate GHG emissions levels), since they do not take into account land use interactions (e.g., residential land use proximity to commercial land uses) and transit amenities (e.g., bus routes) that could likely reduce both the number of vehicle trips generated in the City and the amount of VMT produced by City-generated trips in 2040 (see Section 4.17, Transportation). The next highest source of GHG emissions under both emissions scenarios would be energy sources, which would represent approximately 20 percent of total annual GHG emissions. Pursuant to the State's RPS goals (see Section 4.8.2), it is possible that most of the electricity consumed in the City will be generated from renewable sources by year 2040.

The BAAQMD recommends lead agencies evaluate plan-level GHG emissions impacts by determining whether plan adoption would meet the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and achieve carbon neutrality by 2045. As shown in Table 4.8-6, the proposed HEU, if adopted, would improve GHG emissions efficiency; however, this improvement falls short of the GHG emissions reductions necessary to meet the State's 2030 GHG reduction target (reduce GHG emissions 4 percent below 1990 levels). Furthermore, the HEU would not demonstrate substantial progress towards meeting the State's 2045 carbon neutrality goals. This is considered a potentially significant impact.

The City's existing General Plan Safety Element includes goals and policies that encourage improved air quality and, by association, reductions in GHG emissions. For example, as shown under Section 4.3.2, the City promotes transportation system management as a means to reduce single occupant vehicle travel (Policy 14b). The proposed HEU would further improve air quality and reduce GHG emissions by promoting quality living environments (Goal 5, Policy 5.4) and sustainability practices into housing production and operations (Goal 6, see Section 3.6). Specifically, the proposed HEU includes policies to require developers to incorporate sustainable practices into the design of subdivisions (Policy 6.1), to promote the use of clean, energy-efficient appliances in new homes (Policy 6.2), to promote home retrofits that reduce consumption of water

^{vi} According to CARB's draft 2022 Scoping Plan, the State met the GHG emissions reduction target established in AB 32 - a return of GHG emissions to 1990 levels by 2020—in 2016. Thus, it is reasonable to assume that the GHG emissions shown in Table 4.8-3 are approximately equal to 1990 emissions levels. As shown in Table 4.8-3 and 4.8-6, total GHG emissions in 2040 with the HEU (69,548 MTCO₂e) would be approximately 8.6 percent lower than 2020 emissions levels (76,114 MTCO₂e). The GHG emissions efficiency in 2040 with the HEU (5.3 MTCO₂e/yr/capita) would be approximately 25 percent lower than the 2020 GHG emissions efficiency (6.8 MTCO₂e/yr/capita). This provides further context that the GHG emission with HEU would not be consistent with State GHG reduction goals.

and energy resources (Policy 6.3), and to establish high sustainability standards for new multi-family housing and mixed-use developments (Policy 6.4).

Consistent with these policies and the BAAQMD's project-level guidance for evaluating GHG emissions, Mitigation Measures GHG-1 to GHG-5 are recommended to be incorporated into future development projects supported by the HEU. These measures would reduce GHG emissions from transportation and building energy use, the two largest sources of potential GHG emissions under the HEU.

Mitigation Measure GHG-1 would require the City to prohibit the use of natural gas plumbing and appliances in housing unit sites, reducing on-site GHG emissions, until such time as the City adopts a ZNE ordinance. Mitigation Measure GHG-2 would require the City to evaluate the feasibility of adopting such an ordinance that would mandate all new residential and/or non-residential construction in the City meet ZNE standards. Unlike embedded GHG emissions associated with electricity consumption, which can be reduced by supplying the electricity grid with more electricity produced from carbon-free sources, it is difficult to directly reduce GHG emissions associated with on-site natural gas consumption without limiting its use. Reaching ZNE in new development, therefore, could reduce GHG emissions from natural gas consumption through limited use, increased renewable energy generation, and/or other means. Mitigation Measures GHG-3 and GHG-4 would support and increase the likelihood, accessibility, and convenience of owning and operating an electric vehicle (EV), thereby reducing the number of fossil-fuel powered vehicles on roadways in the City and the associated GHG emissions generated from mobile sources. Mitigation Measures GHG-3 and GHG-4 also set forth requirements for bicycle parking and supporting infrastructure, which could make that form of transportation more accessible to individuals in the City. Finally, Mitigation Measure GHG-5 requires individual future housing site projects to evaluate their GHG emissions levels for consistency with State GHG reduction goals and to incorporate measures, as necessary, to reduce project GHG emissions levels. In addition to these GHG mitigation measures, Mitigation Measure VMT-1 requires future development projects that do not screen out from a detailed VMT impact analysis to incorporate travel demand management and other physical measures to reduce VMT, such as unbundled parking, car sharing, bike sharing, and subsidized transit passes for affordable housing.

2017 CARB Climate Change Scoping Plan

As discussed under Section 4.8.2, the 2017 Climate Change Scoping Plan is CARB's primary document used to ensure State GHG reduction goals are met. The plan identifies an increasing need for coordination among State, regional, and local governments to achieve the GHG emissions reductions that can be gained from local land use planning and decisions. The major elements of the 2017 Climate Change Scoping Plan, which is designed to achieve the State's 2030 GHG reduction goal, are listed in Section 4.8.2. Nearly all of the specific measures identified in the 2017 Climate Change Scoping Plan would be implemented at the state level, with CARB and/or another state or regional agency having the primary responsibility for achieving required GHG reductions. The HEU, therefore, would have limited ability to directly conflict with any of the specific measures identified in the 2017 Climate Change Scoping Plan. Nonetheless, the overarching goal of the 2017 Climate Change Scoping Plan is to achieve a 40 percent reduction in GHG emissions below 1990 levels by the Year 2030. To achieve this statewide goal, the 2017 Climate Change Scoping Plan recommends a statewide efficiency metric of 6.0 MTCO₂e/yr/capita by 2030 and 2.0 MTCO₂e/yr/capita by 2050. These statewide per capita targets are based on the statewide GHG emissions inventory that includes all emissions sectors in the State. As shown in Table 4.8-6, year 2040 GHG emissions with the HEU would result in a GHG efficiency of 5.1

MTCO₂e/yr/capita. This value exceeds the 2017 Climate Change Scoping Plan adjusted statewide of 4.0 MTCO₂e/yr/capita that would apply to Year 2040 conditions.^{vii} To meet the interpolated CARB Scoping Plan efficiency target of 4.0 MTCO₂e/yr/capita, the City would need to reduce its HEU 2040 GHG emissions presented in Table 4.8-6 by approximately 22 percent, or 15,020 MTCO₂e/year. The proposed HEU would, therefore, conflict with implementation of the 2017 Climate Change Scoping Plan. This is considered a potentially significant impact. Mitigation Measures GHG-1 to GHG-5, listed below, as well as Mitigation Measure VMT-1 (see Chapter 4.17) are recommended to be incorporated into future development projects supported by the HEU. These measures would reduce GHG emissions from transportation and building energy use, the two largest sources of potential GHG emissions under the HEU (see discussion above).

Plan Bay Area 2050

As described in Section 4.8.2, Plan Bay Area 2050 is a long-range planning document developed by ABAG and MTC to reduce GHG emissions from transportation. Plan Bay Area 2050 aims to reduce 2035 per capita GHG emissions from cars and light-duty trucks by 20 percent compared to a 2005 baseline. There is currently no data on the amount of GHG emissions generated by car and light duty truck trips generated by the City in 2005; however, as shown in Table 4.8.2 and 4.8.5, Year 2040 mobile source GHG emissions with the proposed HEU are estimated to be approximately 13.3 percent less than existing Year 2020 mobile source GHG emissions. Most of this reduction in mobile source emissions would be due to improvements in fuel efficiency and other State and federal requirements that cannot be credited towards Plan Bay Area per capita GHG emissions reductions requirements. In addition, as described in Section 4.17, Impact TRANS-2, the average home-based VMT/resident in Year 2040 would be higher with the HEU (23.4 VMT/resident) than without the HEU (23.1 VMT/resident) and would slightly increase the overall base citywide VMT/resident (23.5 VMT/resident), which was already 46 percent higher than the 2040 base countywide VMT/ resident (16.1 VMT/resident). It would also slightly increase cumulative, total VMT in the county. Overall, the VMT analysis indicates the HEU would not reduce VMT/resident. Therefore, it is possible that the implementation of the HEU could impede the ability to meet regional transportation GHG reduction goals established by Plan Bay Area 2050. This impact is considered potentially significant.

To reduce transportation GHG emission, the Mitigation Measures GHG-3, GHG-4, and VMT-1 are recommended to be implemented with future development projects supported by the HEU. These measures would reduce transportation-related GHG emissions associated with implementation of the HEU (see discussion above).

Level of Significance Before Mitigation

As discussed above, the HEU would result in 2040 GHG emissions that do not meet the State's 2030 GHG reduction or 2045 carbon neutrality goals. The implementation of the HEU could also result in GHG emissions that are above the 2017 Scoping Plan's per capita GHG targets for achieving State GHG goals and impede the ability to meet regional transportation GHG reduction goals established by Plan Bay Area 2050. This is considered a potentially significant impact.

Mitigation Measures

MM GHG-1: Prohibit Natural Gas Plumbing and Appliances in New Housing Sites. The City shall prohibit natural gas plumbing and the use of natural gas appliances such

^{vii} The 4.0 MTCO₂e/yr/capita metric is linearly derived from the Scoping Plan's identified metrics of 6.0 MTCO₂e/yr/capita in Year 2030 and 2.0 MTCO₂e/yr/capita in Year 2050.

as cook tops, water heaters, and space heaters in all new housing site developments. Upon request by the project developer, exceptions to this prohibition may be allowed in the following instances:

- Accessory dwelling units constructed on a parcel with an existing residential building with gas infrastructure.
- Newly constructed buildings with a valid planning entitlement or other effective development agreement approved prior to the date of certification of this EIR.
- It can be demonstrated there is no commercially available technology capable of meeting the specific appliance or building system application.

Projects subject to the above exceptions shall provide the necessary infrastructure to support future electrification of appliances and building systems. This prohibition on natural gas plumbing and natural gas appliances shall cease if and when the City adopts a ZNE ordinance per Mitigation Measure GHG-2.

MM GHG-2: Consider Adoption of a Zero Net Energy Ordinance. Within one year of the adoption of the HEU, the City shall complete an evaluation on the feasibility of adopting an ordinance that amends the City's Municipal Code to require all new residential and/or non-residential development subject to Title 24, Part 6 of the California Building Code to achieve Zero Net Energy (ZNE) standards. If the City finds ZNE technology, programs, and/or other strategies are feasible and cost-effective, the City shall adopt a ZNE ordinance as expeditiously as possible given City resources. As defined by the California Energy Commission (CEC), ZNE standards require the value of the net energy produced by project renewable energy resources to equal the value of the energy consumed annually by the project, using the CEC's Time Dependent Valuation.¹⁸ In the event the City adopts a ZNE ordinance, Mitigation Measure GHG-2 would no longer apply to housing site projects in the City.

MM GHG-3: Residential Electric Vehicle and Bicycle Parking Requirements. The City shall require new residential housing sites to comply with the Tier 2 electric vehicle charging and bicycle parking requirements in the latest edition of the California Green Building Standards Code (CalGreen) in effect at the time the building permit application is submitted to the City. Currently, the 2019 CalGreen code, Section A4.106.8, Electric Vehicle Charging for New Construction, and Section A4.106.9, Bicycle Parking, require the following measures to facilitate the future installation and use of electric vehicle chargers and bicycle travel:

- New one and two-family dwellings and townhouses with attached private garages include a dedicated 208/240-volt branch circuit rated at 40 amperes minimum.
- New multi-family dwellings provide 20 percent of the total number of parking spaces on a building site be electric vehicle charging spaces capable of supporting future electric vehicle supply equipment.
- New multi-family buildings provide on-site bicycle parking for at least one bicycle per every two dwelling units, with acceptable parking facilities conveniently reached from the street.

MM GHG-4: Non-Residential Electric Vehicle and Bicycle Parking Requirements. The City shall require new commercial development included as part of mixed-use

housing sites to comply with the Tier 2 bicycle accommodations, clean air vehicle parking, and electric vehicle charging requirements in the latest edition of the California Green Building Standards Code (CalGreen) in effect at the time the building permit application is submitted to the City. Currently, the 2019 CalGreen code, Section A5.106.4.3, Changing Rooms, Section A5.106.5.1, Designated Parking for Clean Air Vehicles, and Section A5.106.5.3, Electric Vehicle Charging, require the following measures to facilitate bicycle travel, clean air vehicles, and the future installation and use of electric vehicle chargers:

- Non-residential buildings with more than 10 tenant-occupants provide changing/shower facilities for tenant-occupants in accordance with Table A5.106.4.3 of the CalGreen code.
- Non-residential development involving the installation, addition, or alteration of 10 or more vehicular parking spaces provide designated parking for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles pursuant to Table A5.106.5.1.2 of the CalGreen code.
- Non-residential development shall provide electric vehicle charging spaces capable of supporting electric vehicle supply equipment pursuant to Table A5.106.5.3.2 of the CalGreen code.

MM GHG-5: Require a Project-level Greenhouse Gas Emissions Assessment for Housing Site Projects. The City shall require development projects that are determined not to be categorically exempt from CEQA, and that require the quantitative VMT assessment required by Mitigation Measure VMT-1, to submit a project-level greenhouse gas (GHG) emissions analysis. The GHG emissions analysis shall evaluate the project's consistency with adopted state-wide GHG emissions reduction goals using the latest guidance and recommendations from the Bay Area Air Quality Management District, or another accepted methodology. If the project's GHG emissions could interfere with state-wide GHG emission reduction goals, mitigation shall be identified and implemented to reduce emissions. Mitigation measures to reduce GHG emissions could include, but are not limited to:

- Increasing the energy efficiency of the proposed building(s) (e.g., identifying building practices that go beyond CalGreen Code standards, identifying specific energy efficient appliances, etc.);
- Incorporating on-site renewable energy generation into project-design;
- Reducing the quantity of parking provided by the proposed development;
- Reducing indoor and outdoor potable water consumption; and
- Increasing solid waste diversion rates.

Level of Significance After Mitigation

As described in the preceding analysis, the HEU would result in 2040 GHG emissions that do not meet the State's 2030 GHG reduction or 2045 carbon neutrality goals. The implementation of the HEU could also result in GHG emissions that interfere with the 2017 Scoping Plan and impede the ability to meet regional transportation GHG reduction goals established by Plan Bay Area 2050. This is considered a potentially significant impact. To reduce GHG emissions associated with implementation of the HEU, Mitigation Measures GHG-1 to GHG-5 and VMT-1 are recommended to be incorporated into future housing site development projects. Mitigation Measures GHG-1 and GHG-2 address GHG emissions associated with building energy use. Mitigation Measure GHG-1 would require the City to prohibit natural usage in housing site project until the City evaluates the feasibility of adopting a ZNE ordinance to comprehensively address

building energy use and decarbonization per while Mitigation Measure GHG-2. Mitigation Measures GHG-3, GHG-4, and VMT-1 address GHG emissions associated with vehicle transportation, including measures that increase support for the use of electric vehicles and measures that reduce vehicle trips and associated VMT. Finally, Mitigation Measure GHG-5 would require individual future housing site projects' developers to evaluate their projects' GHG emissions levels for consistency with State GHG reduction goals. It is not possible at this time to quantify the GHG emissions reductions that could be realized through the implementation of Mitigation Measures GHG-1 to GHG-5 and VMT-1 for several reasons. First, it is unknown how many projects would be actually subject to Mitigation Measures GHG-1 to GHG-5 and VMT-1. Second, it is uncertain at this time if the ZNE provisions called out in Mitigation Measure GHG-2 would be adopted by the City. In addition, the specific GHG emissions reduction measures associated with Mitigation Measures GHG-1 through GHG-4 would be dependent on factors that are not known at this time, including the number of projects subject to review, building types/intensities, and each individual project's specific site and trip generation characteristics. Finally, although Mitigation Measure GHG-5 would require a project-level evaluation for future discretionary projects proposed under implementation of the HEU, it cannot be assured at this time that every single one of those projects would be able to mitigate their emissions in line with state-wide goals. Since the GHG emissions associated with the implementation of the HEU would not meet State GHG reduction goals and could conflict with plans adopted for the purposes of reducing GHG emissions (e.g., 2017 Scoping Plan), and since the GHG reductions attributable to Mitigation Measures GHG-1 to GHG-5 cannot be definitively assessed at this time, this impact would be significant and unavoidable.

Cumulative Impacts

Impact GHG-2 – Would the HEU cause substantial adverse cumulative impacts with respect to greenhouse gases?

Analysis of Impacts

Global climate change is the result of GHG emissions worldwide; individual projects do not generate enough GHG emissions to influence global climate change. Thus, the analysis of GHG emissions is by nature a cumulative analysis focused on whether an individual project's contribution to global climate change is cumulatively considerable. As described under Impact GHG-1, the proposed HEU would result in GHG emissions that do not meet the State's 2030 GHG reduction or 2045 carbon neutrality goals. The implementation of the HEU could also result in GHG emissions that conflict with plans adopted for the purposes of reducing GHG emission, including the 2017 Scoping Plan and Plan Bay Area 2050.

Level of Significance Before Mitigation

Potentially Significant.

Mitigation Measures

See Mitigation Measures GHG-1 to GHG-5 and VMT-1.

Level of Significance After Mitigation

Significant and Unavoidable.

4.8.5 References

- ¹ Bay Area Air Quality Management District (BAAQMD). *Clean Air Plan: Spare the Air, Cool the Climate*. (2017). https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-_proposed-final-cap-vol-1-pdf.pdf?la=en [Accessed March 2022].
- ² National Oceanic and Atmospheric Administration (NOAA). *Trends in Atmospheric Carbon Dioxide Mauna Loa, Hawaii. Earth System Research Laboratory*. (2022). <https://gml.noaa.gov/ccgg/trends/> [Accessed March 2022]
- ³ California Natural Resources Agency (CNRA). *California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008*. (2009). http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf [Accessed March 2022].
- ⁴ California Natural Resources Agency (CNRA). *Safeguarding California Plan: 2018 Update*. (2018). <https://resources.ca.gov/CNRALegacyFiles/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf> [Accessed March 2022]
- ⁵ U.S. Environmental Protection Agency (EPA). *EPA and DOT Finalize Greenhouse Gas and Fuel Efficiency Standards for Heavy-Duty Trucks*. (2016). <https://www.transportation.gov/briefing-room/epa-and-dot-finalize-greenhouse-gas-and-fuel-efficiency-standards-heavy-duty-trucks> [Accessed March 2022].
- ⁶ California Air Resources Board (CARB). *EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One*. (2019). https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf [Accessed March 2022].
- ⁷ California Air Resources Board (CARB). *California Greenhouse Gas Emission by Scoping Plan Category (Thirteenth Edition: 2000 to 2018)*. (2020). <https://www.arb.ca.gov/cc/inventory/data/data.htm> [Accessed March 2022].
- ⁸ California Air Resources Board (CARB). *Climate Change Scoping Plan – A Framework for Change*. (2009). <http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm> [Accessed August 2019].
- ⁹ California Air Resources Board (CARB). *AB 32 Climate change, Scoping Plan Progress Report*. (2010).
- ¹⁰ California Air Resources Board (CARB). *First Update to the Climate Change Scoping Plan Building on the Framework Pursuant to AB 32 – The California Global Warming Solutions Act of 2006*. (2014). http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf [Accessed March 2022].
- ¹¹ California Air Resources Board (CARB). *Climate Change Scoping Plan*. (2017). https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf [Accessed March 2022].
- ¹² California Air Resources Board (CARB). *Draft 2022 Scoping Plan Update*. (2022). <https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf> [Accessed July 2022].
- ¹³ California Air Resources Board (CARB). *SB 375 Regional Greenhouse Gas Emission Reduction Targets*. (2018). <https://www.arb.ca.gov/cc/sb375/finaltargets2018.pdf>. [Accessed March 2022].
- ¹⁴ Association of Bay Area Governments / Municipal Transit Commission (ABAG/MTC). *Plan Bay Area 2040*. (2017).
- ¹⁵ Association of Bay Area Governments / Municipal Transit Commission (ABAG/MTC). *Plan Bay Area 2050*. (2021).

-
- ¹⁶ Bay Area Air Quality Management District (BAAQMD). *California Environmental Quality Act Air Quality Guidelines*. (2017). https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en [Accessed March 2022].
- ¹⁷ Bay Area Air Quality Management District. *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans*. (2022). <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en> [Accessed July 2022].
- ¹⁸ California Energy Commission. *Integrated Energy Policy Report*. (2015).

4.9 – HAZARDS AND HAZARDOUS MATERIALS

This EIR chapter addresses hazards and hazardous materials impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (HEU or project), including impacts for transport, use, or disposal of hazardous material, upset and accident conditions, hazardous emissions or materials near schools, hazardous materials sites within the Planning Area, exposure to excessive airport noise, interference with an adopted emergency response plan or evacuation plan, and risk from wildfire.

4.9.1 *Environmental Setting*

Hazardous Materials

The California Environmental Protection Agency's (CalEPA's) Toxic Release Inventory (TRI) Program manages a database of facilities and waste transporters that emit and move toxic chemicals known to be harmful to human health. The State of California categorizes hazardous waste generators as either Very Small Quantity Generators (VSQG), Small Quantity Generators (SQG) or Large Quantity Generators (LQG). VSQGs produce up to 220 pounds of hazardous waste per month. SQGs produce 220 pounds to 2,200 pounds of hazardous waste per month, while LQGs produce more than 2,200 pounds of waste per month.¹

There are two main governmental databases for sites involving hazardous materials in the state: "Envirostor" operated by the state Department of Toxic Substances Control (DTSC), and "Geotracker" operated by the State Water Resources Control Board (SWRCB).^{2, 3} Envirostor is a data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites. The Geotracker database is a data management system for sites that impact, or have the potential to impact, water quality in California. There are no hazardous materials sites within the Planning Area listed in the Envirostor database.

The U.S. Environmental Protection Agency (EPA) Superfund Enterprise Management System (SEMS) database also provides relevant hazardous waste information for land in and around the Planning Area.⁴ According to these sources, there are three Permitted Tank Sites with active underground storage tank (UST) facilities, and there is one open Cleanup Program Site which is a dry cleaner.⁵ Cleanup Program Sites are non-federally owned facilities regulated under the SWRCB's Site Cleanup Program and/or a Regional Water Quality Control Board. In addition, there are eight closed or completed Leaking Underground Storage Tank (LUST) Cleanup sites in the Planning Area.⁶ A designation of "open" status indicates that there is an ongoing case that has been opened by a regulatory agency and the site is undergoing assessment, remediation or site monitoring. A "closed" status indicates that a regulatory agency has determined that no further remediation activities are required. The SEMS database shows no sites located within the Planning Area.

Based on available information, there are no active hazardous waste generators or disposal/remediation sites within the City of Clayton or in the Planning Area.⁷

Airport Hazards

The Buchanan Field Airport is located approximately 5.6 miles northwest of the center of the Planning Area.⁸ The Airport's Influence Area, within which additional land use policies are enforced to ensure compatible development and minimize potential noise and safety impacts of air traffic on the public, is defined in the Contra Costa County Airport Land Use Compatibility Plan as those areas generally extending 14,000 feet or 2 to 3 miles from the airport's runways.⁹ The Planning Area does not fall within the boundaries of the Buchanan Field Airport's Influence Area.

Wildfire Hazards

The City of Clayton is nearly surrounded by open space and vegetation with parts of Mt. Diablo State Park and the Black Diamond Mines Regional Preserve in or near its Planning Area. The Planning Area is centrally located in Contra Costa County, and thus has a typically drier and warmer climate compared to the coastal regions of the Bay Area. In addition to the dry climate, inland winds colloquially named the "Diablo Winds" bring dry hot air similar to the southern California Santa Ana winds. The vegetation, dry climate, and hot winds create a potential wildfire risk for Clayton. To the north, east, and south, the City is surrounded by State Responsibility Area (SRA) High and Very High Fire Hazard Severity (HFS and VHFS) Zones.¹⁰ The Contra Costa Fire Protection District provides firefighting services to Clayton's Local Responsibility Area (LRA).

4.9.2 Regulatory Framework

Federal

U.S. Environmental Protection Agency (EPA)

The EPA regulates chemical and hazardous materials use, storage, treatment, handling, transport, and disposal practices; protects workers and the community (along with CalOSHA, see below); and integrates the Federal Clean Water Act and Clean Air Act into California Legislation.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Adopted in 1980, CERCLA was developed to remove contamination of water, air, and land resources from past chemical disposal practices. Also known as the "Superfund Act," CERCLA contains a list of sites referred to as Superfund sites, where there is an imminent threat to human health. CERCLA collects taxes from the chemical and petroleum industries to clean abandoned or uncontrolled hazardous sites using short term and long-term responses techniques.

The Resources Conservation and Recovery Act (RCRA)

RCRA is a federal law that regulates hazardous wastes from a 'cradle-to-grave' approach, meaning that all hazardous wastes are tracked and strictly regulated from generation to disposal, and waste generators are required to report use or transport of hazardous wastes to the EPA. Hazardous waste generators range from small producers such as dry cleaners and automobile repair facilities to larger producers such as hospitals and manufacturing operations. The EPA categorizes Small Quantity Generators (SQG) as those facilities that produce between 220.5 and 2,205 pounds (i.e., 100 and 1,000 kilograms) of hazardous waste per month. Facilities producing less than 220.5 pounds of hazardous waste per month are not subject to RCRA. Large Quantity Generators (LQG) produce 2,205 pounds or more hazardous waste per month. LQG and SQG facilities are subject to the storage and transportation requirements of RCRA.

The Federal Emergency Planning and Community Right-To-Know Act (FEPCRA)

Enacted to inform communities and residents of chemical hazards in their area, this Act requires the EPA to maintain and publish a list of toxic chemical releases, known as the Toxic Release Inventory (TRI). Facilities required to report include industrial uses that manufacture, process, or use significant amounts of chemicals. Reporting includes types and amounts of chemicals that are released each year into the air, water, and land or transferred off-site. Listing as a TRI facility does not necessarily mean that releases are harmful to humans or the environment.

Federal Occupational Safety and Health Administration (OSHA)

OSHA establishes and enforces federal regulations related to health and safety of workers exposed to toxic and hazardous materials. OSHA also sets health and safety guidelines for construction activities and manufacturing facility operations.

U.S. Department of Transportation (DOT)

DOT regulates the shipment of hazardous material. DOT also administers the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to clarify conflicting state, local, and federal regulations. HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous (along with EPA) when they pose unreasonable risks to health, safety, or property.

Standardized Emergency Management System (SEMS)/National Incident Management System

According to the state's SEMS, local agencies have primary authority regarding rescue and treatment of casualties and making decisions regarding protective actions for the community. When a major incident occurs, the first few moments are critical in terms of reducing loss of life and property. First responders must be sufficiently trained to understand the nature and the gravity of the event to minimize the confusion that inevitably follows catastrophic situations. This on-scene authority rests with the local emergency services organization and the incident commander.

Federal Aviation Administration (FAA)

The FAA Airport Safety and Operations Division has primary responsibility for the safety and certification of airports and aircraft. The FAA establishes and enforces standards, specifications, and recommendations for the safe operation and design of commercial and general aviation airports. The FAA has no authority over off-airport land uses; its role focuses on the safety of aircraft operations.

Federal Aviation Regulations (FAR)

FAR are rules prescribed by the FAA governing all aviation activities in the United States. A wide variety of activities are regulated, such as airplane design and manufacturing, how aircraft are flown, pilot training activities, hot air ballooning, and obstruction lighting and marking.

Part 77 of the FAR, Objects Affecting Navigable Airspace, establishes standards for determining obstructions to navigable airspace and the effects of such obstructions on the safe and efficient use of that airspace. The regulations require that the FAA be notified of proposed construction or alteration of objects—whether permanent, temporary, or of natural growth—if those objects would be of a height that exceeds the FAR Part 77 criteria.

State

California Occupational Safety and Health Administration (CalOSHA)

CalOSHA is responsible for promulgating and enforcing state health and safety standards and implementing federal OSHA laws. For example, CalOSHA's regulatory scope includes provisions to minimize the potential for release of asbestos and lead during construction and demolition activities.

California Environmental Protection Agency (CalEPA)

The CalEPA implements and enforces a statewide hazardous materials program known as the Certified Unified Program Agency (CUPA) established by Senate Bill 1802 to enable counties and local government to enforce the administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs for hazardous materials:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Prevention Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control, and Countermeasure Plans
- Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs
- California Uniform Fire Code, Hazardous Materials Management Plans, and Hazardous Material Inventory Statements

CUPAs are accountable for carrying out responsibilities previously handled by approximately 1,300 different state and local agencies.

CalEPA Office of Emergency Services (CalEPA/OES)

CalEPA establishes regulations governing the use of hazardous materials in the state to protect air, water, and soil. OES coordinates state and local agencies and resources for educating, planning, and warning citizens of hazardous materials and related emergencies, including organized response efforts in case of emergencies.

California Department of Forestry and Fire Protection (CALFIRE), Office of the State Fire Marshal (OSFM)

The CALFIRE OSFM evaluates and provides technical assistance for the Hazardous Material Management Plan (HMMP), the Hazardous Materials Inventory Statement (HMIS) and the Aboveground Petroleum Storage Act (APSA) Programs. The HMMP and HMIS Program are closely tied to the Business Plan Program.

California Fire Code

The City of Clayton has adopted the 2019 California Fire Code, with amendments to address specific local conditions and needs. These provisions include construction standards and fire hydrant requirements, road widths and configurations designed to accommodate the passage of fire trucks and engines, and requirements for minimum fire flow rates for water mains, specifications for exterior materials and construction methods for structures located in the wildland-urban interface (WUI). These regulations pertain to any new building located within a Local Agency 'Very High Fire Hazard Severity Zone' or within a State Responsible 'Moderate', 'High', or 'Very High Fire Hazard Severity Zone'.

California Hazardous Waste Control Law

The California Hazardous Waste Control Law is administered by CalEPA to regulate hazardous wastes. Although the Hazardous Waste Control Law is generally more stringent than RCRA, until the federal EPA approves the California Hazardous Waste Control Program (which is charged with regulating the generation, treatment, storage, and disposal of hazardous waste), both the state and federal laws apply in California. The Hazardous Waste Control Law lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills. The California Code of Regulations (CCR) 22 CCR Section 66261.10 describes waste that has “hazardous” characteristics as follows: “[a](1) a waste that exhibits the characteristics may: (A) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed or otherwise managed.”

According to 22 CCR (Article 11, Chapter 3), substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated, or that is being stored prior to proper disposal. Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances (e.g., gasoline, hexane, and natural gas) are hazardous because of their flammable properties. Corrosive substances (e.g., strong acids and bases such as sulfuric [battery] acid or lye) are chemically active and can damage other materials or cause severe burns upon contact. Reactive substances (e.g., explosives, pressurized canisters, and pure sodium metal, which reacts violently with water) may cause explosions or generate gases or fumes.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Radioactive waste mixed with chemical hazardous waste is referred to as “mixed wastes.” Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses (22 CCR 66251.1 *et seq.*).

California Department of Toxic Substances Control (DTSC)

DTSC regulates hazardous substances and wastes, oversees remedial investigations, protects drinking water from toxic contamination, and warns the public that could potentially be exposed to listed carcinogens. DTSC evaluates and provides technical assistance for the Hazardous Waste Generator Program, including Onsite Treatment (Tiered Permitting) and RCRA. In addition, EnviroStor is DTSC’s data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. There are no open investigations in the Planning Area (DTSC EnviroStor).

Underground Tank Regulations

Title 23, Division 3, Chapter 16 (Underground Tank Regulations) of the California Code of Regulations identifies the regulations applicable to new and existing underground storage tanks. These regulations establish monitoring, maintenance, reporting, abatement, and closure procedures for all underground storage tanks in the state. These regulations are administered by the San Francisco Regional Water Quality Control Board.

California Highway Patrol (CHP)

The CHP has primary regulatory responsibility for the transportation of hazardous wastes and materials.

Cortese List

California Government Code Section 65962.5 established the "Cortese List", which requires state agencies to compile a list of all properties affected by hazardous waste and develop a framework for how they will continue to be monitored and addressed by the state. A site's presence on the list has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA).

California Porter Cologne Water Quality Control Act

Division 7 of the California Water Code (Water Code) identifies the enforcement and implementation rights of the Regional Water Quality Control Board to remedy discharges to surface waters or groundwater that would or could violate water quality standards. Standard remedies include issuance of Cease-and-Desist Orders and cleanup and abatement procedures.

Code of Regulations Title 22

Title 22 of the California Code of Regulations contains all applicable state and federal laws governing hazardous wastes in the state. Title 22 is more stringent and broader in its coverage of wastes than federal law. Chapter 51 (Site Remediation) identifies the minimum standards of performance for site investigations and response actions performed by the private sector in site cleanup efforts.

Hazardous waste is any waste with properties that make it potentially dangerous or harmful to human health or the environment. Hazardous waste is defined in one of two ways. Waste is considered hazardous if it appears on one of the five lists created pursuant to RCRA. The lists are known as the F-, K-, P-/U-, and M- lists and reflect non-specific source waste, source-specific waste, discarded commercial chemical products, and discarded mercury-containing products, respectively. A waste may also be categorized as hazardous if it exhibits one of the four characteristics of hazardous materials: ignitability, corrosivity, reactivity, and toxicity. Because of its toxicity, solid wastes containing certain levels of lead are considered hazardous and must be handled, transported, and disposed of in accordance with federal and state law. In California, two thresholds have been established by state regulation to determine if a waste is hazardous due to its lead content. The Total Threshold Limit Concentration (TTLC) establishes a threshold of 1,000 milligrams (mg) of lead per one kilogram (kg) of waste. The Soluble Threshold Limit Concentration (STLC) establishes a threshold of 5 mg of lead per liter (L) of waste extract solution. Hazardous waste must be disposed of at Class I landfills that are specifically designed to accept hazardous waste.

California Asbestos Standards in Construction

The California Division of Occupational Safety and Health (CalOSHA) enforces the California Asbestos Standards in Construction (8 CCR Section 1529). These standards regulate exposure to asbestos in all construction work including demolition of structures. These regulations establish

entry and exit procedures after working in asbestos-contaminated areas and establish specific control measures designed to protect workers depending on the type of asbestos they are handling. Such procedures include minimum air circulations, use of respirators, wetting of materials, clothing laundering, construction and demolition equipment requirements, and shielding specifications. Notification procedures are also in place that require building owner and employee noticing as well as external and internal hazard signage. All asbestos workers are required to complete training programs and register as an asbestos contractor, depending on the type of asbestos being removed. Medical examination requirements are also required to monitor worker health, generally on an annual basis.

California Construction Safety Orders for Lead

Title 8, Section 1532.2 (Lead) of the California Code of Regulations establishes the requirements for any construction worker who may be exposed to lead during demolition or salvage, removal or encapsulation, new construction, and cleanup activities. The construction safety orders establish an action level of 30 micrograms of lead per cubic meter ($\mu\text{g}/\text{cm}^3$) of air calculated over an 8-hour time-weighted average without regard for the use of a respirator, meaning this is the limit where safety protocols must be initiated, such as use of a respirator. Under no circumstance may a worker be exposed to 50 $\mu\text{g}/\text{cm}^3$ over an 8-hour weighted period. These regulations require implementation of engineering and work practice controls such as respiratory protection, protective clothing, housekeeping, hygiene practices, and signage requirements to meet worker exposure limits. Medical monitoring and training requirements are also identified.

California Assembly Bill 2948 (AB 2948)

In response to the growing statewide concern of hazardous waste management, State Assembly Bill 2948 (Tanner 1986) enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within its jurisdiction.

Hazardous Materials Business Plan (CERS Annual Submittal)

In 1986, the state established the Hazardous Materials Business Plan (HMBP) Program which prevents or minimizes damage to the public and the environment from a release of hazardous materials. Administered by CalEPA/OES, California businesses that handle hazardous materials were required to submit an HMBP each year. Businesses that handle hazardous materials in reportable quantities to submit an annual hazardous materials business plan to the local Certified Unified Program Agency (CUPA) which is the Contra Costa Health Services - Hazardous Materials Programs (CCHSHMP) for all businesses within Contra Costa County. An HMBP must include a hazardous materials inventory, site map, contingency plan, and employee training plans. The HMBP must be submitted annually to the statewide information management system which is also known as the California Environmental Reporting System (CERS).

Emergency Services Act

Under the Emergency Services Act, the State of California developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an integral part of the plan, which is administered by the Governor's Office of Emergency Services. The Office of Emergency Services coordinates the responses of other agencies, including the EPA, California Highway Patrol, Regional Water Quality Control Boards, Air Quality Management Districts, and county disaster response offices.

The Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act requires facilities to disclose to the State and Local Emergency Planning Committee the quantities and type of toxic chemicals stored. To avoid multiple reports to various agencies, the California Health and Safety Code requires notification of chemical inventories to the Administering Agency, which is DTSC. Notification of chemical inventory is accomplished through completion of a Hazardous Materials Business Plan and inventory.

State Education Code

Section 17215 requires that, before acquiring title to property for a new school site situated within 2 miles of an airport runway, a school district must notify the state Department of Education (DOE). DOE then notifies the California Department of Transportation (Caltrans) which is required to investigate the site and prepare a written report. If Caltrans report does not favor acquisition of the site for a school, no state or local funds can be used for site acquisition or building construction on that site.

Section 81033 establishes the same requirements as Section 17215 (above), but for the acquisition of community college sites.

State Public Utilities Code

Section 21001 *et seq.*, State Aeronautics Act, provides for the right of flight over private property, unless conducted in a dangerous manner or at altitudes below those prescribed by federal authority (Section 21403(a)). The act also gives Caltrans and local governments the authority to protect the airspace defined by FAR Part 77 criteria.

California Aeronautics Act (Public Utilities Code, Section 21670 *et seq.*)

The Aeronautics Act requires airport land use commissions to prepare an Airport Land Use Compatibility Plan (ALUCP) for nearly all public-use airports in the state. The intent of the ALUCP is to encourage compatibility between airports and the various land uses that surround them. Contra Costa County has established an Airport Land Use Commission (ALUC), in accordance with state law, to prepare land use compatibility plans for all public-use airports in the county and to review general plans, proposed changes to zoning codes and ordinances, land use actions and development projects, and airport development plans for consistency with compatibility policies.

California Airport Land Use Planning Handbook (2011)

The California Airport Land Use Planning Handbook provides examples of safety zones for five types of general aviation runways, an air carrier runway, and a military runway. The shapes and sizes of the zones are largely based on the spatial distribution of potential aircraft accidents. The handbook provides a qualitative description of the land use characteristics considered acceptable or unacceptable within each of the basic safety zones.

California Senate Bill 99 (SB 99)

SB 99 requires the legislative body of a city or county to adopt a comprehensive, long-term general plan that includes various elements, including a housing element and a safety element for the protection of the community from unreasonable risks associated with the effects of various geologic and seismic hazards, flooding, and wildfires. SB 99 requires the 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.

California Assembly Bill 747 (AB 747)

AB 7474 requires the legislative body of each county and city to adopt a comprehensive, long-term general plan for the physical development of the county or city and of any land outside its boundaries that bears relation to its planning. AB 747 requires the general plan to include certain mandatory elements, including a safety element for the protection of the community from unreasonable risks associated with the effects of various geologic hazards, flooding, wildland and urban fires, and climate adaptation and resilience strategies. AB 747 requires the safety element to address, among other things, evacuation routes related to identified fire and geologic hazards. If a local jurisdiction has not adopted a local hazard mitigation plan, AB 747 requires the safety element to be reviewed and updated as necessary to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. AB 747 authorizes the 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.

Regional

Regional Water Quality Control Board

Regional Water Quality Control Board (RWQCB) Region 2 (San Francisco Bay Region) regulates stormwater quality under authorities of the federal Clean Water Act and California's Porter-Cologne Water Quality Control Act. The RWQCB issues National Pollutant Discharge Elimination System (NPDES) permits to dischargers of municipal and industrial stormwater runoff and operators of large construction sites. In coordination with permittees of the San Francisco Bay Municipal Regional Stormwater Permit, including Clayton, RWQCB staff performs an annual performance review and evaluation of Contra Costa County's stormwater management program and NPDES compliance activities. The RWQCB also protects groundwater through implementation of its regulatory and planning programs.

San Francisco Bay Region Municipal Regional Stormwater NPDES Permit

The San Francisco Bay Municipal Regional Stormwater Permit (MRP) issues the Waste Discharge Requirements and NPDES Permit for the discharge of stormwater runoff from the municipal separate storm sewer systems (MS4s) of over 70 municipalities and local agencies in five Bay Area counties, including the City of Clayton. The MRP replaces the former county-by-county permits, including the former Contra Costa County Countywide Municipal Stormwater Permit.

Multi-Jurisdictional Local Hazard Mitigation Plan (MJ-LHMP)

The goal of the Association of Bay Area Government's (ABAG) MJ-LHMP is to maintain and enhance a disaster-resistant region by reducing the potential for loss and damage resulting from natural disasters, including flooding. The purpose of the MJ-LHMP is to serve as a catalyst for dialogue on public policies needed to mitigate the effects of natural hazards that affect the San Francisco Bay Area. The plan includes a number of hazard mitigation strategies, including strategies specifically related to flood hazard mitigation. In 2010, the City of Clayton adopted the MJ-LHMP as its Local Hazard Mitigation Plan and as part of its General Plan.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) regulates the demolition of buildings and structures that may contain asbestos. The BAAQMD is vested with authority to regulate airborne pollutants through both inspection and law enforcement, and is to be notified 10 days in advance of any proposed demolition or abatement work.

Environmental Site Assessment (ESA) Procedures

A Phase I ESA is the initial investigation phase of a process established by the American Society for Testing and Materials Standards (ASTM), as adequate due diligence by new purchasers of properties or their lenders prior to site development. Phase I ESAs must be completed prior to property development by private parties to establish that the buyer has exercised due diligence in purchasing the site. If a Phase I ESA indicates evidence of site contamination, a Phase II ESA would be required prior to site development. The Phase II ESA includes collection of original samples of soil, groundwater, or building materials to measure and analyze quantities of various contaminants. The most frequent substances tested for are petroleum hydrocarbons, heavy metals, pesticides, solvents, asbestos, and mold. Appropriate cleanup levels for each contaminant, based on current and planned land use, would be determined in accordance with professional procedures adopted by the lead agency (e.g., DTSC, RWQCB, BAAQMD, CUPA).

Contra Costa County

Certified Unified Program Agency (CUPA)

A CUPA is a local agency certified by CalEPA to implement and enforce six state hazardous waste and hazardous materials regulatory management programs. Contra Costa is one of the nine San Francisco Bay area counties with just over one million residents, and the CUPA for all businesses within Contra Costa County is the Contra Costa Health Services, Hazardous Materials Division. CUPAs and Program Agencies (PAs) throughout the state have created a partnership and formed the California CUPA Forum. Together, members of the California CUPA Forum and representatives of local, state and federal agencies established the Unified Program Administration and Advisory Group (UPAAG) to effectively address policy decisions, training and problem solving. The UPAAG's goals and objectives are listed in the UPAAG Strategic Plan. The Unified Program consolidates the administration, permit, inspection, and enforcement activities of the following environmental and emergency management programs:

- Aboveground Petroleum Storage Act (APSA) Program
- Area Plans for Hazardous Materials Emergencies
- California Accidental Release Prevention (CalARP) Program
- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- Hazardous Material Management Plan (HMMP) and Hazardous Material Inventory Statements (HMIS) (California Fire Code)
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- Underground Storage Tank Program

State agency partners involved in the implementation of the Unified Program are responsible for setting program element standards, working with CalEPA to ensure program consistency and providing technical assistance to CUPAs and PAs.

Protection Services

Fire protection and hazardous materials management and provided to the City by the California Department of Forestry and Fire Protection (CALFIRE) and the Contra Costa County Fire Protection District (CCCFPD). The Contra Costa Health Services, Hazardous Materials Division provides hazardous waste management and other environmental services within the County including the City of Clayton. The County, and private contractors working for the County, handle, manage, transport, and dispose of an array of hazardous waste and other regulated materials in Clayton. They handle various waste types from industrial, commercial, institutional and healthcare buildings in Clayton. They also work directly with the City and fire protection authorities on

emergency chemical spill response and cleanup as well as hazardous waste disposal and property cleanup/remediation.

When necessary, the County implements its Emergency Operations Plan (EOP) which identifies the responsibilities of various agencies in emergencies associated with natural disasters and human-caused incidents, including those involving hazardous materials. It defines the primary and support roles of County and, depending on location, city departments in after-incident damage assessment and reporting requirements. The plan also provides a framework for response and recovery coordination between cities and other local as well as State and Federal agencies. The plan: (1) conforms to the State-mandated Standardized Emergency Management System (SEMS) and restructures emergency response in compliance with the Federal Emergency Management Agency (FEMA) Incident Command System (ICS); (2) establishes response policies and procedures to provide the City clear guidance for planning; (3) details steps necessary to protect lives and property; (4) outlines coordination requirements; and (5) provides the basis for unified training and response exercises. The plan also meets the requirements of Contra Costa County's policies on emergency response and planning.

Established in 2007, the City's Community Emergency Response Team (CERT) provides Clayton with the opportunity to be prepared and to institute a formal structure in the event of an emergency. The City is a member of the Contra Costa Cities Citizen Corp/CERT Committee. This group works with the Office of Emergency Services in obtaining funds and training personnel in conducting the activities of the members of the group. The CERT program trains and certifies members of the public in basic emergency response and organizational skills, including light fire suppression, hazardous materials awareness, first aid, light search and rescue techniques, and disaster response assistance.

Multi-Hazard Functional Plan

The County's Emergency Plan addresses the planned response to extraordinary emergency situations associated with natural and human caused disasters, technological incidents and national security operations. Individuals and departments assigned emergency responsibilities within this plan will have prepared appropriate supporting plans and related Standard Operating Procedures.

Local

Clayton Municipal Code

Title 8, Health and Safety, Chapter 8.05, Offsite Hazardous Waste Facility, outlines how such facilities must comply with the County's Hazardous Waste Management Plan pursuant to Health and Safety Code Sections 25135.4 and 25135.7 (Ordinance 293, Section 2, 1992).

Local Hazard Mitigation Plan

The City has adopted a Local Hazard Mitigation Plan¹¹ which provides natural hazard mitigation strategies to reduce the impacts concentrated at large employment and industrial centers, public infrastructure, and critical facilities. The measures were created to be integrated into future building code updates and General Plan Safety Element update. The mitigation measures are therefore implemented by conformance with the building code and regulation.

4.9.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to hazards and hazardous materials if it would:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- b) 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;
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- d) 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 create a significant hazard to the public or the environment;
- e) For development within the HEU area 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, result in a safety hazard or excessive noise for people residing or working in the HEU area;
- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.9.4 Impacts and Mitigation Measures

This section describes potential impacts related to hazards and hazardous materials which could result from the implementation of the HEU and recommends mitigation measures as needed to reduce significant impacts.

Transport, Use, and Disposal Hazards

Impact HAZMAT-1 – Would the HEU create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Analysis of Impacts

Implementation of the proposed HEU would result in an increase in residential dwelling units and non-residential square footage within the Planning Area. Construction associated with implementation of the HEU would likely involve the use and disposal of chemical agents, solvents, paints, and other hazardous materials associated with construction activities. The amount of these chemicals present during construction would be limited, would comply with existing government regulations, and would not be considered a significant hazard. Hazardous materials associated with new residential uses could include, for example, liquid chemical products (e.g., household cleaners, used motor oil, building maintenance supplies, paints and solvents, pesticides, or other similar materials). The limited quantity of such products would not generate significant hazardous emissions or involve the use of acutely hazardous materials that could pose a significant threat to the environment.

Future non-residential development within the Planning Area could involve the storage, use and disposal of potentially hazardous materials, including building maintenance supplies, paints and solvents, pesticides and herbicides for landscaping and pest control, vehicle maintenance products, and similar substances. The City will require all new development to follow applicable local, state and federal regulations and guidelines regarding the storage, handling and disposal of hazardous waste. In addition, all hazardous materials are required to be stored and handled according to manufacturer's directions and local, state, and federal regulations. Given the existing federal, state, and local hazardous materials regulations already in place, the proposed HEU's potential threat to public health and safety and the environment from hazardous materials transport, storage, use, and disposal would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Hazardous Materials

Impact HAZMAT-2 – Would the HEU 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?

Analysis of Impacts

As detailed in Section 4.9.1 above, there are no hazmat facilities within the Planning Area, while there are eight former LUST sites within the Planning Area and all are listed as “case closed”. In addition, there are three permitted tank sites with active underground storage tank (UST) facilities, and there is one open Cleanup Program Site, which is a dry cleaner. Cleanup Program Sites are non-federally owned facilities regulated under the SRWQCB's Site Cleanup Program and/or a Regional Control Board. A designation of “open” status indicates that there is an ongoing case that has been opened by a regulatory agency and the site is undergoing assessment, remediation or site monitoring. A “closed” status indicates that a regulatory agency has determined that no further remediation activities are required. The SEMS database shows no sites located within the Planning Area. Finally, based on available information, there are no active hazardous waste generators or disposal/remediation sites within the City of Clayton or in the Planning Area. None of the 6th cycle housing inventory sites identified by the City are located on or in close proximity to the hazardous materials sites identified above.

It is possible that contaminants in soil or groundwater could expose future construction workers, residents, employees, or other members of the public to potential hazards. However, the potential for soil contamination would be addressed through the continued application of state and federal regulations that address and resolve underground contamination. In addition, the City Community Development Department Site Plan and Environmental Review processes and the Building Permit Issuance process require assessment of potential soil contamination on prospective development sites where evidence, such as historical aerial photos, would suggest past uses or development may have caused ground contamination.

Demolition of existing structures in the Planning Area would involve removal and disposal of existing building materials. Some older buildings may contain hazardous materials, such as asbestos containing materials or lead based paint. If not properly abated, these materials could negatively impact construction workers or members of the public. The BAAQMD regulates the

demolition and renovation of buildings and structures that may contain asbestos, and the manufacture of materials known to contain asbestos through its Rule 11. The BAAQMD is vested with authority to regulate airborne pollutants through both inspection and law enforcement and is to be notified 10 days in advance of any proposed demolition or abatement work. BAAQMD regulations must always be followed when removing asbestos or demolishing buildings. With continued compliance with established local, state and federal environmental site assessment procedures, potential risks to human health or the environment due to existing hazardous materials contamination as a result of the proposed HEU would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Emit Hazardous Emissions

Impact HAZMAT-3 – Would the HEU emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Analysis of Impacts

There are several schools within or proximate to the Planning Area, including one elementary school and one junior high school within the City's corporate boundaries. New development within the Planning Area is expected to be primarily residential and commercial uses; these uses are not expected to emit hazardous materials affecting school sites. Hazardous materials associated with new residential and commercial uses could include, for example, liquid chemical products (e.g., household cleaners, used motor oil, building maintenance supplies, paints and solvents, and pesticides). The limited quantity of such products would not generate significant hazardous air emissions or involve the use of acutely hazardous materials that could pose a significant threat to the environment or human health. New development within the Planning Area could use and dispose of chemical agents, solvents, paints, and other hazardous materials associated with construction activities. The amount of these chemicals present during construction would be limited, would comply with existing government regulations, and would not be considered a significant hazard. Therefore, impacts would be less than significant. In addition, individual development applications would be required to undergo a project-specific CEQA review which would include an evaluation of a project's potential impacts on schools.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Hazardous Material Sites

Impact HAZMAT-4 – Would the HEU 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?

Analysis of Impacts

Sites included on the list required by Government Code Section 65962.5 include hazardous materials contamination that can be detrimental to human health and the environment. As detailed in Section 4.9.1 above, there are no hazardous materials sites within the Planning Area; there are eight former LUST sites within the Planning Area, and all are listed as “case closed”. In addition, there are three Permitted Tank Sites with active underground storage tank (UST) facilities, and there is one open Cleanup Program Site which is a dry cleaner. Cleanup Program Sites are non-federally owned facilities regulated under the SWRCB's Site Cleanup Program and/or a Regional Control Board. A designation of “open” status indicates that there is an ongoing case that has been opened by a regulatory agency and the site is undergoing assessment, remediation or site monitoring. A “closed” status indicates that a regulatory agency has determined that no further remediation activities are required. The SEMS database shows no sites located within the Planning Area. Finally, based on available information, there are no active hazardous waste generators or disposal/remediation sites within the City of Clayton or in the Planning Area. None of the 6th cycle housing inventory sites identified by the City is located on or in close proximity to the hazardous materials sites identified above. If future redevelopment is proposed at any of these contamination sites pursuant to draft HEU policy, potential contamination (if not already remediated) would be addressed through the City's development review requirements in compliance with applicable state and federal regulations. For example, this information would be required during the preliminary assessment of historical, current, or proposed activities on the site involving the storage, handling, production, or transport of any hazardous materials. This information is specifically requested relative to the CEQA Checklist Questions IX.a through IX.d as well as the City's development application. CEQA Checklist Question IX.d specifically inquires if a site is on the Government Code Section 65962.5 (Cortese) List. Any site-specific hazards must be addressed in the CEQA process, even if a Categorical Exemption for Infill Development is requested, because there can be no unusual circumstances on a site that might cause a significant environmental impact under a Categorical Exemption. With implementation of the City's CEQA and development review processes, potential impacts related to sites that may be on the Government Code Section 65962.5 list would be reduced to less than significant levels.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Airports

Impact HAZMAT-5 – For projects 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 HEU result in a safety hazard or excessive noise for people residing or working in the project planning area?

Analysis of Impacts

The Contra Costa County/Buchanan Field Airport is located approximately 5.6 miles northwest of the City boundary. The HEU area does not fall within the Planning Boundary/Airport Influence Area for the airport. Since there are no aircraft influence areas in the City, the existing General Plan and proposed HEU contain no goals or policies related to aircraft safety. Therefore, no impacts related to an airport or private airstrip are anticipated.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Adopted Response and/or Evacuation Plans

Impact HAZMAT-6 – Would the HEU impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Analysis of Impacts

As described in the General Plan Safety Element, primary exit routes out of Clayton to the north are Pine Hollow Road, Clayton Road, and Concord Boulevard. To the south, the primary route is Marsh Creek Road. These principal access ways are all well-maintained and can support an evacuation function. In any disaster warranting evacuation, the exact emergency routes used would depend on several variables, including the type, scope, and location of the incident. The Safety Element includes Objectives 10 through 13 and their attendant policies, which incorporate measures for fire protection into development proposals and City plans, reduce fire risk by promoting fire safe residences in high-risk areas, and evaluate the potential for disaster and to continue planning for mitigation and response to emergency. These objectives and policies will allow the City to maintain a high level of preparedness for emergency and disaster conditions, and to allow unhindered emergency access throughout the City. Similar to the discussion in Impact HAZMAT-4 above, the City's CEQA and development review processes would also assure that future development pursuant to the HEU is consistent with these policies and not hinder emergency access within the City or for individual sites. The City's review process for new development specifically includes CALFIRE or CCCFPD review regarding fire protection, prevention, and emergency access. A similar level of review is provided by the City Police Department for emergency access related to police protective services. While it is possible that there may be temporary and limited circulation changes that may be required during discrete periods of time associated with specific construction projects, these changes would be temporary and would be of a nature that still allowed evacuation in the event of an emergency. (See also discussion of Impact WIL-1 in EIR Chapter 4.20.) Emergency access would be maintained to all properties within project limits and the surrounding vicinity during construction. Potential adverse impacts of the HEU on emergency access would therefore be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Wildland Fires

Impact HAZMAT-7 – Would the HEU expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Analysis of Impacts

Generally, the greatest potential for wildfire hazards occurs in areas adjacent to abundant natural vegetation. Except for the City of Concord to the northwest, all areas surrounding the City of Clayton are designated SRAs. Mt. Diablo and Black Diamonds Mine Regional Preserve are large open spaces that pose a potentially significant fire hazard. Wildfires in the hills are also of continuous concern, and can be fueled by dry vegetation, occasional Diablo winds, and high temperatures. Many notable fires have happened around the Planning Area: in 2013, the Morgan Fire burned 3,111 acres on Mt. Diablo, and in 2018, the Marsh Fire incident burned 247 acres. Both incidents occurred southeast of Clayton. CALFIRE prepares maps that identify Fire Hazard Severity Zones (FHSZs). CALFIRE maps show SRAs and LRAs surrounding Clayton and varying levels of potential fire severity.

With an increase in the frequency and severity of wildfires and other hazards, the State has developed new requirements for evacuation planning as a result of passage of three recent laws SB 99, AB 747, and AB 1409. These bills focus on enhancing the ability for local jurisdictions to facilitate safe evacuation from outlying high fire risk areas. AB 747 and AB1409 (Government Code Section 65302.15) require jurisdictions to identify evacuation routes and their capacity, safety, and viability under various emergency scenarios as well as identify evacuation locations in the jurisdiction's safety element. There are two ways to facilitate these new local evacuation planning requirements. The first would be to update the County's Emergency Operations Plan (EOP), and the second would be to update the City's Local Hazard Mitigation Plan (LHMP). Either of these updates would need to develop and address various emergency scenarios and responses. In addition, the update would have to incorporate descriptions of the capacity of various evacuation routes, their safety, and overall viability. All Bay Area cities have the same Housing Element trigger for SB 99, but the LHMP trigger differs across the region. Jurisdictions must decide if they will prepare their own LHMP or cooperate in a County EOP update. In addition, the timing of the EOP or LHMP update may determine whether efforts to meet SB 99 and AB 747 are done together or separately by each jurisdiction.

None of the proposed 6th cycle housing inventory sites is located in a high fire hazard severity zone. However, Sites L and M are located in close proximity to high fire hazard severity areas. Housing that could be built in the City under the HEU may be subject to significant wildfire risks, especially if those areas have inadequate evacuation routes. Therefore, Mitigation Measure HAZ-1 is recommended to help reduce potential impacts to less than significant levels. Compliance with regulatory requirements, the recommended mitigation, and the Contra Costa County Fire Protection District's development review process for new development, would help minimize the potential for impacts related to wildfire risks to people or structures. Therefore, the HEU would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

MM HAZ-1: The City shall determine if it will prepare an update to its Local Hazard Mitigation Plan (LHMP) or cooperate with Contra Costa County in an update to its Emergency Operations Plan (EOP). This update must address the evacuation planning and coordination directives outlined in SB 99 and AB 747 as they apply to the City. The selected update shall address areas of the City or its Planning Area that have high fire risks and identify adequate evacuation routes with ongoing maintenance needs and operational and public education needs to support use of these routes during emergency conditions. The City shall decide which document update is most appropriate for the City within 90 days of adoption of the HEU.

Level of Significance After Mitigation

Less than significant.

Cumulative Impacts

Impact HAZMAT-8 – Would the HEU cause substantial adverse cumulative impacts with respect to hazards and hazardous materials?

Analysis of Impacts

Impacts related to hazards and hazardous materials are generally site-specific and not cumulative in nature because each project area has unique considerations that would be subject to uniform site development and construction standards. As such, the potential for cumulative impacts is limited. Impacts associated with potential fire hazards occur at individual building sites. These effects are site-specific, and impacts would not be compounded by additional development within the urban setting of the Planning Area. Continued application of existing General Plan Safety Element policies and compliance with existing federal, state, and local regulations would help protect residents, sensitive receptors, and structures from exposure to hazardous materials or accidents and spills involving hazardous materials. It is assumed other surrounding jurisdictions have similar General Plan goals and policies as they generally reflect compliance with state laws regarding various hazards and hazardous materials. Compliance with the requirements of the General Plan Public Safety Element and federal, state, and local regulations would result in impacts from hazardous materials and fire that would be less than significant. Therefore, implementation of the proposed HEU would not result in a cumulatively considerable impact.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

This Page Intentionally Left Blank.

4.9.5 References

- ¹ United States Environmental Protection Agency. *Categories of Hazardous Waste Generators*. (2022). <https://www.epa.gov/hwgenerators/categories-hazardous-waste-generators>. [Accessed April 2022].
- ² California Department of Toxic Substances Control. *EnviroStor*. (2022). <https://dtsc.ca.gov/your-envirostor/>. [Accessed April 2022].
- ³ California State Water Resources Control Board. *Geotracker*. (2022). <https://geotracker.waterboards.ca.gov/> [Accessed April 2022].
- ⁴ United States Environmental Protection Agency. *Superfund Enterprise Management System (SEMS Search)*. (2022). <https://www.epa.gov/enviro/sems-search>. [Accessed April 2022].
- ⁵ California State Water Resources Control Board. *Geotracker*. (2022). <https://geotracker.waterboards.ca.gov/> [Accessed April 2022].
- ⁶ California State Water Resources Control Board. *Geotracker*. (2022). <https://geotracker.waterboards.ca.gov/> [Accessed April 2022].
- ⁷ United States Environmental Protection Agency. *Toxics Release Inventory Program*. (2022). <https://www.epa.gov/toxics-release-inventory-tri-program>. [Accessed April 2022].
- ⁸ Google Maps. *Clayton to Buchanan Field Airport*. (2022). [Accessed April 2022].
- ⁹ Contra Costa County Airport Land Use Compatibility Plan. <https://www.contracosta.ca.gov/4307/Airport-Land-Use-Commission-ALUC> [Accessed April 2022].
- ¹⁰ California Governor's Office of Emergency Hazards. *My Hazards*. (2022). <https://myhazards.caloes.ca.gov/>. [Accessed April 2022].
- ¹¹ City of Clayton. *Local Hazard Mitigation Plan*. <https://claytonca.gov/engineering-and-public-works/local-hazard-mitigation-plan>. [Accessed April 2022].

4.10 – HYDROLOGY AND WATER QUALITY

This EIR chapter addresses hydrology and water quality impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”).

4.10.1 *Environmental Setting*

Watershed

The City of Clayton is located in the Mt. Diablo Creek Watershed, which travels northwesterly off the slopes of Mt. Diablo. The longest branch of the Mt. Diablo Creek flows for approximately 17 miles before emptying into the Suisun Bay.¹ The headwaters of the Creek originate in Mt. Diablo State Park and include major tributaries Mitchell Creek, Back Creek, Donner Creek, and Irish Creek among other smaller tributaries.² Clayton and Concord are the only cities within the watershed, with the remaining 64 percent being unincorporated lands of Contra Costa County. The watershed encompasses over 23,000 acres.³

Groundwater

The Clayton Valley Groundwater Basin (2-005) is bounded by the Mt. Diablo Creek on its east, the Suisun Bay to the north, and is separated from the Ygnacio Valley Groundwater Basin by the Concord Fault to its west.⁴ Mt. Diablo borders the basin to the south. Both the cities of Clayton and Concord overlay the basin. Aquifers in the basin are comprised of thick Quaternary alluvium deposits along with Tertiary-Quaternary deposits, with pockets of clay, gravel and sand embedded throughout.⁵ The combined thickness of deposits surpasses 700 feet. Exposed Quaternary alluvium deposits can be found in the southern portion of the basin.⁶ Nearing the Suisun Bay, young alluvium deposits are exposed, characterized by soft muds and loose sands. Aquifers in the basin are hydrologically connected to Suisun Bay, into which both the Sacramento and San Joaquin Rivers flow.⁷ Groundwater movement generally results from differences in pressure between points of recharge, such as percolation areas, spreading grounds, and streams, and from points of discharge, such as wells and large bodies of water. This basin is not currently adjudicated and is not designated as a “critically overdrafted groundwater basin or subbasin” by the California Department of Water Resources (CDWR) in their Bulletin 118 publication.⁸

Surface Waters, Topography, and Drainage

Clayton is located in North Central Contra Costa County, with the City of Concord being the only city to share a border with Clayton. The Planning Area sits at the northern slopes of Mt. Diablo and to the west of the Black Diamond Mines Regional Preserve. The City of Clayton is naturally flanked by Mt. Diablo and the Black Hills. The Mt. Diablo Creek headwaters begin in Mt. Diablo State Park and flow through the City in a northwest direction until finally depositing into Suisun Bay. Major tributaries include Donner Creek, Mitchell Creek, Back Creek, and Irish Creek, all of which converge in the Planning Area. Surface waters in Clayton flow generally unencumbered, with portions of tributaries that flow through urban areas have been altered to move underground or have earth constructed portions. Concrete canals move water from Mt. Diablo Creek and other rivers outside of the Planning Area into reservoirs. Clayton is overseen by the Contra Costa Flood

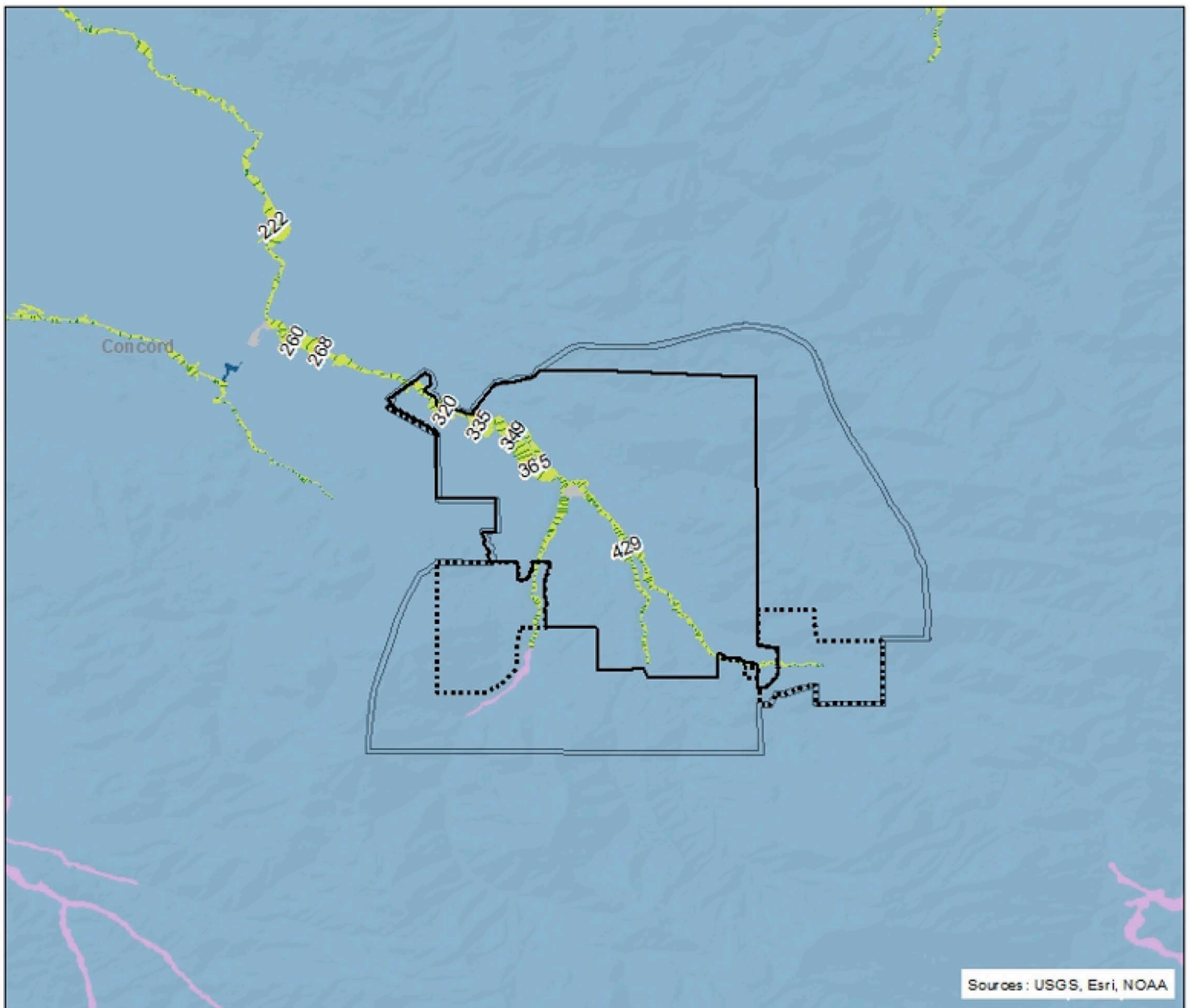
Control and Water Conservation District, which maintains over 79 miles of channels and creeks and other drainage facilities.⁹

Flooding and Dam Inundation

Waterways in the Planning Area can be characterized as an open space resource that provides a structure around which the City's greenbelts are shaped. According to the Federal Emergency Management Agency (FEMA) Flood Panel FIRM Maps 06013C0304G, 06013C0308F, 06013C0316F, 06013C0312F, a majority of the Planning Area is designated Zone X (unshaded), which are areas determined to be of minimal flood hazard.¹⁰ Areas of higher elevation, such as neighborhoods in the east and northeastern portions of the City, are not located near potential flood areas. The downtown Town Center is most susceptible to flooding, with intersections at Marsh Creek Road and Morris Street along Center Street designated as Zone X (shaded).¹¹ These are areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile. Small pockets of these flood areas follow along Mt. Diablo Creek and its tributaries within the Planning Area.¹²

Exhibit 4.10-1 (FEMA Flood Zones) illustrates the above-mentioned areas, as well as shows the Special Flood Hazard Areas that convey surface water within the City. Areas along Mt. Diablo Creek and other waterways are designated as Regulatory Floodways (Zones AE, AO, AH, VE, AR).¹³ Regulatory Floodways are channels and adjacent land that must be preserved to properly discharge floodwaters without increasing the water's surface above a designated height.¹⁴ Base Flood Elevation (BFE) is the elevation of surface water from a flood that has a 1% chance of meeting or exceeding that height in any given year.¹⁵ Special Flood Hazard Areas without BFE in the Planning Area are designated as Zones A, V, and A99. These areas are just outside of Regulatory Floodways, with the largest being in the Town Center on Clayton Road.¹⁶

There are no dams in the Planning Area. After flooding occurred in 1963, the City requested flood control reports from the County Flood Control District and Soil Conservation District. The 1967 report recommended small dams constructed along Mt. Diablo and Marshall Creeks; these were never constructed.¹⁷ Drainage improvement projects were constructed at the Oakhurst Country Club, as well as a detention basin in Peacock Creek, designed to reduce the annual 1% chance flooding on Mt. Diablo Creek.¹⁸ In 2017, the State of California passed legislation requiring the development of inundation maps and emergency action plans for all state jurisdictional dams. In neighboring Concord, the Mallard Dam on the Mallard Reservoir at the northern portion of the City of Concord, is susceptible to dam inundation; however, the Planning Area is not within the inundation area for this dam.¹⁹



- Clayton City Boundary
- Clayton Sphere of Influence
- Planning Area Boundary
- Base flood elevation (BFE)
- A: Areas subject to inundation by the 1-percent-annual-chance flood event.
- AE: Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. BFEs are shown within these zones
- AH: Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are 1–3 feet.
- AO: Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are 1–3 feet.
- X: Moderate to minimal risk outside the 1-percent and 2-percent-annual-chance floodplains.

Exhibit 4.10-1 FEMA Flood Zones

Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.

Stormwater Quality

Point Source Pollutants

Point-source pollutants have historically consisted of industrial operations with discrete discharges to receiving waters. Industrial operations often include potential sources of pollutant discharges that require coverage under the State of California's General Industrial Permit. The General Industrial Permit requires industrial operations to comply with regulations that significantly lessen the impact of industry on water quality. Different types of point source pollutants are discussed below.

Sediment. Sediment is made up of tiny soil particles that are washed or blown into surface water, degrading the quality because they can impact suspended soil particles resulting in increased turbidity. The fine particles also act as a vehicle to transport other pollutants, including nutrients, trace metals, and hydrocarbons. Construction sites are typically the largest source of sediment for urban areas under development.

Nutrients. Nutrients (especially phosphorus and nitrogen) are a major concern for surface water quality because they can cause algal blooms and excessive vegetative growth. Of the two, phosphorus is usually the limited nutrient that controls the growth of algae in lakes. The ortho phosphorous form of phosphorus is readily available for plant growth. The ammonium of nitrogen can also have severe effects on surface water quality. The ammonium is converted to nitrate, and nitrite forms nitrogen in a process called nitrification. The process consumes large amounts of oxygen, which can impair the dissolved oxygen levels in water.

The nitrate form of nitrogen is very soluble and is found naturally at low levels in water. When nitrogen fertilizer is applied to lawn or other areas in excess of plant needs, nitrates can leach below the root zone, eventually reaching groundwater. Orthophosphate from auto emissions also contributes phosphorus in areas with heavy automobile traffic. Other problems resulting from excess nutrients are surface algal scums, water discolorations, odors, toxic releases, and overgrowth of plants. Common measures for nutrients are total nitrogen, total Kjeldahl nitrogen (TKN), nitrate ammonia, total phosphate, and total organic carbon (TOC). Generally, nutrient export is greatest from development sites with the most impervious areas.

Trace Metals. Trace metals are primarily a concern because of their toxic effects on aquatic life and their potential to contaminate drinking water supplies. The most common trace metals found in urban runoff are lead, zinc, and copper. Fallout from automobile emissions is also a major source of lead in urban areas. A large fraction of the trace metals in urban runoff are attached to sediment, and this effectively reduces the amount that is immediately available for biological uptake and subsequent bioaccumulation. Metals associated with the sediment settle out rapidly and accumulate in the soils. Also, urban runoff events typically occur over a shorter duration, which reduces the aquatic environment's amount of exposure to toxics. The toxicity of trace metals in runoff varies with the hardness of the receiving water. As total hardness of the water increases, the threshold concentration levels for adverse effects increases.

Oxygen-Demanding Substances. Aquatic life is dependent on the dissolved oxygen (DO) in the water, and when organic matter is consumed by microorganisms, DO is consumed in the process. A rainfall event can deposit large quantities of oxygen-demanding substances in lakes and streams. A problem from low DO results when the rate of oxygen-demanding material exceeds the rate of replenishment. Oxygen demand is estimated by direct measures of DO and indirect measures such as biochemical oxygen demand (BOD), chemical oxygen demand (COD), oils and greases, and TOC.

Bacteria. Bacteria levels in undiluted urban runoff typically exceed public health standards for water contact recreation. Studies have found that total coliform counts typically exceed U.S. Environmental Protection Agency (EPA) water quality criteria almost every time it rained. The coliform bacteria that are detected may not be a health risk in themselves but are often associated with human pathogens.

Oil and Grease. Oil and grease contain a wide variety of hydrocarbons, some of which are toxic to aquatic life in low concentrations. These materials initially float on water and create the familiar rainbow-colored film. Hydrocarbons have a strong affinity for sediment and quickly become absorbed by it. The major source of hydrocarbons in urban runoff is crankcase oil and other lubricating agents that leak from automobiles. Hydrocarbon levels are highest in the runoff from parking lots, roads, and service stations. Residential land uses generate less hydrocarbons export although illegal disposal of waste oil into stormwater can be a problem in urban areas.

Priority Pollutants

Priority pollutants generally are related to hazardous wastes or toxic chemicals which can be detected in storm water. Priority pollutant scans have been conducted on urban runoff in this region by various regulatory agencies, including the Regional Water Quality Control Board, according to U.S. EPA standards. These previous studies evaluated the presence of over 120 toxic chemicals and compounds and rarely revealed levels of toxins that exceeded the current safety criteria. The urban runoff scans were primarily conducted in suburban areas which are not expected to have many sources of toxic pollutants with the possible exception of illegally disposed or applied household hazardous wastes. Priority pollutants in stormwater include phthalate (plasticizer compound), phenols and creosols (wood preservatives), pesticides and herbicides, oils and greases, and metals.

Physical Characteristics of Stormwater

The physical properties and chemical constituents of water traditionally are used to monitor and evaluate water quality. The water quality parameters for stormwater are numerous and are classified in several ways. In many cases, the concentration of an urban pollutant, rather than the annual load (amount) of that pollutant, is needed to assess a water quality problem.

Stormwater Quality

The City of Clayton is responsible for enforcement of “non-point source” pollution. Unfiltered stormwater and any materials carried with it is discharged into local creeks and streams and is eventually dispensed into the greater San Francisco Bay.

4.10.2 Regulatory Framework

Federal

Clean Water Act

The Clean Water Act (CWA) is the cornerstone of surface water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges (known as “point sources”) into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff, the principal nonpoint source. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support “the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water”. Under the

watershed approach, equal emphasis is placed on protecting healthy waters and restoring impaired ones.

Major CWA programs include water quality standards, anti-degradation policy, waterbody monitoring and assessment, total maximum daily loads (TMDLs), the National Pollutant Discharge Elimination System (NPDES) permit program for point sources, Section 319 program for nonpoint sources, Section 404 program regulating filling of wetlands and other waters, Section 401 state water quality certification, and the state revolving loan fund (SRF).

Section 303(d) of the CWA requires states to: (1) develop a list of water bodies that do not meet water quality standards; (2) establish priority rankings for waters on the list; and (3) develop action plans, called Total Maximum Daily Loads (TMDLs), to improve water quality. The list of impaired water bodies is revised typically every two years.

U.S. Environmental Protection Agency

In 1990, the EPA published final regulations that establish stormwater permit application requirements. The regulations, also known as Phase I of the NPDES program, effectively prohibit discharges of stormwater to waters of the United States from construction projects that encompass 5 or more acres of soil disturbance, unless the discharge complies with an NPDES permit. Phase II of the NPDES program expands the requirements by requiring operators of small Municipal Separate Storm Sewer Systems (MS4) in urbanized areas and small construction sites to be covered under an NPDES permit, and to implement programs and practices to control polluted stormwater runoff.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) creates maps classifying levels of flood risk or flood zones for designated areas.²⁰ The maps are called Flood Insurance Rate Maps (FIRMs) and are utilized to determine the need and rate of flood insurance.²¹ Flood zones are determined based on historical data on the likelihood of flood inundation. The 100-year flood zone, also classified as Zones A, AO and AE, is the area of flooding expected to occur every 100 years.

The Federal Disaster Mitigation Act of 2000

The Federal Disaster Mitigation Act of 2000 seeks to “reduce the loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from natural disasters; and to provide a source of pre-disaster hazard mitigation measures that are designed to ensure the continued functionality of critical services and facilities after a natural disaster.” The Disaster Mitigation Act outlines a process for the development of Local Hazard Mitigation Plans (LHMP) on the part of cities, counties, and special district governments. Development of an LHMP is required to be eligible to receive certain benefits from FEMA and the California Emergency Management Agency (CalEMA).

National Pollutant Discharge Elimination System Program

The NPDES program requires permitting for activities that discharge pollutants into waters of the United States. This includes discharges from municipal, industrial, and construction sources. Generally, these permits are issued and monitored under the oversight of the State Water Resources Control Board (SWRCB) and administered by each regional water quality control board. A brief discussion of these permit types is presented below:

Municipal Permits. Municipal separate storm sewer systems (MS4) are issued permits based on the size of the municipality. MS4 permit requirements include reduction of pollutant discharges to the ‘maximum extent practicable’ and protection of water quality. Requirements also include

identification of major outfalls and pollutant loads and control of discharges from new development and redevelopment. To address these objectives, municipalities are required to prepare stormwater management plans. Although the NPDES program does not regulate nonpoint sources of pollution, the San Francisco RWQCB has other programs in place to address nonpoint sources.

Industrial Permits: The State Water Resources Control Board issues the Industrial General Permit that regulates discharges from 10 broad categories of industrial activities. The permit requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) and monitoring program to implement water quality objectives through use of the best available technology (BAT) economically achievable and best conventional pollutant control technology (BCT).

Construction Permits: Construction activities that disturb 1 or more acres of soil (whether a single project or part of a larger development) are required to obtain coverage under the State's General Permit for Dischargers of Storm Water Associated with Construction Activity. The activities covered under the Construction General Permit include clearing, grading, and other disturbances. The permit requires preparation of a SWPPP and implementation of Best Management Practices (BMPs) with a monitoring program.

State

Porter-Cologne Act (California)

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne) the SWRCB has authority over State water rights and water quality policy. Porter-Cologne also established nine Regional Water Quality Control Boards (RWQCBs) to oversee water quality on a day-to-day basis at the local/regional level. RWQCBs engage in a number of water quality functions in their respective regions. The City of Clayton is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California.

NPDES Regulations

Section 402(p) of the federal CWA, as amended by the Water Quality Act of 1987, requires NPDES permits for stormwater discharges from MS4s, stormwater discharges associated with industrial activity (including construction activities), and designated stormwater discharges, which are considered significant contributors of pollutants to waters of the United States. On November 16, 1990, EPA published regulations (40 CFR Part 122), which prescribe permit application requirements for MS4s pursuant to CWA 402(p). On May 17, 1996, EPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s. The CWA allows individual states to operate their own NPDES programs provided such programs meet minimum federal requirements. The San Francisco Bay Regional Water Quality Control

Board issues the municipal stormwater NPDES permit, and MS4, which encompasses the County of Contra Costa and the City of Clayton.

The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District have joined together to form the Contra Costa Clean Water Program (hereinafter collectively referred to as the Contra Costa Permittees) and have submitted a permit application (Report of Waste Discharge), dated June 2, 2014, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Contra Costa Permittees' jurisdictions. The Contra Costa Permittees are currently subject to NPDES Permit No. CAS612008 originally issued by Order No. R2-2009-0074 on October 14, 2009, and most recently amended by Order No. R2-2015-0049 on November 19, 2015, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.

The objective of Order No. R2-2015-0049 is to protect the beneficial uses of receiving waters in Contra Costa County. To meet this objective, the Order requires permittees, within their respective jurisdictions, to effectively prohibit the discharge of non-stormwater (materials other than stormwater) into storm drain systems and watercourses. NPDES-permitted discharges are exempt from this prohibition. Provision C.15 describes a tiered categorization of non-stormwater discharges based on potential for pollutant content that may be discharged upon adequate assurance that the discharge contains no pollutants of concern at concentrations that will impact beneficial uses or cause exceedances of water quality standards. Further, Permittees are required to ensure that stormwater discharges from the MS4 shall neither cause nor contribute to the exceedance of water quality, standards and objectives nor create conditions of nuisance in the receiving waters, and that the discharge of non-storm water to the MS4 has been effectively prohibited.

State Department of Water Resources

The Department of Water Resources (DWR) is responsible for the management and regulation of water usage, including the delivery of water to two-thirds of California's population, through the nation's largest state-built water development and conveyance system, the State Water Project. Working with other agencies and the public, DWR develops strategic goals, and near-term and long-term actions, to conserve, manage, develop, and sustain California's watersheds, water resources, and management systems. DWR also works to prevent and respond to floods, droughts, and catastrophic events that would threaten public safety, water resources and management systems, the environment, and property.

State Water Resources Control Board

The SWRCB and the nine regional boards protect water quality and allocate surface water rights in the State of California. The City of Clayton is under the jurisdiction of the RWQCB Region 2 (San Francisco Bay Region).

California Water Plan

Required by the California Water Code Section 10005(a), the California Water Plan, prepared by the State DWR, is the strategic plan for managing and developing water resources statewide for current and future generations and provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The California Water Plan, which is updated every five years, presents basic data and information on California's water resources, including water supply evaluations and assessments of agricultural, urban, and

environmental water uses to quantify the gap between water supplies and uses. The California Water Plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the state's water needs. The goal for the California Water Plan Update is to meet California Water Code requirements, while receiving broad support among those participating in California's water planning, and to serve as a useful document for the public, water planners throughout the state, legislators, and other decision-makers.

Colbey-Alquist Floodplain Management Act

The Colbey-Alquist Floodplain Management Act encourages local governments to plan, adopt and enforce land use regulations for floodplain management, in order to protect people and property from flooding hazards. This act also identifies requirements that jurisdictions must meet in order to receive state financial assistance for flood control.

State Resolution No. W-4976

In recent years, the State of California has been experiencing dry weather conditions due to less rainfall, thus causing a statewide drought emergency. In an effort to promote water conservation efforts, the California Public Utilities Commission adopted Resolution No. W-4976 on February 27, 2014 to establish procedures for water conservation measures in order to ensure a reduction in consumption. Since many water utility agencies or companies secure their water supply from multiple sources, including water wholesalers, surface water and/or ground water, the adoption of this mandate has affected how water utility districts plan their service distribution while encountering various levels of water supply adjustments within each service area.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen Code), Part 11 of the California Building Standards Code (Title 24) is designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and to encourage sustainable construction practices. The CALGreen Code provides mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including, but not limited to, site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

Low Impact Development

The State of California adopted sustainability as a core value for all California Water Boards' activities and programs on January 20, 2005. Low Impact Development (LID) practices benefit water supply and contribute to water quality protection by taking a different approach to development and using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The amount of impervious surface, infiltration, water quality, and infrastructure costs can all be addressed by LID techniques, tools, and materials. LID practices include: bioretention facilities or rain gardens, grass swales and channels, vegetated rooftops, rain barrels, cisterns, vegetated filter strips, and permeable pavements.

State Water Efficient Landscaping Requirements

In 2006, California State Assembly Bill 1881 (AB 1881) was enacted, requiring all local jurisdictions to adopt water efficient landscape regulations for new development projects. The requirements set forth under AB 1881 are commonly referred to as the "State Model Water Efficient Landscape Ordinance", or "MWELO", and they became effective on January 1, 2010. Local ordinances adopted to implement the State's requirements are known as "WELOs" ("water-

efficient landscaping ordinances”). In December 2015, the State updated the “State Model Water Efficient Landscape Ordinance” which required local agencies to either implement the MWELO provisions as written or modify the locally adopted WELO to comply with the new regulations. Under the law, local ordinances must be at least as effective as the MWELO in conserving water.

Regional

Regional Water Quality Control Board

RWQCB Region 2 (San Francisco Bay Region) regulates stormwater quality under authorities of the federal CWA and California’s Porter-Cologne Water Quality Control Act. The RWQCB issues NPDES permits to dischargers of municipal and industrial stormwater runoff and operators of large construction sites. In coordination with permittees of the San Francisco Bay Municipal Regional Stormwater Permit, including Clayton, RWQCB staff performs an annual performance review and evaluation of the County’s stormwater management program and NPDES compliance activities. The RWQCB also protects groundwater through implementation of its regulatory and planning programs.

San Francisco Bay Region Municipal Regional Stormwater NPDES Permit

The San Francisco Bay Municipal Regional Stormwater Permit (MRP) issues the Waste Discharge Requirements and NPDES Permit for the discharge of stormwater runoff from the MS4s of over 70 municipalities and local agencies in five Bay Area Counties, including the City of Clayton. The MRP replaces the former county-by-county permits, including the former Contra Costa Countywide Municipal Stormwater Permit, that covered the City of Clayton.

Multi-Jurisdictional Local Hazard Mitigation Plan (MJ-LHMP)

The goal of the Association of Bay Area Government’s (ABAG) MJ-LHMP is to maintain and enhance a disaster-resistant region by reducing the potential for loss and damage resulting from natural disasters, including flooding. The purpose of the MJ-LHMP is to serve as a catalyst for dialogue on public policies needed to mitigate the effects of natural hazards that affect the San Francisco Bay Area. The plan includes a number of hazard mitigation strategies, including strategies specifically related to flood hazard mitigation. In 2010, the City of Clayton adopted the MJ-LHMP as its Local Hazard Mitigation Plan and as part of its General Plan.

San Francisco Bay Regional Basin Plan

The California legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality, including the Porter–Cologne Act and portions of the CWA, to the SWRCB and its nine RWQCBs. The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for implementation of state and federal regulations. The nine RWQCBs throughout California adopt and implement Basin Plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems.

The San Francisco Bay RWQCB is responsible for the protection of the beneficial uses of waters within the coastal watersheds of the San Francisco Bay region, including the City of Clayton. The Water Quality Control Plan (Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code Sections 13240–13247). The San Francisco Bay Basin Plan must conform to the policies set forth in the Porter-Cologne Act as established by the SWRCB in its state water policy. The Porter-Cologne Act also provides the RWQCBs with authority to include within their basin plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

More specifically, the Basin Plan: (i) identifies beneficial uses for surface and ground waters; (ii) includes narrative and numerical water quality objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; and (iii) describes implementation programs and other actions that are necessary to achieve the water quality objectives established in the Basin Plan.

The Basin Plan is continually being updated to include amendments related to implementation of TMDLs of potential pollutants or water quality stressors, revisions of programs and policies within the San Francisco Bay RWQCB region, and changes to beneficial use designations and associated water quality objectives.

State Construction General Permit

For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) to avoid and minimize water quality impacts attributable to such activities. The Construction General Permit (SWRCB Order 2009-0009-DWQ, as amended through July 1, 2010) applies to all projects in which construction activity disturbs 1 or more acres of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The Construction General Permit requires the development and implementation of a SWPPP, which would include and specify water quality BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off site into receiving waters. Routine inspection of all BMPs is required under the provisions of the Construction General Permit, and the SWPPP must be prepared and implemented by qualified individuals as defined by the SWRCB.

Activities that disturb over half an acre of land require coverage under the Construction General Permit. This general order is intended to authorize discharges of treated or untreated groundwater generated from permanent or temporary dewatering operations or other applicable wastewater discharges not specifically covered in other general or individual NPDES permits. Discharges from facilities to waters of the United States that do not cause, have the reasonable potential to cause, or contribute to an in-stream excursion above any applicable state or federal water quality objectives/criteria or cause acute or chronic toxicity in the receiving water are authorized discharges in accordance with the conditions set forth in this Order. To demonstrate coverage under the order, dischargers must submit documentation to show that the discharge would not cause or contribute to a violation of any applicable water quality objective/criteria for the receiving waters, or any other discharge prohibition listed in the order. In addition, dischargers must perform reasonable potential analysis using a representative sample of groundwater or wastewater to be discharged. The sample must be analyzed, and the data compared to the water quality screening criteria for the constituents listed in the order, and if results show exceedance of water quality screening criteria, the discharger is required to treat the wastewater to acceptable standards prior to discharge.

Local

City General Plan

The existing 2000 General Plan contain the following goals, objectives, and policies relative to hydrology and water quality:

*Safety Element*²²

Goal 1. To reduce potential risk to new development by proper planning and to minimize existing risk through coordinated City-County actions.

FLOOD HAZARDS

Objective 8. To protect development in Clayton from the 100 Year Flood.

Policy 8a. Use the flood maps from FEMA unless better information is available to determine area of the 100 Year Flood in approving new development.

Policy 8b. Submit all subdivision and creekside development plans for review by the County Flood Control District.

Policy 8c. Evaluate areas of existing development subject to flooding for risk mitigation.

Policy 8d. Prevent encroachment into the flood plain subject to Federal, County and local standards and requirements.

Objective 9. To continue participation in the Federal Flood Insurance Program with continued effort to improve flood information.

Policy 9a. Restrict development in floodways and flood plains in accordance with FEMA requirements.

Policy 9b. Cooperate in watershed evaluations and projects developed by the County Flood Control District.

*Open Space/Conservation Element*²³

Goal 1. To maintain a system of active open space along stream channels and passive open space within hillsides as a means to preserve the rural character of the community.

Objective 3. To establish an open space conservation designations to preserve natural resources, to manage resources, to provide for outdoor recreation, to promote health and safety and to ensure orderly growth.

Policy 3a. Apply Public Park/Open Space designation to areas of public park and recreation facilities.

Policy 3b. Cluster development in order to allow a Private Open Space designation on sites that pose natural limitations such as streams channel, earthquake fault, unstable soil or prominent hilltop or ridge, fire hazard areas, and ground water recharge areas.

Implementation Measure 3. Obtain updated flood boundaries.

City Municipal Code

Title 13, *Water and Sewers*, of the Clayton Municipal Code (CMC) addresses requirements for water and sewer utility systems in terms of new development. Chapter 13.12 deals with stormwater management and discharge controls (i.e., water quality and runoff pollution control

measures).²⁴ The following sub-sections contain specific water-related requirements for new development:

- CMC Section 15.60.130 (General Grading Regulations) includes erosion control standards. This section also requires preparation of grading plans and erosion control measures that must be reviewed and approved by the City Engineer prior to issuance of grading permits.
- CMC Section 16.20.053 (Improvements Required) requires all runoff from project sites to be collected and conveyed by an approved storm drain system which must be designed for ultimate development of the watershed. It is also required that the storm systems protect abutting and offsite (downstream) properties that could be adversely affected by any increase in runoff attributed to a development.
- CMC Section 13.12.090 (Best Management Practices and Standards) establishes controls on the rate, volume, and duration of stormwater runoff from new developments and redevelopment. Development projects must submit a stormwater control plan and implement conditions of approval to reduce stormwater pollutant discharges through the construction, operation and maintenance of treatment measures and other appropriate source control and site design measures.

4.10.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to 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 HEU 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 inundation; or,
- e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.10.4 Impacts and Mitigation Measures

This section describes potential impacts related to hydrology and water quality that could result from the implementation of the HEU and recommends mitigation measures as needed to reduce significant impacts.

Water Quality Standards

Impact HYDRO-1 – Would the HEU violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Analysis of Impacts

The Open Space/Conservation Element of the existing General Plan contains Goal 1 to maintain a system of active open space along stream channels and passive open space within the City, and Policy 3b requires clustered development to protect stream channels and groundwater recharge areas (including the protection of water quality). In addition, Title 13, Water and Sewers, of the Clayton Municipal Code addresses water quality, pollution control, and stormwater management.

The proposed HEU deals exclusively with housing issues and does not address other issues. It does not contain any goals or policies that specifically address water quality or waste discharge standards.

The SWRCB regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of 1 or more acres. The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District have joined together to form the Contra Costa Clean Water Program (collectively, the Contra Costa Permittees). The Contra Costa Permittees are currently subject to NPDES Permit No. CAS612008 first issued by Order No. R2-2009-0074 on October 14, 2009, and most recently amended by Order No. R2-2015-0049 on November 19, 2015, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions. Potential impacts from construction and operation of developments under the proposed HEU is discussed in detail below.

Construction Impacts- The City's NPDES permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a SWPPP to be prepared for sites that disturb more than 1 acre of land. A SWPPP describes BMPs to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project. Construction projects that would disturb greater than 1 acre of land would also be subject to the requirements of the State's General Construction Permit. Compliance with such requirements would minimize the potential for polluted runoff to leave the site during construction activities. Additionally, future construction projects under the HEU would be required to implement site-specific BMPs in order to protect water quality. Compliance with federal and state regulations and implementation of site-specific BMPs would ensure that water quality and waste discharge requirements would not be violated as a result of construction under the proposed future development. Impacts would be less than significant.

Operational Impacts- Residential and non-residential uses that would be potentially developed under the proposed HEU would not involve operations typically associated with the generation or

discharge of polluted water because generation or discharge of polluted water is generally associated with industrial uses. Thus, typical operations of development under the proposed HEU would not violate any water quality standards or waste discharge requirements, nor degrade water quality. However, the addition of impervious surfaces in the Planning Area could result in the generation of urban runoff, which could contain pollutants if the runoff comes into contact with vehicle fluids on parking surfaces and/or landscape fertilizers and herbicides. All municipalities within Contra Costa County (and the County itself) are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. The City of Clayton has adopted County Provision C.3 (Stormwater Standards) of the Municipal Regional Permit, which requires site designs for new developments and redevelopments to minimize the area of new roofs and paving and reduce runoff. Under Provision C.3, new development and redevelopment projects that create or alter 10,000 or more square feet (SF) of impervious area to contain and treat all stormwater runoff from onsite before discharging into municipal stormwater systems.

Future projects under the proposed HEU that would create or alter 10,000 or more SF of impervious area would be subject to the requirements of the SWRCB and the RWQCB, including the C.3 Standards, which are included in the City's NPDES General Permit. Further, projects developed under the proposed HEU that would create or alter 10,000 or more SF of impervious area would be required by the City to prepare a Stormwater Control Plan (SWCP) that conforms with the most recent Contra Costa Clean Water Program Stormwater C.3 Guidebook and verifies that the proposed project would comply with all City stormwater requirements. Where feasible, pervious surfaces would be required to be used instead of impervious pavements so that runoff can infiltrate to underlying soil. In some developments, the rates and durations of site runoff must also be controlled. In compliance with the C.3 Guidebook, remaining runoff from impervious areas would be required to be treated on-site using bioretention.

Bioretention basins for future developments under the proposed HEU would be site-specific and would be sized to exceed the minimum volume requirement necessary to adequately handle all runoff from proposed impervious surfaces and landscaping. Bioretention basins would remove pollutants primarily by filtering runoff slowly through an active layer of soil. The process of stormwater moving through the soil layers would remove pollutants from the stormwater prior to subsurface infiltration or discharge to City infrastructure. Bioretention basins would be designed and constructed according to criteria from the C.3 Guidebook. In addition, any proposed bioretention areas would be designed to accommodate runoff for treatment and hydromodification as specified in the C.3 Guidebook. During operation, all projects developed under the proposed HEU would be required to comply with all relevant water quality standards and waste discharge requirements, including requirements of the SWRCB and the RWQCB, and would be required to meet or exceed C.3 Standards. Therefore, projects developed under the proposed HEU would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Decrease Groundwater

Impact HYDRO-2 – Would the HEU substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the HEU may impede sustainable groundwater management of the basin?

Analysis of Impacts

The Open Space/Conservation Element of the existing General Plan contains Goal 1 to maintain a system of active open space along stream channels and passive open space within the City, and Policy 3b requires clustered development to protect stream channels and groundwater recharge areas (both of which will help protect local groundwater resources). In addition, Title 13, Water and Sewers, of the Clayton Municipal Code (CMC) addresses water and sewer system design which would also help to reduce groundwater use. Pursuant to state law, CMC Chapter 17.80 complies with the “state model water efficient landscaping ordinance” requirements.

The proposed HEU deals exclusively with housing issues and does not address other environmental issues. It does not contain any goals or policies that specifically address groundwater consumption.

The Contra Costa Water District (CCWD) provides domestic water service to Clayton. The major source of CCWD water is the Sacramento River Contra Costa Water District Canal, not groundwater. Clayton is within the CCWD’s Treated Water Service Area (TWSA). The TWSA in 2020 had a water demand of 32,600 acre-feet per year (AFY), with that demand projected to increase to 37,400 AFY in 2030. Water in the service area is primarily drawn from the Sacramento-San Joaquin Delta, which originates in the Sierra Nevada mountains and flows through the Sacramento and San Joaquin rivers into the delta. Water is diverted from four intakes on the delta: the Rock Slough, Mallard Slough, and the Old and Middle Rivers. Diverted water is transported through the 48-mile Contra Costa Canal and deposited at treatment plants and reservoirs. CCWD uses three water treatment plants within the county: the Ralph D. Bollman Treatment Plant in Concord, the CCWD/Brentwood Plant, and the Randall-Bold Plant jointly owned with the Diablo Water District. These treatment plants have a combined daily water capacity of 141.5 million gallons.

The addition of up to 868 residential units and up to 13,000 additional non-residential square feet, and the associated population growth of up to 2,364 additional persons, would result in a net increase in impervious surfaces and higher water demand in the Planning Area. Because the main source of CCWD water is the Sacramento River-Contra Costa Water District Canal, and not groundwater, the potential increase in population and water demand that could occur under the proposed HEU would not substantially deplete groundwater supplies. With respect to groundwater recharge, it is not anticipated that the additional impervious surfaces that could result from development under the HEU would substantially interfere with groundwater recharge. First, many of the 6th cycle housing inventory sites identified by the City are already developed with impervious surfaces, and increases in the number of units on these sites would not result in increases in impervious surfaces. Second, as discussed in Impact HYDRO-1, projects developed under the proposed HEU that would create or alter 10,000 or more SF of impervious area would be required by the City to prepare a Stormwater Control Plan (SWCP) that conforms with the most recent Contra Costa Clean Water Program Stormwater C.3 Guidebook. The C.3 Guidebook requires site designs for new developments and redevelopments to minimize the area of new roofs and paving and reduce runoff. Where feasible, pervious surfaces are also required to be used instead of paving so that runoff can infiltrate to underlying soil. Third, none of the 6th cycle housing inventory sites identified by the City is currently utilized for groundwater recharge. As such, while

development of these sites would increase area of impervious surfaces, it would not affect groundwater recharge. Finally, because groundwater is not the main source of water in the Planning Area, the introduction of additional impervious surfaces would not significantly affect water supplies. For these reasons, the additional impervious surface area that could potentially occur as a result of development under the proposed HEU would not substantially interfere with groundwater recharge and would not impede sustainable groundwater management of the basin.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Drainage

Impact HYDRO-3 – Would the HEU 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:

- (a) result in substantial erosion or siltation on- or off-site;**
- (b) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;**
- (c) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems;**
- (d) provide substantial additional sources of polluted runoff; or**
- (e) Impede or redirect flood flows.**

Analysis of Impacts

The Open Space/Conservation Element of the existing General Plan contains Goal 1 to maintain a system of active open space along stream channels and passive open space within the City, and Policy 3b requires clustered development to protect stream channels and groundwater recharge areas to protect water quality and reduce erosion and siltation. In addition, Title 13, Water and Sewers, of the Clayton Municipal Code addresses water quality, pollution control, and stormwater management including erosion control. The proposed HEU deals exclusively with housing issues and does not contain any goals or policies that specifically address water quality or erosion control.

Alter Drainage Patterns. Clayton is located in North Central Contra Costa County, with the City of Concord being the only city to share a border with Clayton. The Planning Area sits at the northern slopes of Mt. Diablo and to the west of the Black Diamond Mines Regional Preserve. The City of Clayton is naturally flanked by Mt. Diablo and the Black Hills. The Mt. Diablo Creek headwaters begin in Mt. Diablo State Park and flow through the City in a northwest direction until finally depositing into Suisun Bay. Major tributaries include Donner Creek, Mitchell Creek, Back Creek, and Irish Creek, all of which converge in the Planning Area. Surface waters in Clayton flow generally unencumbered, with portions of tributaries that flow through urban areas have been altered to move underground or have earth constructed portions. Concrete canals move water from Mt. Diablo Creek and other rivers outside of the Planning Area into reservoirs. Clayton is overseen by the Contra Costa Flood Control and Water Conservation District, which maintains over 79 miles of channels and creeks and other drainage facilities.

The City is largely built out including a long-established network of drainage and flood control improvements. The overall development pattern of the City (i.e., the locations and densities of

planned land uses) has been established for many years and is not likely to change dramatically in the future. For example, the proposed HEU does not anticipate development of large areas of vacant and/or outlying lands that are not already protected by the existing drainage and flood control infrastructure. Implementation of the HEU would continue existing trends and patterns, and future development proposals that contain drainages would continue to be evaluated in the CEQA and planning review processes to determine the most appropriate way to address potential project impacts to existing drainages and flood control infrastructure. Similar to the overall development pattern, the overall drainage pattern and system of drainage and flood control channels would likely continue similar to existing conditions with development under the proposed HEU. In addition, the City's development review procedures require new projects to be consistent with regulations of federal and state agencies regarding the design and capacity of drainage channels. For example, an integral part of both the CEQA and planning review of development projects, consistent with the General Plan, is the preparation of hydrological and water quality studies to identify how any increase in runoff from a particular site would be accommodated to prevent downstream impacts related to erosion or flooding. Continued implementation of CEQA and the City's development review process would ensure projects developed under the HEU would not substantially alter the existing drainage pattern of the project site or area.

Erosion/Siltation. Future development under the HEU would result in grading of vacant land or the demolition and regrading of developed land. Under either of those conditions, erosion from wind and water can occur, especially if disturbed soils are left exposed for long periods of time. Section 15.60.130 (General Grading Regulations) of the Clayton Municipal Code includes erosion control standards. Future projects developed under the proposed HEU would be required to comply with Municipal Code Section 15.60.130, and grading plans and erosion control measures must be reviewed and approved by the City Engineer prior to issuance of grading permits. In addition, the City's development review procedures require new projects to be consistent with regulations of federal and state agencies regarding BMPs to protect water quality, including erosion control, as required by CMC Sections 15.60.130 (General Grading Regulations), 16.20.053 (Improvements Required), and 13.12.090 (Best Management Practices and Standards). By continuing to implement the City's Municipal Code standards for erosion control and development review process, future projects developed under the proposed HEU would not result in substantial erosion or siltation on- or off-site.

Increased Surface Runoff and Flood Flows. A key design consideration of all new development is to not increase offsite downstream runoff by retention or detention of stormwater onsite and by implementing low impact development where practical in order to comply with local, State and federal regulations. Projects developed under the proposed HEU would be required to comply with Section 16.20.053 (Improvements Required) of the Clayton Municipal Code, which requires all runoff from project sites to be collected and conveyed by an approved storm drain system. The storm drain systems would be required to be designed for ultimate development of the watershed. The storm systems would also be required to provide for the protection of abutting and offsite properties that would be adversely affected by any increase in runoff attributed to a development. In addition, Section 13.12.090 (Best Management Practices and Standards) of the Clayton Municipal Code establishes controls on the rate, volume, and duration of stormwater runoff from new developments and redevelopment. Every development or redevelopment project subject to the development runoff requirements is required to submit a stormwater control plan and implement conditions of approval that reduce stormwater pollutant discharges through the construction, operation and maintenance of treatment measures and other appropriate source control and site design measures. Similarly, increases in runoff volume, flows, and durations are required to be managed in accordance with the development runoff requirements. By continuing to implement the City's Municipal Code standards for runoff, future projects developed under the

proposed HEU would not substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding.

Stormwater Drainage System Capacity. As detailed in Impact HYDRO-1, future projects developed under the proposed HEU that would create or alter 10,000 or more SF of impervious area would be required by the City to prepare a Stormwater Control Plan (SWCP) that conforms with the most recent Contra Costa Clean Water Program Stormwater C.3 Guidebook and verifies that the proposed project would comply with all City stormwater requirements. In addition, future projects would be required to comply with Chapter 13.12 (Stormwater Management and Discharge Control) and Section 17.80.100 (Stormwater Management) of the Clayton Municipal Code. Finally, implementation of Goal 1 and Policy 1.1 of the proposed HEU would help accommodate growth and mitigate impacts of new housing on the stormwater drainage system. Therefore, future projects developed under the proposed HEU would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems.

Additional Polluted Runoff. As detailed in Impact HYDRO-1, future projects under the proposed HEU that would create or alter 10,000 or more SF of impervious area would be subject to the requirements of the SWRCB and the RWQCB, including the C.3 Standards, which are included in the City's NPDES General Permit. Where feasible, pervious surfaces would be required to be used instead of impervious pavement so that runoff can infiltrate to underlying soil. In some developments, the rates and durations of site runoff must also be controlled. In compliance with the C.3 Guidebook, remaining runoff from impervious areas would be required to be treated on-site using bioretention. Bioretention basins for future developments under the proposed HEU would be site-specific and would be sized to exceed the minimum volume requirement necessary to adequately handle all runoff from proposed impervious surfaces and landscaping. Bioretention basins would remove pollutants primarily by filtering runoff slowly through an active layer of soil. The process of stormwater moving through the soil layers would remove pollutants from the stormwater prior to subsurface infiltration or discharge to City infrastructure. Bioretention basins would be designed and constructed according to criteria from the C.3 Guidebook. In addition, any proposed bioretention areas would be designed to accommodate runoff for treatment and hydromodification as specified in the C.3 Guidebook. During operation, all projects developed under the proposed HEU would be required to comply with all relevant water quality standards and waste discharge requirements, including requirements of the SWRCB and the RWQCB, and would be required to meet or exceed C.3 Standards. Therefore, future projects developed under the proposed HEU would not provide substantial additional sources of polluted runoff.

Impediment or Redirection of Flood Flows. According to the FEMA Flood Panel FIRM Maps 06013C0304G, 06013C0308F, 06013C0316F, 06013C0312F, a majority of the Planning Area is designated Zone X (unshaded), which are areas determined to be of minimal flood hazard. Areas of higher elevation, such as neighborhoods in the east and northeastern portions of the City, are not located near potential flood areas. The downtown Town Center is most susceptible to flooding, with intersections at Marsh Creek Road and Morris Street along Center Street designated as Zone X (shaded). These are areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile. Small pockets of these flood areas follow along Mt. Diablo Creek and its tributaries within the Planning Area. Areas along Mt. Diablo Creek and other waterways traversing the City are designated as Regulatory Floodways (Zones AE, AO, AH, VE, AR). Regulatory Floodways are channels and adjacent land that must be preserved to properly discharge floodwaters without increasing the water's surface above a designated height. Special Flood Hazard Areas without Base Flood Elevation (BFE) in the Planning Area are designated as Zones A, V, and A99. These areas are

just outside of Regulatory Floodways, with the largest being in the Town Center on Clayton Road. Future development projects under the proposed HEU would occur on sites identified by the City as being appropriate for development, and while some parts of the Planning Area are susceptible to periodic flooding, there is little potential for new development under the proposed HEU to substantially alter flood flows. In addition, the General Plan Safety Element contains Objective 8 and Objective 9, and their attendant policies, which require the use of FEMA flood maps in approving new development and prevent encroachment into the floodplain, subject to federal, county and local standards and requirements.

For the above reasons, the future development under 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: (a) result in substantial erosion or siltation on- or off-site; (b) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (c) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems; (d) provide substantial additional sources of polluted runoff; or (e) Impede or redirect flood flows. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Flood Risk

Impact HYDRO-4 – Would the HEU risk release of pollutants due to inundation from flooding, tsunami, or seiche?

Analysis of Impacts

The Open Space/Conservation Element of the existing General Plan contains Goal 1 to maintain a system of active open space along stream channels and passive open space within the City, and Policy 3b requires clustered development to protect stream channels and groundwater recharge areas (which also helps reduce the potential for flooding). In addition, Title 13, Water and Sewers, of the Clayton Municipal Code addresses water quality, pollution control, and stormwater management including that related to potential flooding. The proposed HEU deals exclusively with housing issues and does not contain any goals or policies that specifically address flooding or flood control.

Flooding. As previously detailed, portions of Clayton are located within either a 100, 200, or 500-year floodplain, while a majority of the Planning Area is designated Zone X (unshaded), which are areas determined to be of minimal flood hazard. The Town Center is most susceptible to flooding, with intersections at Marsh Creek Road and Morris Street along Center Street designated as Zone X (shaded). These are areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile. Small pockets of these flood areas follow along Mt. Diablo Creek and its tributaries within the Planning Area. Special Flood Hazard Areas without Base Flood Elevation (BFE) in the Planning Area are designated as Zones A, V, and A99. These areas are just outside of Regulatory Floodways, with the largest being in the Town Center on Clayton Road. There are no dams in the Planning Area, and the Planning Area is not located in any dam inundation zone.

Future development projects under the proposed HEU would occur on sites identified by the City as being appropriate for development, including residential development. While some parts of the Planning Area are susceptible to periodic flooding, the type of residential and commercial development that would potentially occur as a result of the proposed HEU does not involve the use or storage of pollutants or toxic substances. Therefore, the addition of up to 868 additional dwelling units, up to 13,000 additional non-residential square feet, and up to 2,364 additional persons in the Planning Area would not result in the risk or release of pollutants into local waterways.

Tsunami. The City and Planning Area are at elevations hundreds of feet above sea level (minimum 300 feet), and the City is located 35 miles inland of the Pacific Ocean and 21 miles from San Francisco Bay. Therefore, the City has minimal to no risk from tsunamis, and there is little potential for significant release of pollutants within the Planning Area from a tsunami.

Seiche. A seiche is a standing wave generated during earthquakes within enclosed bodies of water like reservoirs and lakes. There are no lakes or reservoirs within a 6-mile radius of the Planning Area. Therefore, there is little potential for significant release of pollutants within the Planning Area due to seiche.

The preceding analysis demonstrates the City and Planning Area have a very low risk of pollutants being released during flooding, tsunami, or seiche (i.e., dam failure) within the region. Impacts are therefore less than significant. In addition, the existing General Plan Safety Element contains Objective 8 and Objective 9 and their attendant policies to ensure future development under the HEU would be protected from flooding. The Safety Element also includes Objective 12 and Objective 13, and their attendant policies, to ensure future development under the HEU would not conflict with emergency planning or evacuation. Due to the relatively low risk to the Planning Area from flooding, tsunami, and seiche, there is little potential for significant release of pollutants from these sources, so impacts are less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Water Quality/Groundwater Plans

Impact HYDRO-5 – Would the HEU conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Analysis of Impacts

The Open Space/Conservation Element of the existing General Plan contains Goal 1 to maintain a system of active open space along stream channels and passive open space within the City, and Policy 3b requires clustered development to protect stream channels and groundwater recharge areas (including the protection of water quality). In addition, Title 13, Water and Sewers, of the Clayton Municipal Code addresses water quality, pollution control, and stormwater management related to both surface waters and groundwater.

The proposed HEU deals exclusively with housing issues and does not address other environmental issues. It does not contain any goals or policies that specifically address water quality of either surface waters or groundwater.

Water Quality Control Plan. The Delta Region Drinking Water Quality Management Plan (Basin Plan) is the water quality control plan for the Contra Costa area, including the City of Clayton. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The Basin Plan is continually being updated to include amendments related to implementation of the total maximum daily load (TMDL) of specific potential pollutants or water quality stressors, revisions of programs and policies within the RWQCB region, and changes to beneficial use designations and associated water quality objectives. TMDL is a regulatory term in the federal CWA, describing a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards. The General Plan requires the City and future development within the Planning Area to be consistent with the Basin Plan. The City uses its development review process to evaluate potential water quality impacts of new development to determine what short- or long-term measures must be implemented to protect the San Francisco Bay through the Basin Plan. New housing under the HEU would also meet these requirements. Therefore, the HEU would not conflict with or obstruct implementation of a water quality control plan.

Groundwater Management Plan. In 2014, the governor signed the Sustainable Groundwater Management Act (SGMA) into law which requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California.

The Clayton Valley Groundwater Basin is not currently adjudicated and is not designated as a “critically overdrafted groundwater basin or subbasin” by the California Department of Water Resources (DWR) in their Bulletin 118 publication. The City and its future development activities must be consistent with the short- and long-term water quality requirements of the San Francisco Bay Regional Basin Plan to protect local groundwater supplies. Eventually the local groundwater basin will be part of a GSP under a GSA.

Once the HEU is adopted, the City will inform the local water serving agency of its changes in land use and growth projections under the HEU. This information will then contribute to the planning process of the Delta Watermaster (relative to imported water) and any future GSPs for groundwater management in this region. In addition, implementation of Mitigation Measure UTL-1 from the Utilities Section would help reduce future demand on local groundwater resources from new development. Therefore, the HEU would not conflict with or obstruct implementation of a sustainable groundwater management plan.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact HYDRO-6 – Would the HEU cause substantial adverse cumulative impacts with respect to hydrology and water quality?

Analysis of Impacts

The Planning Area and surrounding communities contain water-related hazards as well as surface and groundwater resources that must be protected. State law requires that the Safety Elements of city General Plans, including Clayton, address potential flooding, erosion, changing drainage patterns, and other water-related hazards. The Safety Element of the current General Plan contains goals and policies that acknowledge these potential risks and require structures and infrastructure to provide adequate levels of safety for the community. In addition, the Growth Management Element requires the City to identify and coordinate with other agencies to protect surface and groundwater. The General Plan Safety Element and Growth Management Element contain goals and policies which will continue to identify and protect the community from flooding and other water-related hazards.

The General Plans for the surrounding cities and the County General Plan are all required to identify potential risks from flooding, geologic and seismic conditions and contain goals and policies to address these risks and protect the public. These goals and policies are intended to be consistent with state law and are similar to those of Clayton's General Plan. In addition to local general plans, various state laws including CEQA require the City as a lead agency to identify potential hazards related to new development as well as protect important water resources as development occurs in the future. Local water districts must prepare Urban Water Management Plans and Groundwater Sustainability Plans are required to provide long-term protection for both surface and groundwater supplies for the region.

In these ways, potential cumulative impacts to future development from flooding and water-related hazards would be minimized, and the water quality of important regional water resources would be protected. In addition, Mitigation Measure UTL-1 (from the Utilities Section 4.19) would help reduce future demand on surface and groundwater resources from new development which would indirectly help protect water quality. Therefore, future development in the City of Clayton under the proposed HEU would not make a significant contribution to any cumulative regional impacts on flooding or other water-related hazards and help protect the quality of surface and groundwater resources in the future.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.10.5 References

- 1 Contra Costa County Clean Water Program. *Watershed Atlas*. (2004). <https://www.cccleanwater.org/community/watersheds.https://www.cccleanwater.org/userfiles/kcfinder/files/Watershed%20Atlas.pdf>. [Accessed April 2022].
- 2 Contra Costa County Clean Water Program. *Watershed Atlas*. (2004). <https://www.cccleanwater.org/community/watersheds.https://www.cccleanwater.org/userfiles/kcfinder/files/Watershed%20Atlas.pdf>. [Accessed April 2022].
- 3 Contra Costa County Clean Water Program. *Watershed Atlas*. (2004). <https://www.cccleanwater.org/community/watersheds.https://www.cccleanwater.org/userfiles/kcfinder/files/Watershed%20Atlas.pdf>. [Accessed April 2022].
- 4 California Department of Water Resources. California Natural Resources Agency. *Bulletin 118 Update 2003 – Basin 2_005*. (2003). https://data.cnra.ca.gov/dataset/12e534ff-f604-4ba9-82db-486d81e082ff/resource/3a5c455d-aea9-4c93-a8952b373870a15c/download/b118_2003_basindescription_2_005.pdf [Accessed April 2022].
- 5 California Department of Water Resources. California Natural Resources Agency. *Bulletin 118 Update 2003 – Basin 2_005*. (2003). https://data.cnra.ca.gov/dataset/12e534ff-f604-4ba9-82db-486d81e082ff/resource/3a5c455d-aea9-4c93-a895-2b373870a15c/download/b118_2003_basindescription_2_005.pdf [Accessed April 2022].
- 6 California Department of Water Resources. California Natural Resources Agency. *Bulletin 118 Update 2003 – Basin 2_005*. (2003). https://data.cnra.ca.gov/dataset/12e534ff-f604-4ba9-82db-486d81e082ff/resource/3a5c455d-aea9-4c93-a895-2b373870a15c/download/b118_2003_basindescription_2_005.pdf [Accessed April 2022].
- 7 California Department of Water Resources. California Natural Resources Agency. *Bulletin 118 Update 2003 – Basin 2_005*. (2003). https://data.cnra.ca.gov/dataset/12e534ff-f604-4ba9-82db-486d81e082ff/resource/3a5c455d-aea9-4c93-a895-2b373870a15c/download/b118_2003_basindescription_2_005.pdf [Accessed April 2022].
- 8 California Department of Water Resources, Bulletin 118, Website accessed June 12, 2022: <https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118/Critically-Overdrafted-Basins>
- 9 Contra Costa County Public Works. *Flood Control District*. (2022). <https://www.contracosta.ca.gov/5586/Flood-Control-District>. [Accessed April 2022].
- 10 Federal Emergency Management Agency. *Risk Mapping, Assessment, and Planning: FEMA Flood Map Service Center*. (2022). <https://msc.fema.gov/portal/search?AddressQuery=Clayton%20CA#searchresultsanchor>. [Accessed 2022].
- 11 Federal Emergency Management Agency. *Risk Mapping, Assessment, and Planning: FEMA Flood Map Service Center*. (2022). <https://msc.fema.gov/portal/search?AddressQuery=Clayton%20CA#searchresultsanchor>. [Accessed 2022].
- 12 Federal Emergency Management Agency. *Risk Mapping, Assessment, and Planning: FEMA Flood Map Service Center*. (2022). <https://msc.fema.gov/portal/search?AddressQuery=Clayton%20CA#searchresultsanchor>. [Accessed 2022].
- 13 Federal Emergency Management Agency. *Risk Mapping, Assessment, and Planning: FEMA Flood Map Service Center*. (2022). <https://msc.fema.gov/portal/search?AddressQuery=Clayton%20CA#searchresultsanchor>. [Accessed 2022].

-
- ¹⁴ Federal Emergency Management Agency. *Risk Mapping, Assessment, and Planning: FEMA Flood Map Service Center*. (2022).
<https://msc.fema.gov/portal/search?AddressQuery=Clayton%20CA#searchresultsanchor>. [Accessed 2022].
- ¹⁵ Federal Emergency Management Agency. *Risk Mapping, Assessment, and Planning: FEMA Flood Map Service Center*. (2022).
<https://msc.fema.gov/portal/search?AddressQuery=Clayton%20CA#searchresultsanchor>. [Accessed 2022].
- ¹⁶ Federal Emergency Management Agency. *Risk Mapping, Assessment, and Planning: FEMA Flood Map Service Center*. (2022).
<https://msc.fema.gov/portal/search?AddressQuery=Clayton%20CA#searchresultsanchor>. [Accessed 2022].
- ¹⁷ Federal Emergency Management Agency. *Flood Insurance Study: Contra Costa County, California and Incorporated Areas*. (2017).
<https://map1.msc.fema.gov/data/06/S/PDF/06013CV001C.pdf?LOC=b67bda4e24d4967b7250cd83380d4dc3>. [Accessed April 2022].
- ¹⁸ Federal Emergency Management Agency. *Flood Insurance Study: Contra Costa County, California and Incorporated Areas*. (2017).
<https://map1.msc.fema.gov/data/06/S/PDF/06013CV001C.pdf?LOC=b67bda4e24d4967b7250cd83380d4dc3>. [Accessed April 2022].
- ¹⁹ California Department of Water Resources. *Inundation Maps*. (2022).
https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2. [Accessed April 2022].
- ²⁰ Federal Emergency Management Agency. *Flood Insurance Rate Maps Online Viewer*.
<https://www.fema.gov/flood-maps>.
- ²¹ Federal Emergency Management Agency. *Flood Insurance Rate Maps Online Viewer*.
<https://www.fema.gov/flood-maps>.
- ²² City of Clayton. *General Plan, Section VII, Safety Element*. (2000).
<https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-VII-safety-element.pdf>.
- ²³ City of Clayton. *General Plan, Section VI, Open Space and Conservation Element*. (2000).
<https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-VI-open-space-and-conservation-element.pdf>.
- ²⁴ City of Clayton, *Municipal Code. Title 13, Water and Sewers, Chapter 13.12*. (2000).
<https://library.municode.com/ca/clayton/codes/municipal%20code>.

4.11 – LAND USE AND PLANNING

This EIR chapter addresses land use and planning impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). Issues of interest are land use and planning impact: specifically, whether the HEU would physically divide an established community or 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.

4.11.1 *Environmental Setting*

Existing Land Uses

The City of Clayton is made up of 3.84 square miles of land, with an additional 0.98 square miles within the City’s Sphere of Influence (SOI) but outside of its corporate boundaries. Clayton has a Planning Area that extends outside of the SOI that would not be impacted by the Housing Element Update. Single-family residences in the City of Clayton make up the majority of development, encompassing 1,081.66 acres or approximately 50 percent of total land area; an additional 184.27 acres of single-family residences exist in the SOI. Parks and open space combined constitute nearly 40 percent or 850.1 acres of land within Clayton. There are 41.71 acres total of commercial land uses in the City and SOI, and a further 180.64 acres of industrial land uses just in the SOI. Commercial, office, and retail uses in Clayton are mainly located in the northwestern corner of the City, or in the downtown area. The private Oakhurst Country Club and golf course is one recreational facility of the prominent open spaces featured in the eastern portion of the City. Exhibit 4.11-1 (Existing Land Uses) illustrates the location of existing land uses within the Planning Area, Exhibit 4.11-2 (Current Zoning Map) shows the existing zoning within the Planning Area, and Exhibit 4.11-3 (Current General Plan Land Use Map) shows the existing land use designations within the Planning Area. The acreage associated with existing land uses within the Planning Area are shown in Table 4.11-1 (Existing Land Uses).

Residential Land Uses

As described above, the largest land usage in Clayton is single-family residences. Attached single-family (i.e., townhouses) and multi-family residential land uses (more than one unit per development/lot) are located in the northwestern and central areas of the City and in a senior development in the City’s Town Center. Multi-family residences account for 4.15 acres of land usage, with no additional units in the SOI.

Commercial and Industrial Land Uses

Commercial and office land uses constitute 41.71 acres of development in the City and SOI. There is additionally 180.64 acres of industrial land uses just in SOI. The Clayton Station shopping area is in the northwestern corner of Clayton and mostly consists of retail spaces. Clayton’s downtown Town Center area features the other concentration of commercial land usage in the City, with small businesses and office spaces. Open air mining operations represent the industrial land use that occurs in the southwestern corner of Clayton’s SOI.

Park and Open Space Land Uses

Parks and open space make up nearly 40 percent of land usage in the City, and include areas such as the Oakhurst Country Club, the Clayton Community Park, The Grove, Lydia Lane Park,

as well as a number of trails and greenways that connect to state and regional parks outside of the City.

Public Facilities and Institutional Land Uses

Public and quasi-public uses include schools (public and private), churches, hospitals, government offices, and utilities. This type of land usage accounts for 167.03 acres total or 7.8 percent of the City. Public facilities in Clayton are primarily located in and around the downtown Town Center area and include City Hall, the Clayton Community Library, and Endeavor Hall. Public facilities constitute 138.79 acres, schools constitute an additional 25.69 acres, and utilities and transportationⁱ constitute the remaining 2.55 acres. Public schools inside the Clayton corporate boundary include Mt. Diablo Elementary School and Diablo View Middle School.

Vacant Land

There is little vacant land located in the City; the majority of vacant lots in the City are in the Town Center; and make up just 2.68 acres of land usage within the City. There are 196.41 acres of vacant land outside of the City in the SOI, in the southwestern portion of the SOI.

Specific Plans

Specific Plans implement a city or county's general plan by establishing detailed regulations for a defined area. Specific Plans are put in place to regulate distinct character areas that cannot be regulated through general development ordinances or citywide zoning. As described below, the Marsh Creek Road Specific Plan (MCRSP) and the Town Center Specific Plan (TCSP) are the active specific plans within the Planning Area.

The Marsh Creek Road Specific Plan (MCRSP) was adopted in 1998 and amended most recently in 2021. The purpose of the MCRSP is to study 475 acres of then mostly undeveloped land along Marsh Creek Road and determine best practices moving forward with development. This involves designating sites best suitable for residential development, while keeping in line with the City's character. It also serves to protect the natural features of the area.

The Town Center Specific Plan (TCSP) was adopted in 1990, most recently amended in 2012, and outlines the development of Clayton's city center in keeping with its character. This includes expanding and supporting commercial businesses in the Town Center, municipal services, aesthetics and specific design features and guidelines, and parking and circulation issues and goals for existing and new roadways. Within the circulation chapter is the initial development of Oakhurst Drive, developed to alleviate traffic and give commuters more options for moving in and out of the City through Ygnacio Valley/Kirker Pass Road.

Exhibit 4.11-4 (Preliminary 6th Cycle Sites) shows the land use plan under the proposed HEU.

ⁱ Refers to facilities and not roads which are not accounted for as land uses in the HEU figures and tables

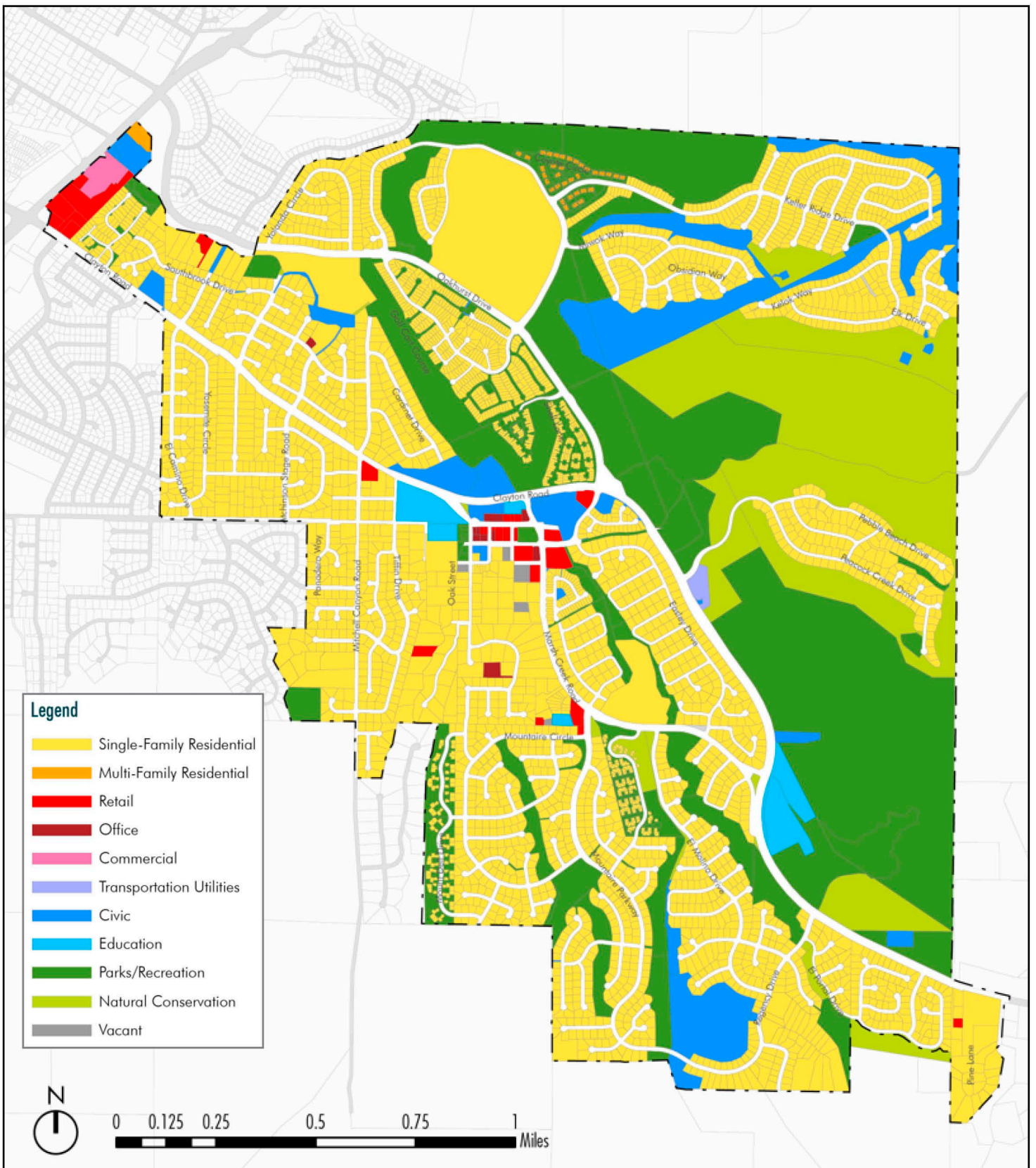
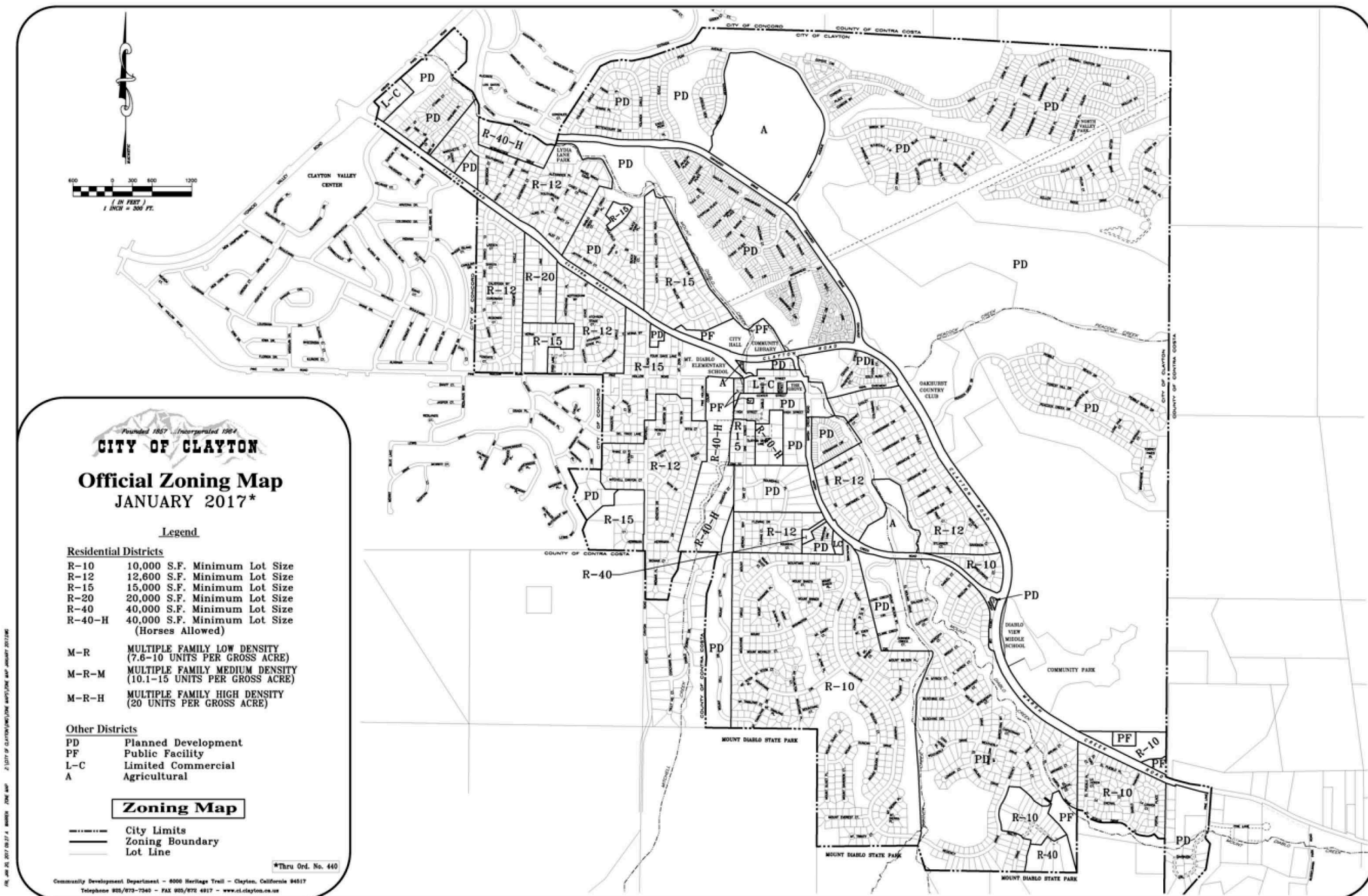


Exhibit 4.11-1 Existing Land Uses

Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.



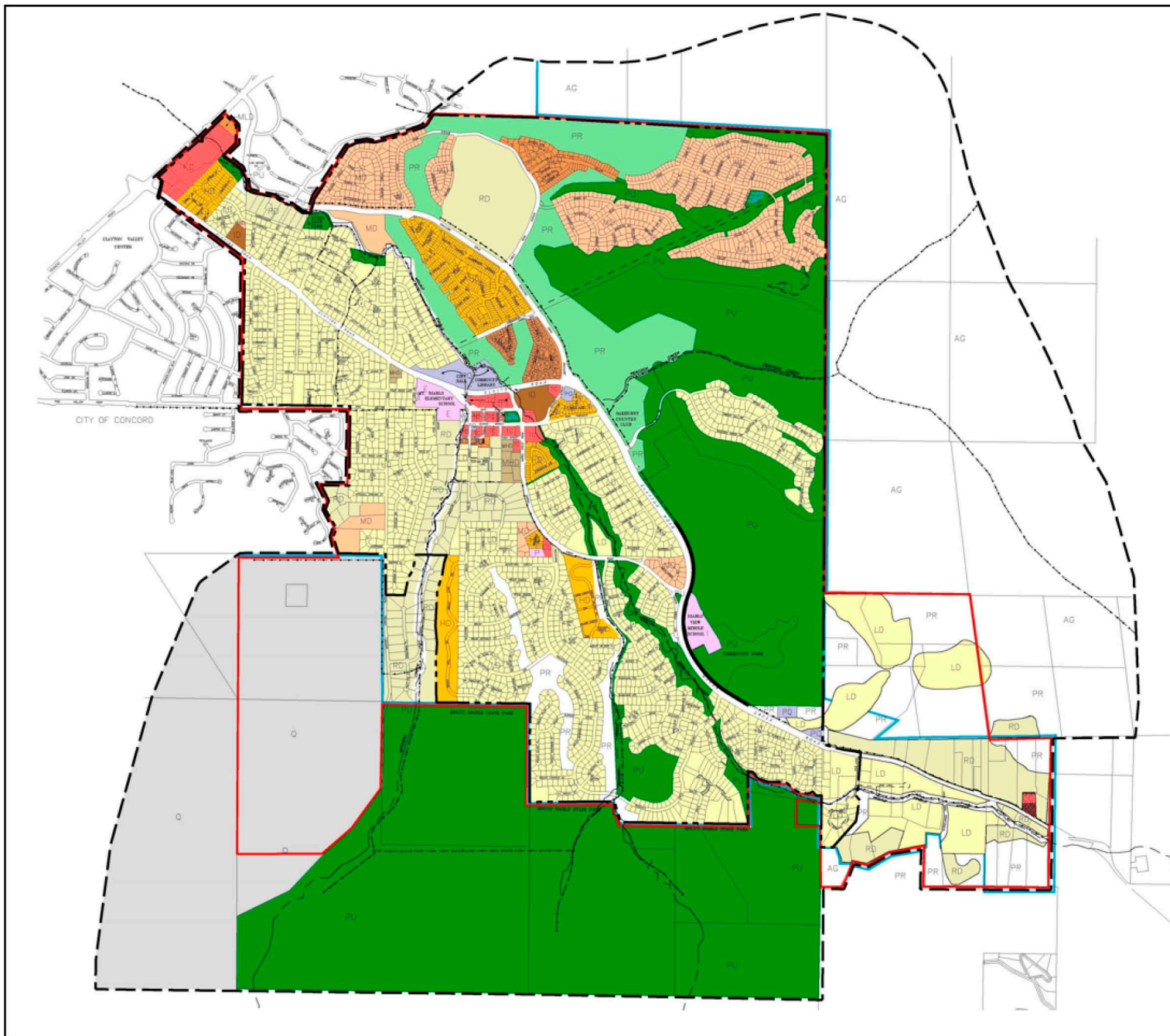
<http://www.migcom.com> • 951-787-9222



Exhibit 4.11-2 Current Zoning Map

Clayton Housing Element Update
 Clayton, California

This Page Intentionally Left Blank.



LEGEND

<u>RESIDENTIAL</u>		
		<u>UNITS/GROSS ACRE</u>
RD	RURAL ESTATE	(0 TO 1.0)
LD	SINGLE FAMILY LOW DENSITY	(1.1 TO 3)
MD	SINGLE FAMILY MEDIUM DENSITY	(3.1 TO 5)
HD	SINGLE FAMILY HIGH DENSITY	(5.1 TO 7.5)
MLD	MULTIFAMILY LOW DENSITY	(7.6 TO 10)
MMD	MULTIFAMILY MEDIUM DENSITY	(10.1 TO 15)
MHD	MULTIFAMILY HIGH DENSITY	(20)
ID	INSTITUTIONAL DENSITY	(7.6 TO 20)

<u>COMMERCIAL</u>	
TC	TOWN CENTER
KC	KIRKER CORRIDOR
CC	CONVENIENCE COMMERCIAL
<u>COMMUNITY FACILITIES</u>	
CV	CULTURAL CENTER
PQ	PUBLIC/QUASI-PUBLIC
I	INTERMEDIATE SCHOOL
E	ELEMENTARY SCHOOL
P	PRIVATE SCHOOL

<u>OPEN SPACE</u>	
PR	PRIVATE OPEN SPACE
PO	PUBLIC PARK/OPEN SPACE/ OPEN SPACE AND RECREATIONAL
AG	AGRICULTURE
Q	QUARRY
PR	PRIVATE OPEN SPACE (GOLF COURSE)
---	TRAILS

<u>BOUNDARIES</u>	
---	CITY LIMITS
---	SPHERE OF INFLUENCE
---	URBAN LIMIT LINE
---	PLANNING AREA

Exhibit 4.11-3 Current General Plan Land Use Map

<http://www.mig.com> • 951-787-9222



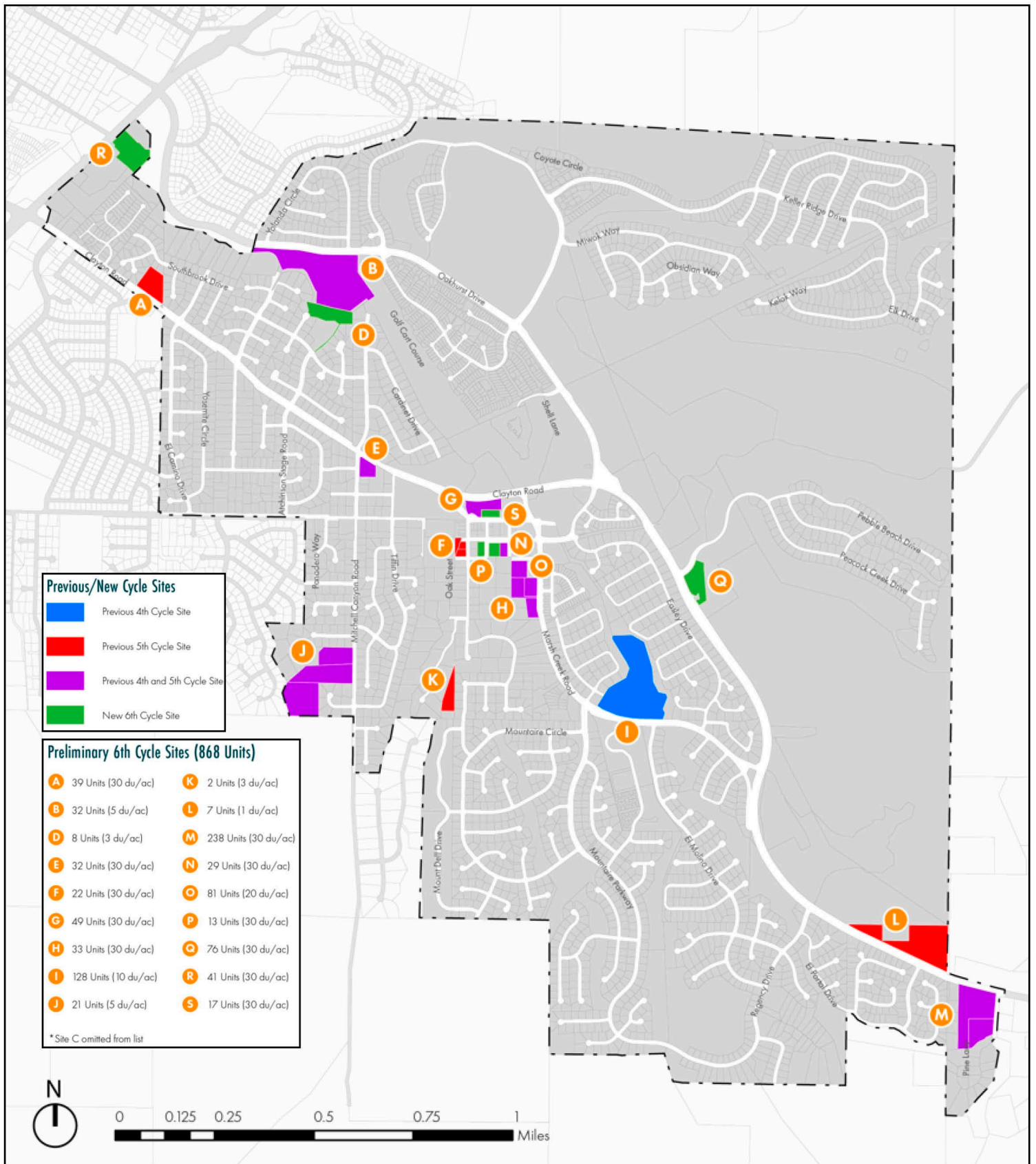
Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.

**Table 4.11-1
Existing Land Uses**

Existing Land Use	Acres		Dwelling Units		Population		Building Square Footage						Employment					
	City	SOI	City	SOI	City	SOI	City			SOI			City			SOI		
							Comm	Office	PF	Comm	Agr	Ind	Comm	Office	PF	Comm	Agr	Ind
Single Family Units	1081.66	184.27	3,910	68	10,450	204	0	0	0	0	0	0	0	0	0	0	0	0
- Accessory Dwelling Units	0.00	0.00	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Multi-Family Units	4.15	0.00	155	0	582	0	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	29.77	11.94	0	0	0	0	173,490	0	0	1,680	0	0	686	0	0	7	0	0
Office	3.44	0.00	0	0	0	0	0	83,650	0	0	0	0	0	163	0	0	0	0
Industrial	0.00	180.64	0	0	0	0	0	0	0	0	0	350	0	0	0	0	0	1
Public Facilities	138.79	0.00	52	0	233	0	0	0	107,000	0	0	0	0	0	78	0	0	0
Schools	25.69	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utilities & Transportation	2.55	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parks	481.19	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Open Space	368.91	14.96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture	0.00	39.26	0	0	0	0	0	0	0	0	2,839	0	0	0	0	0	4	0
Vacant	2.68	196.41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2138.83	627.48	4,120	68	11,268	204	173,490	83,650	107,000	1,680	2,839	350	686	163	78	7	4	1

This Page Intentionally Left Blank.



This Page Intentionally Left Blank

4.11.2 Regulatory Framework

Federal

A number of federal laws restrict or affect the use of land to protect various natural resources (e.g., Clean Air Act, Clean Water Act, Endangered Species Act). However, no federal laws directly regulate land use at the local level.

State

General Plan Law

California Government Code Section 65300 regulates the substantive and topical requirements of general plans. State law requires each city and county to adopt a general plan “for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning.” The California Supreme Court has called the general plan the “constitution for future development.” The general plan expresses the community’s development goals and embodies public policy relative to the distribution of future land uses, both public and private.

Since the general plan affects the welfare of current and future generations, state law requires that the plan take a long-term perspective (typically 15 to 25 years). The general plan projects conditions and needs into the future and establishes long-term policy for day-to-day decision making.

Policies of the general plan are intended to underlie most land use decisions. Pursuant to state law, subdivisions, capital improvements, development agreements, and many other land use actions must be consistent with the adopted general plan. In counties and general law cities, zoning and specific plans are also required to conform to the general plan. In addition, preparing, adopting, implementing, and maintaining the general plan:

- Serves to identify the community’s land use, circulation, environmental, economic, and social goals and policies as they relate to land use and development;
- Provides a basis for local government decision-making, including decisions on development approvals and exactions;
- Provides citizens with opportunities to participate in the planning and decision-making processes of their communities, and
- Informs citizens, developers, decision-makers, and other cities and counties of the ground rules that guide development within a particular community.

General Plan Guidelines

Section 65301 of the California Government Code requires a general plan to address the geographic territory of the local jurisdiction and any other territory outside its boundaries that bears relation to the planning of the jurisdiction. The jurisdiction may utilize judgment in determining what areas outside of its boundaries to include in the planning area. The State of California General Plan Guidelines state that the planning area for a city should include (at minimum) all land within the city limits and all land within the city’s sphere of influence.

California Government Code Section 65860

The zoning provisions of counties, general law cities, and charter cities must be consistent with the jurisdiction's general plan. Charter cities with a population of under two million are exempt from the zoning consistency requirement unless their charters provide otherwise. The City of Clayton is a general law city with less than two million people.

Cortese Knox Hertzberg Local Government Reorganization Act of 2000

The Cortese Knox Hertzberg Local Government Reorganization Act (CKH Act) is the most significant reform to local government reorganization law since the 1963 statute that created a local agency formation commission (LAFCO) in each county in California. The law established procedures for local government changes of organization, including city incorporation, annexation to a city or special district, and consolidation of cities or special districts (Government Code Section 56000 *et seq.*). LAFCOs have numerous powers under the CKH Act, but those of prime concern are the power to act on local agency boundary changes and to adopt spheres of influence for local agencies. The law also states that in order to update a sphere of influence, LAFCOs are required to first conduct a review of the municipal services provided in the county.

Housing Element Law (California Government Code Article 10.6)

State law (Government Code Section 65302(c)) requires each California city and county to prepare and maintain a current housing element as part of the jurisdiction's general plan, with goals and programs to attain a statewide goal of providing "decent housing and a suitable living environment for every California family." Under state law, each jurisdiction must adopt an update to their housing element every eight years. Housing elements are also subject to review by the State Department of Housing and Community Development, who is authorized to certify that the housing element is consistent with state law.

Specific Plan Law (California Government Code Section 65451)

California Government Code Section 65451 regulates the substantive and topical requirements of specific plans. A specific plan is a tool for the systematic implementation of the general plan and establishes a link between implementing policies of the general plan and the individual development proposals in a defined area. A specific plan may be as general as setting forth broad policy concepts, or as detailed as providing direction on every facet of development from the type, location, and intensity of uses to the design and capacity of infrastructure.

Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375)

Senate Bill (SB) 375 (Steinberg) is California legislation that became law effective January 1, 2009. It prompts California regions to work together to reduce greenhouse gas (GHG) emissions from cars and light trucks. This law would achieve this objective by requiring integration of planning processes for transportation, land use and housing. It was the legislators' intent that the plans emerging from this process would lead to more efficient communities that provide residents with alternatives to using single occupant vehicles. SB 375 requires the California Air Resources Board (CARB) to develop regional reduction targets for automobiles and light trucks GHG emissions. Each region, in turn, is tasked with creating a "sustainable communities strategy" (SCS), which combines transportation and land-use elements in order to achieve the emissions reduction target, if feasible. SB 375 also offers local governments regulatory and other incentives to encourage more compact new development and transportation alternatives.

Regional

Association of Bay Area Governments

The Association of Bay Area Governments (ABAG) is responsible for regional planning in the San Francisco Bay area. ABAG provides a framework to coordinate local and regional decisions regarding future growth and development and prepares future growth forecasts for the region.

Plan Bay Area 2050

As the designated Metropolitan Planning Organization (MPO) for the area, ABAG is mandated by the federal government to research and develop plans for transportation, growth management, hazardous waste management, and air quality based on the regional growth projections. ABAG is responsible for the production of a Regional Transportation Plan/Sustainable Communities Strategy (RTC/SCS) in accordance with SB 375. The current ABAG RTP/SCS is referred to as Plan Bay Area 2050 and provides a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals.

Regional Housing Needs Allocation (RHNA)

The California Department of Housing and Community Development (HCD) approved the ABAG Regional Housing Needs Allocation (RHNA) Plan on January 12, 2022. HCD requires ABAG and Bay Area jurisdictions to plan for and revise local zoning ordinances as necessary to accommodate 441,176 additional housing units during the 2023-31 period. The approved final RHNA plan distributes this requirement among the region's nine counties and 101 cities and towns, including the City of Clayton.

Bay Area Air Quality Management District

Air quality in the San Francisco Bay Air Basin is managed by the Bay Area Air Quality Management District (BAAQMD). Pursuant to the California Clean Air Act, BAAQMD is responsible for bringing air quality within the Basin into conformity with federal and state air quality standards by reducing existing emission levels and ensuring that future emission levels meet applicable air quality standards. BAAQMD works with federal, state, and local agencies to reduce pollutant emissions through adoption and implementation of rules and regulations.

The BAAQMD's 2017 Bay Area Clean Air Plan includes a wide range of control measures, many of which have land use implications, designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants. The Plan is intended to reduce emissions of methane and other climate pollutants in the near-term and to decrease emissions of carbon dioxide by reducing fossil fuel combustion. The latest 2017 Bay Area Clean Air Plan was adopted on April 19, 2017.

Local Agency Formation Commission (LAFCO)

Local agency formation commissions (LAFCOs) are independent regulatory commissions created to control the boundaries of cities and most special districts. LAFCOs have a range of duties but fundamentally exist to function as regulatory bodies to control city and special district boundaries and use their planning powers to influence land use. LAFCOs are restricted to making indirect land use decisions and primarily approve or deny logical and timely boundary changes in local governmental boundaries. LAFCOs are also responsible for conducting special studies to review ways to reorganize, simplify, and streamline governmental structure and prepare a sphere of influence for each city and special district within each county.

Local

City General Plan

The current General Plan contains the following goals, objectives, and policies related to land use and growth in the Planning Area:

Land Use Element (May 16, 2017)

Overall Goals

1. To maintain the rural character that has been the pride and distinction of Clayton.
2. To encourage a balance of housing types and densities consistent with the rural character of Clayton.
3. To preserve the natural features, ecology, and scenic vistas of the Clayton area.
4. To control development through appropriate zoning, subdivision regulations and code enforcement.
5. To provide a comprehensive, integrated, greenbelt system, which includes bicycle, equestrian, and walking paths and is connected to regional systems.
6. To encourage a pedestrian-oriented community with areas of open space and recreational facilities for public use.
7. To enhance the sense of identity and pride in and to encourage historical awareness of Clayton.
8. To ensure an adequate commercial tax base for Clayton.
9. To create and maintain an attractive Town Center area and to make it the commercial, civic, and heritage focus for the community.
10. To provide housing opportunities which serve the varied social and economic segments of the Clayton community.

Goal 1. To provide a mixture of land uses that responds to needs of the City of Clayton.

Residential

Objective 1. To retain the rural character of Clayton through a predominance but not exclusive use of single-family, low-density residential development balancing needs of the housing element and preservation of open space.

Policies

1a. Establish density designations based on terrain, circulation, adjacent uses and area characteristics.

1b. Identify a variety of densities, which decrease as slope increases.

1c. Permit limited high density areas.

1d. Preserve historic structures and open space areas with uses such as community facilities, bed and breakfast facilities, or large single-family homes.

1e. Encourage the clustering of development to preserve open space.

Objective 2. To preserve the natural beauty and the feeling of openness in the community by preserving ridgelines and limiting development in the hills.

Policies

2a. To prevent deterioration of scenic or sensitive areas, development should be clustered in less sensitive areas and an Open Space designation should be applied to undeveloped portions of parcels.

2b. Promote mitigation measures that maintain the aesthetic quality of the hills in transition areas.

Objective 3. To establish boundaries for the City of Clayton that follow standard principles of urban design and municipal development.

Policies

3a. Promote annexation of all land area within the City's Sphere of Influence, provided there is no drain on current City resources.

3b. Encourage Contra Costa County to follow the example of Santa Clara County and other progressive counties in establishing policies supporting city annexation within spheres.

3c. The City should review its Sphere of Influence at least every five years and request a boundary amendment as needed.

Commercial

Objective 4. To plan for and promote adequate commercial facilities to serve the needs of Clayton residents.

Policies

4a. Expand the commercial tax base in appropriate areas.

4b. Maintain the Town Center and the commercial areas of Kirker Pass Road and Marsh Creek Road as the sole areas for commercial development.

4c. Require a master development plan for combination of parcels where appropriate.

Objective 5. To prevent strip development and other inappropriate commercial uses.

Policies

5a. Review commercial development to ensure compatibility with surrounding uses and the environmental setting.

5b. Provide strict control of nuisance characteristics of uses.

Major Developments

Objective 6. To promote development of the Keller Ranch with Clayton.

Policies

6a. Require a design constraints analysis prior to Keller Ranch development.

6b. Review the design for Keller Ranch as a whole rather than a piecemeal process.

6c. Incorporate or promote adoption of all reasonable mitigation measures for Keller Ranch development whether in the City of Clayton or in another jurisdiction.

Objective 7. To promote community amenities within the Keller Ranch development.

Policies

7a. Support development of a country club facility that would include a golf course, tennis courts, swimming pool, clubhouse, restaurant, overnight accommodations and other uses deemed ancillary by the Planning Commission.

7b. Support establishment of a Heritage Center that would permit uses that support historical heritage and community activity within the Town Center.

7c. Support development of community playfields.

Objective 8. To direct development of Keller Ranch within appropriate areas as constrained by topography, visual corridors, geologic factors, water courses and other planning considerations.

Policies

8a. Utilize map designation footprint to indicate development form.

8b. Permit density transfer among residential development areas within the overall unit limit.

8c. Designate Country Club and athletic field facilities as Open Space/Facility.

8d. Permit minor design deviation among residential development, open space, open space/facility, and commercial designation footprints through the Planned Development approval process.

Housing Element (2015-2023)

Adequate Sites and New Construction

Goal I. Provide for adequate sites and promote the development of new housing to accommodate Clayton's fair share housing allocation.

Policy I.1. The City shall designate and zone sufficient land to accommodate Clayton's projected fair share housing allocation as determined by the Association of Bay Area Governments.

Policy I.2. The City shall actively support and participate in the development of extremely low-, very low-, low-, and moderate-income housing to meet Clayton's fair share housing allocation. To this end, the City shall help facilitate the provision of affordable housing through the granting of regulatory concessions and available financial assistance.

Policy I.3. The City shall encourage the development of second dwelling units on new and existing single-family-zoned lots.

Policy I.4. The City shall aggressively promote mixed-use or second-story residential units above commercial uses in the Town Center.

Regulatory Relief and Incentives

Goal II. To the extent feasible, remove governmental constraints for affordable and special needs housing.

Policy II.1. The City shall seek to meet the special housing needs of individuals with disabilities and developmental disabilities, extremely low-, very low-, and low-incomes, large families, senior citizens, farmworkers and their families, female-headed and single-parent households, and others with special needs.

Policy II.2. The City shall encourage affordable housing by granting regulatory incentives to projects that provide affordable units.

Rental and Homeownership Assistance

Goal III. Increase housing opportunities for lower-income renters and first-time homebuyers.

Policy III.1. The City shall promote assistance to lower-income renters and first-time homebuyers by promoting programs available through Contra Costa County and the Contra Costa County Housing Authority.

Policy III.2. Preserve units at risk of losing affordability covenants and converting to market-rate rents or sale prices.

Equal Access

Goal IV. Ensure equal housing opportunities for all persons in Clayton regardless of age, race, religion, sex, marital status, national origin, color, disability, or other barriers that prevent choice in housing.

Policy IV.1. The City shall promote housing opportunities for all persons regardless of age, race, religion, sex, marital status, national origin, color, disability, or other barriers that prevent choice in housing.

Policy IV.2. The City shall strive to increase public awareness and acceptance of affordable housing in the community.

Policy IV.3. The City shall offer reasonable accommodations for households with disabilities with respect to zoning, permit processing, and building codes and shall support programs to modify existing units to better serve the needs of disabled persons.

Energy Conservation

Goal V. Encourage and maintain energy efficiency in new and existing housing.

Policy V.1. The City shall continue to promote energy conservation in the design of all new residential structures and shall promote incorporation of energy conservation and weatherization features in existing homes.

Regional Planning

Goal VI. Promote and participate in the resolution of housing, employment, and transportation issues on a regional basis in cooperation with all Contra Costa County jurisdictions.

Policy VI.1. The City shall actively support regional-based solutions to the housing, employment, and transportation issues initially within Contra Costa County and ultimately within the Bay Area.

4.11.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU have a significant impact related to land use and planning if it would:

- a) Physically divide an established community; or
- b) 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.

4.11.4 Impacts and Mitigation Measures

This section describes potential impacts related to land use policies, plans or regulations, which could result from the implementation of the HEU and recommends mitigation measures as needed to reduce significant impacts.

Divide Established Communities

Impact LAND-1 – Would the HEU physically divide an established community?

Analysis of Impacts

The proposed HEU would not physically divide an established community. The HEU contains goals and policies intended to maintain the cohesiveness of the Planning Area. Provided below are the applicable goals and policies of the proposed HEU that relate to dividing established communities. See Appendix B for the full text of each goal or policy.

Goal 1. ***Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.***

Policy 1.1 **Neighborhood Preservation.** Preserve the architectural and design quality of established residential neighborhoods.

Policy 1.2 **Impacts of New Housing.** Consider and mitigate the impacts of new housing on the City's infrastructure, open space, natural resources, and public services.

Policy 1.3 **Targeted Growth.** Target new housing development to areas in Clayton near major travel corridors and commercial centers.

The goals and policies of the HEU would help existing neighborhoods to remain cohesive and allow new development in the future to create additional cohesive neighborhoods for residents and businesses. In these ways, the HEU would not physically divide established neighborhoods now or in the future.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Existing Plans, Policies or Regulations

Impact LAND-2 – Would the HEU cause a significant environmental impact due to a conflict with any land use plan, policy, or regulations adopted for the purpose of avoiding or mitigating an environmental effect?

Analysis of Impacts

The proposed HEU would result in changes in land uses in the Planning Area and would result in substantial increases in the amount of residential uses and housing units over those projected in the 2014 Housing Element. As described in Chapter 3 (Project Description), the 2031 planning horizon for the Planning Area is estimated to result in increases over existing land uses of up to 868 additional dwelling units within the Planning Area. Additionally, the proposed HEU has the potential to result in a population increase of up to 2,364 additional persons and an additional 71 employees within the Planning Area, and up to 13,000 square feet of additional non-residential building square footage within the Planning Area. These changes in anticipated growth are a result of the City's increased RHNA, which is based on the state's desire to encourage more housing throughout the state.ⁱⁱ

As discussed in Section 4.14-4, the HEU is inconsistent with the growth projections of ABAG and Plan Bay Area 2050 because those long-term projections do not take into account jurisdiction-specific short-term RHNA requirements. Once the City has adopted the HEU, it will transmit its new growth numbers to ABAG, and those estimates will be incorporated into the next revisions to the Plan Bay Area. Any further action by the City would not resolve the regional impact of the RHNA conflicting with the Plan Bay Area projections, and in any case would be infeasible because only ABAG can resolve this policy and program conflict. Therefore, there is no feasible mitigation available to the City to reduce this potential impact. If growth occurs according to the proposed HEU, substantial unplanned population and housing growth may be induced into the Planning Area. The City's Land Use Element and updated Housing Element demonstrate the City has exercised adequate local planning to accommodate growth based on the mandated RHNA. However, the inconsistency between the RNHA and Plan Bay Area 2050 is a potentially significant population impact. Unfortunately, the City cannot feasibly resolve this inconsistency in adopted plans at this time, but it can accommodate this future growth according to the RHNA at the local level with adherence to the goals and policies of the General Plan Land Use Element and Housing

ⁱⁱ At a press conference on September 19, 2020, the Governor stated that over the past decade, California has averaged less than 100,000 new homes per year, significantly slower than that of most other states. Gov. Newsom then set a goal of 3.5 million new housing units to be built by 2025 or about 500,000 units per year. He outlined a suite of proposals he hoped would make it easier for builders to build such as altering the state's oft-abused environmental-impact law (CEQA) to allow more housing, revamping how local governments get their tax dollars and clamping down on cities that obstruct new construction [Sacramento Bee, September 20, 2020].

Element. Therefore, potential population, housing, and employment changes from future development under the HEU are considered to have less than significant impacts under CEQA, and no mitigation is required.

Consistency with Plan Bay Area 2040 Growth Projections

The updated Housing Element identifies how the City plans to accommodate its RHNA of 570 or more housing units. In Section 3, Project Description, Table 3-3 indicates the HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area which represents a 21.07 percent increase over existing (2020) conditions. This increase in housing would result in a population increase of up to 2,364 additional persons. The 2000 General Plan had a maximum build-out of 3,399 units which would generate 11,217 persons at 3.3 persons per unit. This included the existing 1,540 units in the City but did not include the 555 units that could be developed outside of the City limits.

The following goals, objectives, and policies of the proposed HEU address new housing to accommodate increased population projections by ABAG:

Goal 1 ***Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.***

Policy 1.2 **Impacts of New Housing.** Consider and mitigate the impacts of new housing on the City's infrastructure, open space, natural resources, and public services.

In addition, the following General Plan Growth Management Element goals, objectives, and policies address new housing to accommodate increase population projections by ABAG:

Goal 2 ***Design a street system that while accommodating urban development is consistent with orderly growth.***

Goal 4 ***Assure that new residential, business, and commercial growth pays for the facilities required to meet the demands resulting from that growth.***

Policy 1a Clayton will continue to implement its adopted development fees to require developers to pay the costs necessary to mitigate the impacts of their development on the local street system.

Policy 1b Clayton will participate in TRANSPAC's regional development mitigation program and establish fees, exactions, assessments, or other mitigation measures to fund regional or subregional transportation improvements needed to mitigate the impacts of planned development on the regional transportation system.

Policy 1c Clayton will periodically review the existing adopted development fees to determine if the fees accurately reflect the needed traffic mitigation associated with development.

Policy 1d As part of the development review process for projects estimated to generate over 100 peak-hour vehicle trips, Clayton will require the developer/applicant to provide the City with a traffic impact study consistent with the Technical Guidelines published by the Contra Costa Transportation Authority.

- Policy 1e** Development projects expected to generate over 100 peak-hour vehicle trips in the peak direction will not be approved by the City unless a finding of consistency can be made with the Reporting Intersection Traffic Level of Service Standards.
- Policy 1f** The City will not use Local Street Improvement and Maintenance funds allocated to Clayton, pursuant to Measure J by the Contra Costa Transportation Authority, to replace developer funding for transportation projects determined to be required for growth to comply with standards.

The ABAG population, housing, and employment projections for Clayton, Contra Costa County, and the San Francisco Bay Area region for 2040 and 2050 are shown in Tables 4.11-2 and 4.11-3. Table 4.11-2 shows that only 115 new units are projected by ABAG for the City from 2020 to 2040, while the current RHNA for the City is 570 or more new units from only 2023 to 2031. It should be noted the RHNA is based on the state's desire to encourage more housing throughout the state. Based on available evidence, the HEU is inconsistent with the growth projections of ABAG and Plan Bay Area 2050 because those long-term projections do not take into account jurisdiction-specific short-term RHNA requirements. Table 4.11-2 also indicates the City's population growth projected by ABAG is beyond what was anticipated when the City's General Plan and its EIR were adopted in 2000.

Once the City has adopted the HEU, it will transmit its new growth numbers to ABAG, and those estimates will be incorporated into the next revisions to the Plan Bay Area. Any further action by the City would not resolve the regional impact of the RHNA conflicting with the Plan Bay Area projections, and in any case would be infeasible because only ABAG can resolve this policy and program conflict. Therefore, there is no feasible mitigation available to the City to reduce this potential impact. If growth occurs according to the proposed HEU, substantial unplanned population and housing growth may be induced into the City/SOI. The City's Land Use Element and updated Housing Element demonstrate the City has exercised adequate local planning to accommodate growth based on the mandated RHNA. However, while the City cannot feasibly resolve this inconsistency between the RHNA and Plan Bay Area 2050 at this time, it can accommodate this future growth according to the RHNA at the local level with adherence to the goals and policies of the General Plan Land Use Element and Housing Element. Therefore, potential population, housing, and employment changes from future development under the HEU are considered to have less than significant impacts under CEQA and no mitigation is required.

Consistency with Plan Bay Area 2050 Strategies

In October 2021, ABAG adopted "Plan Bay Area 2050" which is another term for their Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The City's projected growth numbers of the 2017 General Plan Land Use Element were incorporated into the RTP/SCS for ABAG's Plan Bay Area 2050, thereby achieving balance and consistency between the two plans. Plan Bay Area 2050 builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The long-range visioning plan includes 35 strategies to improve housing, the economy, transportation, and the environment across the Bay Area's nine counties. The strategies included in Plan Bay Area 2050 may be important considerations in the City's Housing Element Update. Table 4.11-4 provides a consistency analysis between the Plan Bay Area 2050 strategies and the City's proposed HEU. Table 4.11-4 demonstrates that the proposed HEU is consistent with the strategies and environmental justice guidelines of the ABAG RTP/SCS document, and that the proposed HEU would not conflict with the strategies of the Plan Bay Area 2050.

This Page Intentionally Left Blank.

Table 4.11-2
2040 ABAG Demographic Projections - City of Clayton and Contra Costa County

ABAG Projections¹	2010	2015	2020	2025	2030	2035	2040	Change² 2010-2040
<u>Total Households</u>								
City of Clayton	3,745	3,895	3,990	4,070	4,125	4,105	4,105	+9.6%
Contra Costa County	368,585	386,755	399,615	422,435	440,765	461,065	475,390	+29.0%
<u>Total Population</u>								
City of Clayton	9,960	10,420	10,630	10,880	11,070	11,140	11,255	+13.0%
Contra Costa County	1,036,970	1,093,170	1,128,660	1,198,715	1,257,790	1,329,330	1,387,295	+33.8%
<u>Persons/Household</u>								
City of Clayton	2.66	2.67	2.66	2.67	2.68	2.71	2.74	+3.0%
Contra Costa County	2.79	2.80	2.80	2.81	2.83	2.86	2.89	+3.6%
<u>Total Jobs</u>								
City of Clayton	1,980	2,080	2,110	2,125	2,130	2,135	2,095	+5.8%
Contra Costa County	352,290	406,130	414,290	423,845	458,255	483,810	498,115	+41.4%
<u>Jobs/Housing³</u>								
City of Clayton	0.53	0.53	0.53	0.52	0.52	0.52	0.51	-0.4%
Contra Costa County	0.96	1.05	1.04	1.00	1.04	1.05	1.05	+9.4%

Source: Plan Bay Area 2040, Projections 2040, Association of Bay Area Governments, July 2017

¹ 2010 value from pre-run microdata that most closely approximates the 2010 federal Census data

² Arithmetic Average = 2040 value minus 2010 value then divided by 2010 value (result in percent)

³ Total Jobs divided by Total Households

Table 4.11-3
2050 ABAG Projections for RHNA Process

ABAG Projections¹	2015	2050	Growth	Percent Growth
<u>Total Households</u>				
Contra Costa County	383,000	551,000	169,000	+44%
ABAG Area	2,677,000	4,043,000	1,367,000	+51%
<u>Total Jobs</u>				
Contra Costa County	404,000	534,000	130,000	+32%
ABAG Area	4,005,000	5,408,000	1,403,000	+35%
<u>Jobs/Housing²</u>				
Contra Costa County	1.05	0.97	-0.08	-7.6%
ABAG Area	1.50	1.34	-0.16	-10.7%

Source: Growth Pattern, Plan Bay Area 2050, January 21, 2021

¹ Data tables below summarize the regional, county, and sub-county growth pattern for households and jobs in the Plan Bay Area 2050 Final Blueprint. Jurisdiction-level growth projections are developed solely for the 2023-2031 Regional Housing Needs Allocation (RHNA) process

This Page Intentionally Left Blank.

Table 4.11-4
Consistency with Plan Bay Area 2050 Strategies

Plan Bay Area 2050 Strategies	Housing Element Consistency Analysis
<p>Strategy H1: Further Strengthen Renter Protections Beyond State Law.</p> <p>Strategy H2: Preserve Existing Affordable Housing.</p> <p>Strategy H3: Allow a Greater Mix of Housing Densities and Types in Growth Geographies.</p> <p>Strategy H4: Build Adequate Affordable Housing to Ensure Homes for All.</p> <p>Strategy H5: Integrate Affordable Housing into All Major Housing Project.</p> <p>Strategy H6: Transform Aging Malls and Office Parks into Neighborhoods.</p> <p>Strategy H7: Provide Targeted Mortgage, Rental and Small Business Assistance to Equity Priority Communities.</p> <p>Strategy H8: Accelerate Reuse of Public and Community-Owned Land for Mixed-Income Housing and Essential Services.</p>	<p>Consistent: The proposed Housing Element Update contains the following goals and attendant objectives and policies that will help achieve Plan Bay Area 2050 Strategy H1 through H8:</p> <p>Goal 2: Encourage a variety of housing types, densities, and affordability levels to meet the diverse needs of the community, including a mix of ownership and rental.</p> <p>Policy 2.1: Maintain and implement land use policies and zoning regulations that accommodate a range of residential housing types that can fulfill local housing needs and accommodate the City's Regional Housing Needs Allocation of at least 570 units.</p> <p>Policy 2.2: Implement land use policies and standards that allow for a range of residential densities and housing types that will enable households of all types and income levels opportunities to find suitable ownership and rental housing in the City.</p> <p>Policy 2.3: Promote construction of accessory dwelling units as a way to increase the housing stock, particularly for lower-income households, seniors, young adults and persons with disabilities, recognizing that ADUs also promote investment in existing properties and reduce ongoing housing costs for property owners.</p> <p>Policy 2.4: Recognize urban lot splits, as defined and allowed by State law, as a viable means to create new housing.</p> <p>Policy 2.5: Promote mixed-use development in Downtown Clayton that includes residential uses above ground-floor commercial and office uses, with ground-floor residential allowed under limited circumstances, such as alongside streets or behind street-facing commercial uses on Central and Main Streets.</p> <p>Policy 2.6: Create land use regulations that encourage the development of housing, particularly below market-rate housing, on properties owned by religious institutions.</p> <p>Goal 3: Provide opportunities for housing that respond to the needs of special needs households.</p> <p>Policy 3.1: Ensure zoning regulations accommodate development approaches that support special consideration for persons living with disabilities of all types.</p> <p>Policy 3.2: Facilitate the development of lower- and moderate-income housing by offering developers</p>

Plan Bay Area 2050 Strategies	Housing Element Consistency Analysis
	<p>incentives such as density bonuses, streamlined entitlement and permitting processes, City participation in on- and off-site public improvements, and flexible development standards.</p> <p>Policy 3.3: Encourage development of housing that meets the specific needs of seniors, large families, single-parent households, and youth transitioning out of the foster care system.</p> <p>Policy 3.4: Ensure that zoning regulations respond to evolving laws regarding supportive and transitional housing.</p> <p>Policy 3.5: Support regional programs focused on finding safe housing for persons and families who are temporarily or chronically without a place to live.</p> <p>Goal 4: Remove governmental constraints and obstacles to the production of housing for all income groups.</p> <p>Policy 4.1 : Ensure that General Plan land use policies permit higher density housing development within a range that can support and encourage affordable housing.</p> <p>Policy 4.2: Review and adjust residential development standards, regulations, ordinances, departmental processing procedures, and residential fees related to rehabilitation and construction that are determined to constrain housing development.</p> <p>Policy 4.3: Identify, assess, and, when appropriate, amend ordinances and policies that adversely affect housing cost.</p> <p>Goal 5: Ensure equal housing opportunities for all persons in Clayton regardless of age, race, religion, sex, marital status, national origin, color, disability, or other barriers that prevent choice in housing.</p> <p>Policy 5.1: Promote equity and prohibit discrimination in the sale, rental, or financing of housing based on race, color, ancestry, religion, national origin, sex, sexual orientation, gender identity, age, disability/medical condition, familial status, marital status, source of income, or any other arbitrary factor.</p> <p>Policy 5.2: Assist in the enforcement of fair housing laws by providing references for residents to organizations that can receive and investigate fair housing allegations, monitor compliance with fair housing laws, and refer possible violations to enforcing agencies.</p> <p>Policy 5.3: Distribute affordable housing throughout all Clayton neighborhoods.</p>

Plan Bay Area 2050 Strategies	Housing Element Consistency Analysis
	<p>Policy 5.4: Avoid concentrating low-income housing in areas with high pollution loads and low levels of public services.</p> <p>Policy 5.5: Facilitate increased participation in civic conversations and decision-making by residents who have traditionally been underrepresented or hesitant to engage.</p> <p>Policy 5.6: Support continuing education for landlords regarding their fair housing legal responsibilities and tenants regarding their fair housing rights.</p>
<p>Strategy EC1: Implement a Statewide Universal Basic Income.</p> <p>Strategy EC2: Expand Job Training and Incubator Programs.</p> <p>Strategy EC3: Invest in High-Speed Internet in Underserved Low-Income Communities.</p> <p>Strategy EC4: Allow Greater Commercial Densities in Growth Geographies.</p> <p>Strategy EC5: Provide Incentives to Employers to Shift Jobs to Housing-Rich Areas Well Served By Transit.</p> <p>Strategy EC6: Retain and Invest in Key Industrial Lands.</p>	<p>Not Applicable: The proposed Housing Element Update would not have a direct or indirect impact on Plan Bay Area 2050 economic strategies EC1, EC2, EC3, EC4, or EC6. However, Policy 1.3 of the Housing Element Update, which directs the City to target new housing development to areas in Clayton near major travel corridors and commercial centers, would help to achieve Strategy EC5 by providing incentives to employers to shift jobs to housing-rich areas well served by transit.</p>
<p>Strategy T1: Restore, Operate and Maintain the Existing Transportation System.</p> <p>Strategy T2: Support Community-Led Transportation Enhancements in Equity Priority Communities.</p> <p>Strategy T3: Enable a Seamless Mobility Experience.</p> <p>Strategy T4: Reform Regional Transit Fare Policy.</p> <p>Strategy T5: Implement Means-Based Per-Mile Tolling on Congested Freeways with Transit Alternatives.</p> <p>Strategy T6: Improve Interchanges and Address Highway Bottlenecks.</p> <p>Strategy T7: Advance Other Regional Programs and Local Priorities.</p>	<p>Consistent. While the proposed Housing Element does not directly address the local transportation system, the Housing Element Update does contain the following goals and attendant objectives and policies that will help achieve Plan Bay Area 2050 Strategy T1 through T12:</p> <p>Goal 1: Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.</p> <p>Policy 1.3: Target new housing development to areas in Clayton near major travel corridors and commercial centers.</p> <p>Goal 5: Ensure equal housing opportunities for all persons in Clayton regardless of age, race, religion, sex, marital status, national origin, color, disability, or other barriers that prevent choice in housing.</p> <p>In addition, the <i>General Plan Circulation Element</i> contains the following goals and attendant objectives and policies that will help achieve Plan Bay Area 2050 Strategy T1 through 12:</p>

Plan Bay Area 2050 Strategies	Housing Element Consistency Analysis
<p>Strategy T8: Build a Complete Streets Network.</p> <p>Strategy T9: Advance Regional Vision Zero Policy through Street Design and Reduced Speeds.</p> <p>Strategy T10: Enhance Local Transit Frequency, Capacity and Reliability.</p> <p>Strategy T11: Expand and Modernize the Regional Rail Network.</p> <p>Strategy T12: Build an Integrated Regional Express Lanes and Express Bus Network.</p>	<p>Goal: To implement a circulation system which will preserve the atmosphere and unity of the area and which will assure adequate traffic capacity on major thoroughfares but will minimize through traffic in residential neighborhoods.</p> <p>Objective 1: To reduce truck traffic through residential areas.</p> <p>Objective 2: To coordinate the increased use of Concord Boulevard with Concord to reduce traffic passing through the City of Clayton to Kirker Pass.</p> <p>Objective 3: To continue the development of Concord Boulevard based on existing alignment but respecting geological hazards and limitations.</p> <p>Objective 4: To plan an efficient network of streets and trails which will link all neighborhoods of the community and allow safety and economy of movement.</p> <p>Objective 6: To provide alternative routes of circulation through the Town Center.</p> <p>Objective 8: To cooperate with Concord and Contra Costa County in design of the Regional Traffic System.</p> <p>Objective 9: Establish a priority system to upgrade existing City streets to a City standard.</p> <p>In addition, the <i>General Plan Growth Management Element</i> contains the following goals and attendant objectives and policies that will help achieve Plan Bay Area 2050 Strategy T1 through T12:</p> <p>Goal 2: Design a street system that while accommodating urban development is consistent with orderly growth.</p> <p>Goal 4: Assure that new residential, business, and commercial growth pays for the facilities required to meet the demands resulting from that growth.</p> <p>Objective 1: The City shall adopt and maintain a development mitigation program to ensure that new growth pays its fair share of the costs associated with that growth.</p> <p>Objective 2: The City shall participate in an on-going multi-jurisdictional planning process with other jurisdictions and agencies, the RTPC, and the Contra Costa Transportation Authority to create a balanced, safe, and efficient transportation system and to manage the impacts of growth.</p>

Plan Bay Area 2050 Strategies	Housing Element Consistency Analysis
<p>Strategy EN1: Adapt to Sea Level Rise.</p> <p>Strategy EN2: Provide Means-Based Financial Support to Retrofit Existing Residential Buildings.</p> <p>Strategy EN3: Fund Energy Upgrades to Enable Carbon-Neutrality in All Existing Commercial and Public Buildings.</p> <p>Strategy EN4: Maintain Urban Growth Boundaries.</p> <p>Strategy EN5: Protect and Manage High-Value Conservation Lands.</p> <p>Strategy EN6: Modernize and Expand Parks, Trails and Recreation Facilities.</p> <p>Strategy EN7: Expand Commute Trip Reduction Programs at Major Employers.</p> <p>Strategy EN8: Expand Clean Vehicle Initiatives.</p> <p>Strategy EN9: Expand Transportation Demand Management Initiatives.</p>	<p>Objective 4: The City shall maintain and improve traffic operations compliant with LOS standards.</p> <p>Consistent: The proposed Housing Element Update contains the following goals and attendant objectives and policies that will help achieve Plan Bay Area 2050 Strategy EN1 through EN9:</p> <p>Goal 1: Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.</p> <p>Policy 1.1: Preserve the architectural and design quality of established residential neighborhoods.</p> <p>Policy 1.2: Consider and mitigate the impacts of new housing on the City's infrastructure, open space, natural resources, and public services.</p> <p>Policy 1.4: Continue to utilize the City's code enforcement program to improve overall housing conditions, and promote increased awareness among property owners and residents of the importance of property maintenance.</p> <p>Policy 1.5: Make it easy for homeowners to reinvest in their properties by having staff-level review processes for the home renovations and additions that meet minimum development standards.</p>

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts***Impact LAND-3 – Would the HEU cause substantial adverse cumulative impacts with respect to land use and planning?***Analysis of Impacts

As discussed in Impact LAND-2 above, the proposed HEU would change land uses in the City over time by increasing the number of housing units over those projected in the 2015 Housing Element. Conversely, the HEU represents a slight increase in non-residential uses (e.g., commercial, office, light industrial) and employment in the future compared to that projected in the 2015 Housing Element. These land use changes and their related housing and population increases are resulting from the City's increased RHNA from ABAG, which is in turn based on the state's goal of providing more housing throughout the state. However, the state housing goal conflicts with its desire to also reduce vehicle miles traveled (VMT) in an effort to reduce vehicular air pollution and greenhouse gas emissions.

4.11 – Land Use and Planning

The Land Use and Growth Management Elements of the existing General Plan and proposed HEU both contain a number of goals and policies for orderly growth consistent with local and regional plans, and surrounding jurisdictions have similar goals and policies to be consistent with state planning and housing laws. While the proposed HEU has cumulative implications for ABAG's regional plans, the City itself cannot solve the inherent conflict between the goals and directives of the RHNA and the regional growth projections provided in the Plan Bay Area 2040. Once the City has adopted the HEU, it will transmit its new growth numbers to ABAG, and those estimates will be incorporated into the next revisions to the RHNA and RTP/SCS. The HEU would change land uses that would induce substantial housing and population growth within the Planning Area. However, this level of growth can be accommodated at the local level by the City of Clayton, so the HEU does not represent a substantial adverse cumulative impacts with respect to land use and planning.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.11.1 References

Association of Bay Area Government (ABAG) & Metropolitan Transportation Commission. *Plan Bay Area 2040*. July 2017.

Association of Bay Area Government (ABAG) & Metropolitan Transportation Commission. *Plan Bay Area 2050*. October 2021.

4.12 – MINERAL RESOURCES

This EIR chapter addresses mineral resources impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). Issues of interest are mineral resources impacts identified by the CEQA Guidelines: whether the HEU will result in the loss of availability of a known mineral resource or result in the loss of availability of a locally important mineral resource recovery site.

4.12.1 *Environmental Setting*

Mineral Resource Zones

Minerals resources refer to naturally occurring deposits of aggregate resources, or rock, sand, and gravel; energy-producing fields, including oil, gas, and geothermal substances; and mining operations that can be economically extracted. The California Division of Mines and Geology (CDMG) classifies land according to the presence or absence of mineral resources, which are categorized through maps designating Mineral Resource Zones (MRZ).¹ The Planning Area is located in the South San Francisco Bay Production Consumption (P-C) Region. There are four MRZ classifications, MRZ-1 through MRZ-4, and several sub-categories within those. Areas designated as MRZ-1 are areas where adequate information indicates that there are no significant mineral deposits present, or there is very little likelihood of deposits existing. MRZ-2 areas are where adequate information indicates that significant mineral deposits are present or where there is a high likelihood for their presence. MRZ-3 areas are areas containing mineral deposits abundance of which cannot be evaluated from available data. And MRZ-4 areas are where information is inadequate for assignment to another MRZ-zone.²

According to the Department of Conservation, a large portion of the Planning Area is classified as MRZ-3, meaning there are minerals of an undetermined quantity. Quaternary alluvium, sand or gravel deposits follow along the Mount Diablo Creek and Clayton Valley, but the amount and quality of materials is inconclusive.³ Furthermore, the Neroly and Cierbo Formations, the Wolfskill Formation, and Franciscan Complex have been mined in other nearby areas for sandstone, greenstone, and chert, but there is a lack of adequate information to determine local quantities and quality.⁴ A western portion of the Planning Area is designated as MRZ-2, meaning there are significant mineral deposits; this portion is in line with where the Clayton quarry is located. The remainder of the City of Clayton is designated as MRZ-4, there being insufficient information on the presence of minerals.⁵

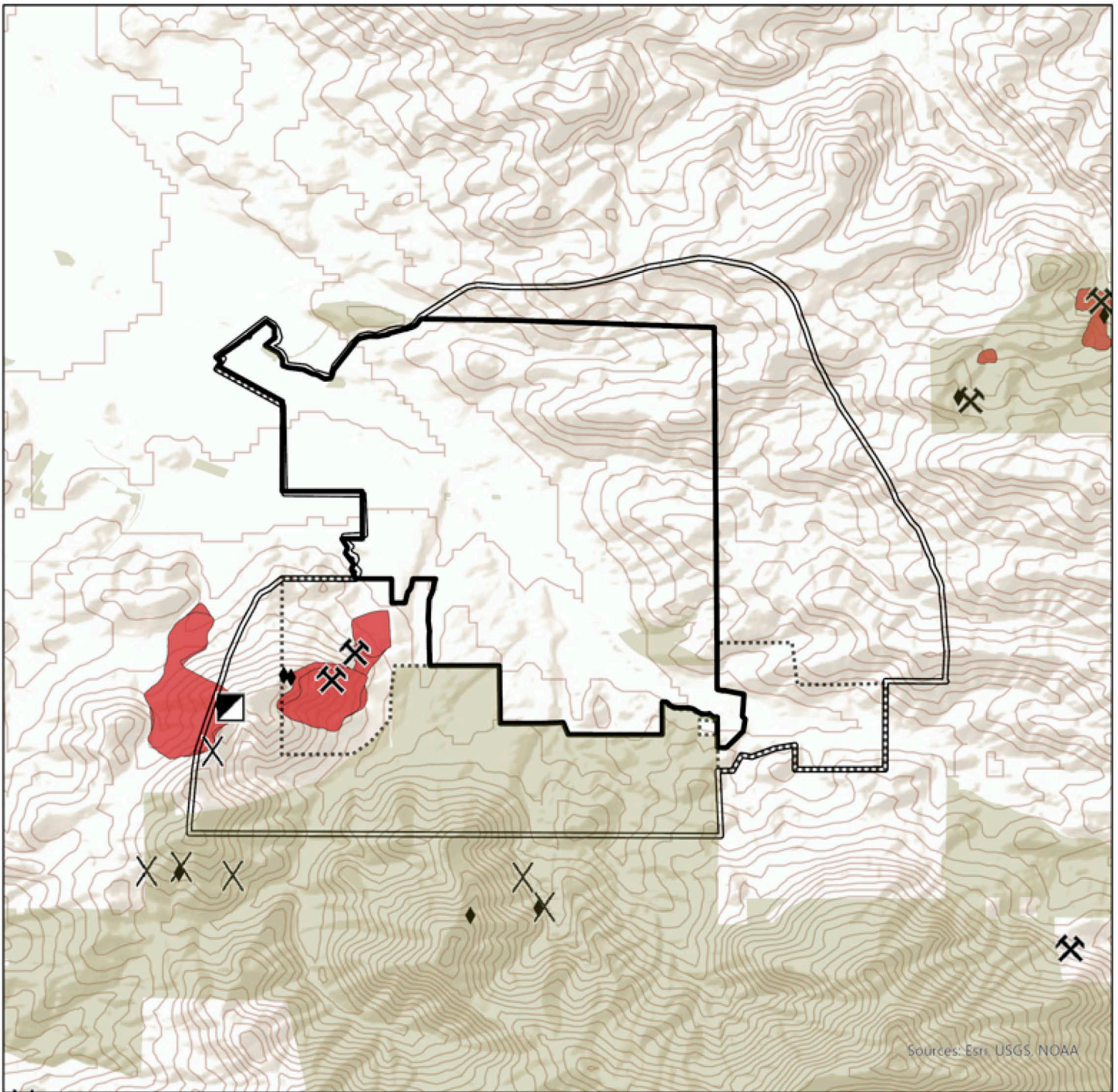
Aggregate Resources

Aggregate resources consist of rock, sand, and gravel or crushed stone. These materials are used in construction services, primarily in the production of asphalt and concrete among other applications.⁶ Mt. Diablo contained small deposits of gold, quicksilver, copper, and lime, but not enough to sustain development to the degree of the surrounding areas during California’s Gold Rush. Coal was discovered in 1858 south of Antioch by W.C. Israel and in 1859 by Francis Somers and James T. Cruikshank in the now Black Diamond Mines Regional Preserve.⁷ Coal deposits provided local, cheap energy to the Bay Area’s growth until mining operations of silica sand ceased in the area in 1949.⁸ Oil and gas are prevalent mineral resources produced in California, but according to the California Department of Conservation Geologic Energy

4.12 – Mineral Resources

Management Division's (CalGEM) online mapping application Well Finder, there are no active wells in and around the Planning Area.⁹

Just outside the City of Clayton are two quarries on the western and eastern slopes of Mount Zion. Mount Zion is a mineral reserve that supplies construction materials to Contra Costa County. The eastern quarry, the CEMEX Clayton Quarry, is located within the Planning Area, approximately one-half mile south of the City of Clayton. The Clayton Quarry is an active surface mine that produces aggregate materials diabase and pillow basalt, hard crushed stone and rocks, that are used in the production of durable construction materials used for roads, buildings, dams, etc.¹⁰



- | | |
|-----------------------------|-------------------|
| Clayton City Boundary | Pits and Diggings |
| Clayton Sphere of Influence | Mine Shaft |
| Planning Area Boundary | Quarry |
| | Prospect Pit |
| | Adit |

0 0.25 0.5 1 Miles

This Page Intentionally Left Blank.

4.12.2 Regulatory Framework

State

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 (SMARA) was enacted by the California legislature to promote the conservation of the state's mineral resources and to ensure adequate reclamation of mined lands.¹¹ Among other provisions, SMARA requires the State Geologist to classify land in California into MRZs, according to the known or inferred mineral potential of the land. The process is based solely on geology, without regard to existing land use or land ownership. Upon completion of each study, the State Geologist submits the mineral land classification report to the State Mining and Geology Board, which transmits the information to appropriate local governments that maintain jurisdictional authority in mining, reclamation, and related land-use activities. Local governments are required to incorporate the report and maps into their General Plans and consider the information when making land use decisions.

SMARA addresses the need for a continuing supply of mineral resources and to prevent or minimize the negative impacts of surface mining to public health, property and the environment. The Act applies to anyone, including government agencies, engaged in surface mining operations in California, including federally-managed lands that disturb more than 1 acre or remove more than 1,000 cubic yards of material cumulatively from one site.¹² Regulated mining activities include prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials. The current General Plan incorporates the requirements and mineral classification and designation information of SMARA.

The California Department of Conservation, Division of Mines and Geology (DMG) 'Mineral Land Classification Project' publishes mineral resource maps which have proven to be of value in land use planning and mineral conservation.¹³ This is an ongoing process with updates taking place approximately every 10 years. DMG is also in the process of identifying lands throughout the Contra Costa County with the potential for mineral resource recovery; the information gathered through this process will be used by the County to identify new mineral resource areas to help ensure their preservation. Areas subject to California mineral land classification studies are divided by the State Geologist into various MRZ categories that reflect varying degrees of mineral potential.¹⁴

Local

City General Plan

The Open Space/Conservation Element of the City's current (2000) General Plan states the following regarding mineral resources: "The City of Clayton seeks to preserve open space and provide recreational opportunities to Clayton residents within the City Limits. Four designations have been created to fulfill these goals: Private Open Space, Public Park/Open Space, Quarry, and Agriculture." The City's General Plan contain no specific goals, objectives, or policies regarding mineral resources, but it does acknowledge the two existing quarries located just southwest of the City within its Sphere of Influence (i.e., the Planning Area). The two local quarries carry a land use designation of Quarry (Q) in the Land Use Element.

City Municipal Code

Similar to the General Plan, the City's Municipal Code contains no regulations or ordinances relative to mineral resources or quarries.

4.12.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to mineral resources if it would:

- a) 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
- b) 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.

4.12.4 Impacts and Mitigation Measures

This section describes potential impacts related to the loss of availability of a known mineral resource that is of value to the region and the residents of the state and the loss of availability of a locally-important mineral resource recovery site.

Loss of Statewide or Regional Mineral Resources

Impact MINERAL-1 – Would the HEU 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?

Analysis of Impacts

According to the Department of Conservation, a large portion of the Planning Area is classified as MRZ-3, meaning there are minerals of an undetermined quantity. A western portion of the Planning Area is designated as MRZ-2, meaning there are significant mineral deposits, this portion is in line with where the CEMEX Clayton Quarry is located. The remainder of the City of Clayton is designated as MRZ-4, there being insufficient information on the presence of minerals. While there are significant mineral deposits located within the Planning Area, the proposed HEU would not impact any of the locations identified within the Planning Area boundaries as containing significant mineral deposits. As shown in Exhibit 3-4 (Preliminary 6th Cycle Housing Inventory Sites), all of the sites identified by the City are either currently developed or located in mostly developed areas that are designated in the City's General Plan Land Use Element for development. The HEU would not result in the loss of availability of a known mineral resource that is of value to the region and the residents of the State.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Loss of Locally Important Mineral Resources

Impact MINERAL-2 – Would the HEU 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?

Analysis of Impacts

As discussed in MINERAL-1 above, there are portions of the Planning Area where significant mineral deposits have been identified. However, because all of the potential 6th Cycle housing

inventory sites identified by the City are inside the corporate boundary and either developed or located in mostly developed areas that are designated in the City's General Plan Land Use Element for development, the proposed HEU would not result in the loss of availability of a locally-important mineral resource recovery site. Further, no impact to the CEMEX Clayton Quarry would occur as a result of the proposed HEU.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Cumulative Impacts

Impact MINERAL-3 – Would the HEU cause substantial adverse cumulative impacts with respect to mineral resources?

Analysis of Impacts

The proposed Housing Update would not result in any impacts related to mineral resources. Because of the developed nature of the Planning Area, and because the HEU would not impact identified mineral resources within the Planning Area, there would also be no cumulative impacts with respect to mineral resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

4.12.5 References

- ¹ California Department of Conservation. *Guidelines For Classification and Designation of Mineral Lands*. Web: <https://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf>. [Accessed March 2022].
- ² California Department of Conservation. *Guidelines For Classification and Designation of Mineral Lands*. Web: <https://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf>. [Accessed March 2022].
- ³ California Department of Conservation Division of Mines and Geology. *Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area. Mineral Land Classification Map: Aggregate Resources Only: Contra Costa County*. PDF. 1987. 1982. [Accessed March 2022].
- ⁴ California Department of Conservation Division of Mines and Geology. *Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area. Mineral Land Classification Map: Aggregate Resources Only: Contra Costa County*. PDF. 1987. 1982. [Accessed March 2022].
- ⁵ California Department of Conservation Division of Mines and Geology. *Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area. Mineral Land Classification Map: Aggregate Resources Only: Contra Costa County*. PDF. 1987. 1982. [Accessed March 2022].
- ⁶ California Department of Conservation. *Mineral Resources Program*. Web: https://www.conservation.ca.gov/cgs/minerals/storymap?utm_source=mrp+home&utm_medium=referral&utm_campaign=minerals+storymap. [Accessed March 2022].
- ⁷ Clayton Historical Society and Museum. *Coal Mining*. Web: <https://claytonhistory.org/history/coalmining/>. [Accessed March 2022].
- ⁸ Clayton Historical Society and Museum. *Coal Mining*. Web: <https://claytonhistory.org/history/coalmining/>. [Accessed March 2022].
- ⁹ California Department of Conservation. *Well Finder*. Web: <https://www.conservation.ca.gov/calgem/Pages/wellfinder.aspx>. [Accessed March 2022].
- ¹⁰ California Department of Conservation Division of Mines and Geology. *Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area*. PDF. 1987. Mount Diablo Interpretive Association. Clayton Quarry. Web: <https://www.mdia.org/clayton-quarry>. Accessed [March 2022].
- ¹¹ Department of Conservation (DOC). 2022. California Geological Survey (CGS) Warehouse: Mineral Land Classification. Web: <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>. [Accessed March 2022].
- ¹² Department of Conservation (DOC). 2022. California Geological Survey (CGS) Warehouse: Mineral Land Classification. Web: <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>. [Accessed March 2022].
- ¹³ California Department of Conservation, Division of Oil, Gas, and Geothermal Resources. (DOGGR). 2022. DOGGR Well Finder. Web: <http://maps.conservation.ca.gov/doggr/index.html#close>. [Accessed March 2022].
- ¹⁴ California Department of Conservation, Division of Oil, Gas, and Geothermal Resources. (DOGGR). 2022. DOGGR Well Finder. Web: <http://maps.conservation.ca.gov/doggr/index.html#close>. [Accessed March 2022].

4.13 – NOISE

This chapter provides pertinent background information on the nature of sound and vibration transmission; describes the existing noise environment in the Planning Area; summarizes applicable noise guidelines, standards, and regulations; and evaluates potential noise and vibration impacts that could result from implementation of the City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Changes (“HEU” or “project”). Where necessary, this section includes mitigation measures that would reduce noise and vibration impacts associated with the HEU.

4.13.1 *Fundamentals of Environmental Acoustics*

Noise is generally defined as unwanted sound and is widely recognized as a form of environmental degradation. Airborne sound is the rapid fluctuation of air pressure above and below atmospheric pressure. The frequency (pitch), amplitude (intensity or loudness), and duration of a sound all contribute to the effect on a listener, or receptor, and whether or not the receptor perceives the sound as “noisy” or annoying.

Pitch is the height or depth of a tone or sound and depends on the frequency of the vibrations by which it is produced. Sound frequency is expressed in terms of cycles per second, or Hertz (Hz). Humans generally hear sounds with frequencies between 20 and 20,000 Hz and perceive higher frequency sounds, or high pitch noise, as louder than low-frequency sound or sounds low in pitch. Sound intensity or loudness is a function of the amplitude of the pressure wave generated by a noise source combined with the reception characteristics of the human ear. Atmospheric factors and obstructions between the noise source and receptor also affect the loudness perceived by the receptor. Sound pressure levels are typically expressed on a logarithmic scale in terms of decibels (dB). A dB is a unit of measurement that indicates the relative amplitude (i.e., intensity or loudness) of a sound, with 0 dB corresponding roughly to the threshold of hearing for the healthy, unimpaired human ear.

Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 dBs represents a ten-fold increase in acoustic energy, while 20 dBs is 100 times more intense, 30 dBs is 1,000 times more intense, and so on. In general, there is a relationship between the subjective noisiness or loudness of a sound and its intensity, with each 10 dB increase in sound level perceived as approximately a doubling of loudness. Due to the logarithmic basis, decibels cannot be directly added or subtracted together using common arithmetic operations:

$$50 \text{ decibels} + 50 \text{ decibels} \neq 100 \text{ decibels}$$

Instead, the combined sound level from two or more sources must be combined logarithmically. For example, if one noise source produces a sound power level of 50 dBA, two of the same sources would combine to produce 53 dB as shown below.

$$10 * 10 \log \left(10^{\left(\frac{50}{10}\right)} + 10^{\left(\frac{50}{10}\right)} \right) = 53 \text{ decibels}$$

In general, when one source is 10 dB higher than another source, the quieter source does not add to the sound levels produced by the louder source because the louder source contains ten times more sound energy than the quieter source.

Sound Characterization

Although humans generally can hear sounds with frequencies between 20 and 20,000 Hz, most of the sounds humans are normally exposed to do not consist of a single frequency, but rather a broad range of frequencies perceived differently by the human ear. In general, humans are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. Instruments used to measure sound, therefore, include an electrical filter that enables the instrument's detectors to replicate human hearing. This filter, known as the "A-weighting" or "A-weighted sound level," filters low and very high frequencies, giving greater weight to the frequencies of sound to which the human ear is typically most sensitive. Most environmental measurements are reported in dBA, meaning decibels on the A-scale. See Table 4.13-1 for a list of common noise sources and their A-weighted noise levels.

Sound levels are usually not steady and vary over time. Therefore, a method for describing either the average character of the sound or the statistical behavior of the variations over a period of time is necessary. The continuous equivalent noise level (L_{eq}) descriptor is used to represent the average character of the sound over a period of time. The L_{eq} represents the level of steady-state noise that would have the same acoustical energy as the time-varying noise measured over a given time period. L_{eq} is useful for evaluating shorter time periods over the course of a day. The most common L_{eq} averaging period is hourly, but L_{eq} can describe any series of noise events over a given time period.

Variable noise levels are the values that are exceeded for a portion of the measured time period. Thus, the L_{01} , L_{10} , L_{50} , and L_{90} descriptors represent the sound levels exceeded 1 percent, 10 percent, 50 percent, and 90 percent of the time the measurement was performed. The L_{90} value usually corresponds to the background sound level at the measurement location.

When considering environmental noise, it is important to account for the different responses people have to daytime and nighttime noise. In general, during the nighttime, background noise levels are quieter than during the daytime but also more noticeable due to the fact that household noise has decreased as people begin to retire and sleep. Noise exposure over the course of an entire day is described by the day/night average sound level, DNL (or L_{dn}), and the community noise equivalent level, or CNEL, descriptors. Both descriptors represent the 24-hour noise exposure in a community or area. For DNL, the 24-hour day is divided into a 15-hour daytime period (7:00 a.m. to 10:00 p.m.), and a 9-hour nighttime period (10:00 p.m. to 7:00 a.m.), and a 10 dB "penalty" is added to measure nighttime noise levels when calculating the 24-hour average noise level. For example, a 45 dBA nighttime sound level would contribute as much to the overall day-night average as a 55 dBA daytime sound level. The CNEL descriptor is similar to DNL, except that it includes an additional 5 dBA penalty for noise events that occur during the evening time period (7:00 p.m. to 10:00 p.m.). The artificial penalties imposed during DNL and CNEL calculations are intended to account for a receptor's increased sensitivity to noise levels during quieter nighttime periods.

**Table 4.13-1
Typical Noise Levels**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet flyover at 1,000 feet	105	
	100	
Gas lawn mower at 3 feet	95	
	90	
Diesel truck at 50 feet at 50 mph	85	Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noise urban area, daytime	75	
Gas lawnmower, 100 feet	70	Vacuum cleaner at 10 feet
Commercial area	65	Normal speech at 3 feet
Heavy traffic at 300 feet	60	
	55	Large business office
Quiet urban daytime	50	Dishwasher next room
	45	
Quiet urban nighttime	40	Theater, large conference room
Quiet suburban nighttime	35	
	30	Library
Quite rural nighttime	25	Bedroom at night
	20	
	15	Broadcast/recording studio
	10	
	5	
Typical threshold of human hearing	0	Typical threshold of human hearing

Source: Caltrans, 2013

Sound Propagation

The energy contained in a sound pressure wave dissipates and is absorbed by the surrounding environment as the sound wave spreads out and travels away from the noise-generating source. The strength of the source is often characterized by its “sound power level.” Sound power level is independent of the distance a receiver is from the source and is a property of the source alone. Knowing the sound power level of an idealized source and its distance from a receiver, the sound pressure level at a specific point (e.g., a property line or a receiver) can be calculated based on geometrical spreading and attenuation (noise reduction) as a result of distance and environmental factors, such as ground cover (asphalt vs. grass or trees), atmospheric absorption, and shielding by terrain or barriers.

For an ideal “point” source of sound, such as mechanical equipment, the energy contained in a sound pressure wave dissipates and is absorbed by the surrounding environment as the sound wave spreads out in a spherical pattern and travels away from the point source. Theoretically, the

sound level attenuates, or decreases, by 6 dB with each doubling of distance from the point source. In contrast, a “line” source of sound, such as roadway traffic or a rail line, spreads out in a cylindrical pattern and theoretically attenuates by 3 dB with each doubling of distance from the line source; however, the sound level at a receptor location can be modified further by additional factors. The first is the presence of a reflecting plane such as the ground. For hard ground, a reflecting plane typically increases A-weighted sound pressure levels by 3 dB. If some of the reflected sound is absorbed by the surface, this increase will be less than 3 dB. Other factors affecting the predicted sound pressure level are often lumped together into a term called “excess attenuation.” Excess attenuation is the amount of additional attenuation that occurs beyond simple spherical or cylindrical spreading. For sound propagation outdoors, there is almost always excess attenuation, producing lower levels than what would be predicted by spherical or cylindrical spreading. Some examples include attenuation by sound absorption in air; attenuation by barriers; attenuation by rain, sleet, snow, or fog; attenuation by grass, shrubbery, and trees; and attenuation from shadow zones created by wind and temperature gradients. Under certain meteorological conditions, like fog and low-level clouds, some of these excess attenuation mechanisms are reduced or eliminated due to noise reflection.

Noise Effects

Noise effects on human beings are generally categorized as:

- Subjective effects of annoyance, nuisance, and/or dissatisfaction
- Interference with activities such as speech, sleep, learning, or relaxing
- Physiological effects such as startling and hearing loss

Most environmental noise levels produce subjective or interference effects; physiological effects are usually limited to high noise environments such as industrial manufacturing facilities or airports.

Predicting the subjective and interference effects of noise is difficult due to the wide variation in individual thresholds of annoyance and past experiences with noise; however, an accepted method to determine a person’s subjective reaction to a new noise source is to compare it with the existing environment without the noise source, or the “ambient” noise environment. In general, the more a new noise source exceeds the ambient noise level, the more likely it is to be considered annoying and to disturb normal activities.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dB increase is generally perceived as a distinctly noticeable increase, and a 10 dB increase is generally perceived as a doubling of loudness that would almost certainly cause an adverse response from community noise receptors.

Groundborne Vibration and Noise

Vibration is the movement of particles within a medium or object such as the ground or a building. Vibration may be caused by natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or humans (e.g., explosions, machinery, traffic, trains, construction

equipment). Vibration sources are usually characterized as continuous, such as factory machinery, or transient, such as explosions.

As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency; however, unlike airborne sound, there is no standard way of measuring and reporting amplitude. Vibration amplitudes can be expressed in terms of velocity (inches per second) or discussed in dB units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are usually discussed in terms of peak particle velocity (PPV) in inches per second (in/sec). PPV represents the maximum instantaneous positive or negative peak of a vibration signal and is most appropriate for evaluating the potential for building damage. Vibration can impact people, structures, and sensitive equipment. The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments, such as electron microscopes.

Common sources of vibration within communities include construction activities and railroads. Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used.

Groundborne noise is noise generated by vibrating building surfaces such as floors, walls, and ceilings that radiate noise inside buildings subjected to an external source of vibration. The vibration level, the acoustic radiation of the vibrating element, and the acoustical absorption of the room are all factors that affect potential groundborne noise generation.

4.13.2 Environmental Setting

The City's existing General Plan Noise Element identifies the most common sources of noise in the City's as truck and automobile traffic, with the gravel trucks travelling to and from the CEMEX Clayton Quarry as a notable source of vehicle noise. The General Plan identifies the Clayton Road-Marsh Creek Road thoroughfare, which travels through the Town Center, and Mitchell Canyon Road, which is the gravel truck route for the quarry, as critical routes for noise in the City. The General Plan also identifies the Concord Pavilion and the CEMEX Clayton Quarry as the two most prominent fixed point sources of noise in the Clayton area, although both are located outside City boundaries. The closest airport to the City is Buchanan Field Airport, located approximately 5.6 miles northwest of the City boundary. The City is not located in any noise contour zone associated with this airport.¹

Existing and Future Baseline Modeled Traffic Noise Levels

Existing (Year 2020) traffic noise levels were computed using the U.S. Department of Transportation Federal Highway Administration's (FHWA) Traffic Noise Model (TNM), Version 3.1. The model uses traffic volume, vehicle mix, vehicle speed, roadway geometry, and other variables to compute 24-hour traffic noise levels at user-defined receptor distances from the roadway center. The TNM modeling conducted for this EIR incorporates worst-case assumptions about motor vehicle traffic and noise levels; specifically, calculations are based on "hard" site conditions and do not incorporate any natural or artificial shielding.

Peak hour and average daily traffic (ADT) volume information was obtained from the traffic and vehicle miles traveled (VMT) analysis prepared for the proposed HEU (see Section 4.17, Transportation). Traffic noise levels were estimated for typical daytime (consisting of peak and non-peak hour traffic volumes) and nighttime (consisting of non-peak hour traffic volumes only) periods. Hourly traffic noise levels were then summed to derive the 24-hour DNL along modeled roadway segments. The mix of automobiles, medium and heavy duty trucks, and motorcycles assigned to the roadway system was generated using the California Air Resources Board's (CARB) EMFAC2021 model, which contains vehicle population data by different geographic regions. Vehicles were assumed to travel the posted speed limit on each modeled roadway segment.

The transportation impact analysis (TIA) prepared for the HEU also includes an analysis of future traffic conditions that would occur in Year 2040 based on continued implementation of the City's current General Plan at the land use development intensities permitted by the current General Plan. The future baseline Year 2040 traffic noise levels were estimated using the same methodology as described for the existing year 2020 traffic noise analysis. Traffic noise levels were computed using TNM, Version 3.1 and the same roadway geometry factors assumed for 2020 traffic noise levels; however, traffic volumes and fleet mix percentages were updated based on specific information for future Year 2040 conditions identified in the traffic and VMT analysis prepared for the HEU (see Section 4.17, Transportation). Modeled traffic noise levels for existing (Year 2020) and future (Year 2040) baseline traffic noise levels are shown in Table 4.13-2. Refer to Appendix E for detailed information on existing traffic noise modeling assumptions.

**Table 4.13-2
Existing (2020) and Future (2040) Baseline Traffic Noise Levels**

Road / Segment	Year 2020		Year 2040		Net Change	
	ADT	DNL^(A)	ADT	DNL^(A)	ADT	DNL
Clayton Road						
City Limit to Mt. Zion Drive	24,763	72.2	27,903	72.9	3,139	0.7
Mt Zion Dr to Marsh Creek Road	17,508	70.3	20,650	71.1	3,142	0.8
South of Marsh Creek Road	2,592	61.8	5,909	66.9	3,317	5.1
Mitchell Canyon Road						
South of Clayton Road	517	50.9	627	51.4	110	0.5
Oakhurst Drive						
Cam Estrada to Clayton Road	4,284	63.5	6,542	65.6	2,258	2.1
Pine Hollow Drive						
El Camino Drive to Mitchell Canyon Road	357	49.4	391	47.5	34	-1.9
City Limit to El Camino Drive	3,946	59.1	4,447	59.7	501	0.6
Kirker Pass Road						
Clayton Road to Concord Boulevard	35,373	74.8	40,896	75.4	5,523	0.6
Marsh Creek Road						
Clayton Road to Mountaire Pkwy	11,533	66.4	29,432	70.9	17,899	4.5
Mountaire Pkwy to Marsh Creek Road	3,947	62.1	4,933	63.2	986	1.1
Clayton Rd to Regency Drive	3,531	63.1	10,818	69.7	7,287	6.6
Regency Drive to City Limit	3,531	62.3	10,818	68.8	7,287	6.5
Source: MIG, 2022 (see Appendix E)						
(A) CNEL values are estimated at 50 feet from the road center.						

The results of the traffic noise modeling indicate that existing traffic noise levels within the City are highest along Clayton Road, Kirker Pass Road, Marsh Creek Road, and Oakhurst Drive. Specifically, the modeling shows:

- Year 2020 traffic noise levels along the modeled segments of Clayton Road are between approximately 62 DNL to 72 DNL at a distance of 50 feet from the center of the roadway. Residential, commercial, and institutional land uses are present along Clayton Road. The estimated Year 2020 traffic noise levels exceed the noise level (60 DNL) identified in the City's existing General Plan as requiring mitigation. Year 2040 traffic noise levels are estimated to increase by approximately 1 dBA due to a predicted increase in traffic volumes on Clayton Road.
- Year 2020 traffic noise levels along the modeled segment of Kirker Pass Road are estimated to be approximately 75 DNL at a distance of 50 feet from the center of the roadway. Residential and commercial land uses are present along this segment of Kirker Pass Road. The estimated Year 2020 traffic noise levels exceed the noise level (60 DNL) identified in the City's existing General Plan as requiring mitigation. Year 2040 traffic noise levels are estimated to increase by less than 1 dBA due to a predicted increase in traffic volumes on Kirker Pass Road.
- Year 2020 traffic noise levels along the modeled segment of Marsh Creek Road are estimated to be above 65 DNL north of Mountaire Parkway and less than 65 DNL south of Mountaire Parkway at a distance of 50 feet from the center of the roadway. Residential, commercial, and institutional land uses are present along this segment of Clayton Road. The estimated Year 2020 traffic noise levels exceed the noise level (60 DNL) identified in the City's existing General Plan as requiring mitigation. Year 2040 traffic noise levels are estimated to increase between 1 dBA and 7 dBA due to a predicted increase in traffic volumes on Marsh Creek Road.
- Year 2020 traffic noise levels along the modeled segment of Oakhurst Drive are estimated to be approximately 64 DNL at a distance of 50 feet from the center of the roadway. Residential, commercial, and open space land uses are present along this segment of road. The estimated Year 2020 traffic noise levels exceed the noise level (60 DNL) identified in the City's existing General Plan as requiring mitigation. Year 2040 traffic noise levels are estimated to increase by approximately 2 dBA due to a predicted increase in traffic volumes on Oakhurst Drive.

Noise Sensitive Receptors

Noise-sensitive receptors are buildings or areas where unwanted sound or increases in sound may have an adverse effect on people or land uses. Residential areas, motels and hotels, hospitals and health care facilities, school facilities, and parks are examples of noise receptors that could be sensitive to changes in existing environmental noise levels. In general, potential noise-sensitive receptors within the City include:

- Existing residential land uses within the City.
- Existing schools and education or institutional facilities, such as, but not limited to, Mt. Diablo Elementary School and Pine Hollow Middle School.
- Existing neighborhood, community, and other parks, such as, but not limited to, Westwood Park, Lydia Lane Park, The Grove, and Clayton Community Park.

In addition to existing sensitive noise receptors, the proposed HEU would increase development density in the City and would provide for new residential and mixed use residential and commercial opportunities.

4.13.3 Regulatory Framework

Federal

Federal Transit Administration (FTA)

No federal regulations apply to noise or vibration from the proposed HEU, but the FTA's 2018 *Transit Noise and Vibration Impact Assessment Manual* document sets groundborne vibration annoyance criteria for general assessments.² The criteria vary by the type of building being subjected to the vibrations, and the overall number of vibration events occurring each day. Category 1 buildings are considered buildings where vibration would interfere with operation, even at levels that are below human detection. These include buildings with sensitive equipment, such as research facilities and recording studios. Category 2 buildings include residential lands and buildings where people sleep, such as hotels and hospitals. Category 3 buildings consist of institutional land uses with primarily daytime uses. The FTA standards vary for "frequent" events (occurring more than 70 times per day, such as a rapid transit project), "occasional" events (occurring between 30 to 70 times per day), and "infrequent" events (occurring less than 30 times per day). The FTA's vibration annoyance criteria are summarized in Table 4.13-3.

Table 4.13-3
FTA Ground-Borne Vibration Impact Criteria for General Assessment

Land Use Category/Type	Impact Level (Velocity Decibels)		
	Frequent Events	Occasional Events	Infrequent Events
Category 1 – Buildings with sensitive equipment	65 VdB	65 VdB	65 VdB
Category 2 – Buildings where people sleep	72 VdB	75 VdB	80 VdB
Category 3 – Institutional buildings	75 VdB	78 VdB	83 VdB
Source: FTA 2018			

State

California Building Standards Code

The California Building Standards Code is contained in Title 24 of the California Code of Regulations and consists of 11 different parts that set forth various construction and building requirements. Part 2, California Building Code, Section 1206, Sound Transmission, establishes sound transmission standards for interior walls, partitions, and floor/ceiling assemblies. Specifically, Section 1206.4 establishes that interior noise levels attributable to exterior noise sources shall not exceed 45 dBA DNL or CNEL (as set by the local General Plan) in any habitable room.

California Green Building Standards Code

The California Green Building Standards Code is Part 11 to the California Building Standards Code. Chapter 5, Nonresidential Mandatory Standards, Section 5.507 establishes the following requirements for non-residential development that may be applicable to the Project.

- Section 5.507.4.1.1 sets forth that buildings exposed to a noise level of 65 dBA L_{eq} (1-hour) during any hour of operation shall have exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composting sound transmission class (STC) rating of at least 45 (or an outdoor indoor transmission class [OITC] of 35), with exterior windows of a minimum STC of 40.
- Section 5.507.4.2 sets forth that wall and roof assemblies for buildings exposed to a 65 dBA L_{eq} pursuant to Section 5.507.4.1.1 shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed 50 dBA L_{eq} in occupied areas during any hour of operation. This requirement shall be documented by an acoustical analysis documenting interior sound levels prepared by personnel approved by the architect or engineer of record.

California Department of Transportation (Caltrans)

Caltrans' Transportation and Construction Vibration Guidance Manual provides a summary of vibration human responses and structural damage criteria that have been reported by researchers, organizations, and governmental agencies.³ These thresholds are summarized in Table 4.13-4 and Table 4.13-5.

Table 4.13-4
Caltrans' Vibration Threshold Criteria for Building Damage

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Historic and some older buildings	0.50	0.12 to 0.2
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50
Source: Caltrans 2020		

Table 4.13-5
Caltrans' Vibration Threshold Criteria for Human Response

Human Response	Maximum PPV (in/sec)	
	Transient	Continuous
Slightly perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.90	0.10
Severe/Disturbing	2.0	0.7 (at 2 Hz) to 0.17 (at 20 Hz)
Very disturbing	--	3.6 (at 2 Hz) to 0.4 (at 20 Hz)
Source: Caltrans 2020		

Local

City of Clayton General Plan

The City's existing Clayton 2000 General Plan Noise Element includes the following goals and policies relevant to development under the existing General Plan.

Goal: To maintain or improve the overall environment and the general well-being of the community by reducing annoying levels of noise for all land uses in the city. Physically harmful levels of noise (70 Ldn and above) shall be mitigated to below harmful levels and to levels of minimum annoyance (below 60 Ldn) where feasible.

Objective 1

To identify routes in Clayton with high levels of noise.

Policy 1a: Prepare noise contour maps for Kirker Pass Road, Clayton Road, Marsh Creek Road, Mitchell Canyon Road, Concord Boulevard, Main Street, El Molino, Pine Hollow Road, Oak Street, Mountaire Parkway, and Regency Drive. These maps are needed as a new baseline to reflect changes in noise levels due to the significant growth which has occurred since the last General Plan revision.

Policy 1b: Identify future routes with potential for significant levels of noise. Noise contour maps for these routes should be prepared when development is proposed which will affect noise levels on the routes.

Objective 2

To establish mitigation measures for reducing exposure to traffic noise.

Policy 2a: Require sound mitigation to 45 Ldn for indoor noise level uses and 60 Ldn for outdoor noise level uses in new developments.

Policy 2b: Require setbacks, sound walls, specific orientation and other measures where new uses are exposed to noise. Such measures shall be consistent with the intent of the Community Design Element.

Policy 2c: Permit noise attenuation measures that do not create traffic hazards along South Mitchell Canyon Road and Clayton Road and retain limited hours of trucking operations on weekdays from 7:00 AM to 4:00 PM with no activity on weekends. Hours may be exceeded in event of emergency with prior city authorization.

Policy 2d: Require developer to conduct noise studies to determine an appropriate noise reduction plan in event development is proposed in areas where roadway or fixed point sources exceed 60 Ldn.

Objective 3

To provide control of fixed point sources.

Policy 3a: Encourage Concord Pavilion not to generate noise in excess of 60 dBA in Clayton.

Policy 3b: Limit construction activities to the hours of 7:00 AM to 5:30 PM on weekdays and 9:00 AM to 6:00 PM on weekends when adjacent neighbors are affected.

Policy 3c: Restrict home sound equipment noise in excess of 55 Ldn at the property line.

Policy 3d: Restrict operation of home power equipment before 7:00 AM to after 10:00 PM at a noise level above 55 Ldn at the property line.

Policy 3e: Consider an ordinance to reduce the nuisance effects of unattended pets.

Clayton Municipal Code

Clayton Municipal Code Title 9 (Public Peace, Morals, and Welfare), Chapter 9.30 (Noise) includes the City's standards related to noise. Section 9.30.020 - General Noise Regulations states that it is unlawful for a person to willfully make a loud, unnecessary or unusual noise, which disturbs the peace or quiet of a neighborhood or which causes discomfort or annoyance to a reasonable person or normal sensitiveness residing in the area, unless otherwise provided for in the municipal code, such as emergency exemptions as specified in Section 9.30.060, or when a permit is issued, as specified in Section 9.30.050.

Section 9.30.040 (Prohibitions) lists actions that are unlawful unless otherwise provided. These noises are summarized Table 4.13-6.

Table 4.13-6
Clayton Municipal Code Noise Prohibitions

Noise Source	Noise Source Description	Standard Applied
Radios, television sets, and similar devices	Playing a radio, television set, stereo, phonograph, receiving set, tape or compact disk player, jukebox, musical instrument, or similar device in such a manner as to disturb the peace, quiet, or comfort of the neighboring inhabitants, or to do so with a louder volume than is necessary for convenient hearing for persons in the room, vehicle, or chamber in which the device is operated	A prima facie violation has occurred if the noise is plainly audible at a distance of fifty (50) feet from the nearest property line of any yard, park, or outside activity area, or any building or structure from which the noise is emanating from or vehicle from which it is located, or a distance of fifty (50) feet from the device if outside.
Schools and churches	Creating noise on a street, sidewalk or public place adjacent to a school or church while in use	The noise unreasonably interferes with the working of the institution.
Construction or repair work.	Construction or repair work which creates noise within or adjacent to a residential land use district or planned development	See Section 15.01.101 - Construction Working Hours.

Table 4.13-6
Clayton Municipal Code Noise Prohibitions

Noise Source	Noise Source Description	Standard Applied
Loudspeakers or sound-amplifying equipment	Loudspeaker or sound-amplifying equipment in a fixed or movable position or mounted on a sound truck	A person may not install, use or operate sound-amplifying equipment for the purpose of transmitting sound to a person in or on a street, sidewalk, park or public property without a permit.
Animals or birds in residential neighborhoods	Animal, fowl, or bird that are otherwise permitted to be kept	No person shall keep or maintain animals or birds which, by sound, cry, or audible behavior causes annoyance or discomfort or disturbs the repose of a reasonable person.
Garbage disposal and street sweeping	Garbage disposal and street sweeping activities that are not otherwise permitted by franchise agreement or other City regulation	It shall be unlawful to perform these activities between 10:00 p.m. and 6:00 a.m. weekdays and 10:00 p.m. and 8:00 a.m. on weekends.
Machinery, Equipment, Fans, Air Conditioning and Power Equipment.	<p>Operate machinery, equipment, or a pump, fan, air-conditioner, spa or pool equipment or engine in a manner which causes excessive noise to nearby residents.</p> <p>Operate power equipment for home use or residential yard maintenance including power tools, lawn mowers and leaf blowers</p>	<p>It is unlawful to operate machinery between the hours of 10:00 p.m. and 7:00 a.m.</p> <p>It is prohibited to use power equipment for home use or yard maintenance except on weekdays, Monday through Friday between 7:00 a.m. and 8:00 p.m. and on Saturdays, Sundays and City-observed Holidays between 8:00 a.m. and 8:00 p.m.</p>
Source: Clayton Municipal Code Section 9.30.040		

Section 11.04.210 (Loud or Raucous Noise) states, “No person shall make any sustained loud or raucous noise or vocal utterance such as is likely to cause physical discomfort or harm to persons of ordinary sensibilities and tolerance levels or which render ordinary conversation difficult or impossible, in any park, open space, picnic area, playing field, or surrounding areas.”

Section 15.01.101 (Construction Working Hours) states the following, “All grading and excavation, construction, demolition, renovation, and other works of improvement within the City of Clayton and the on-site maintenance and servicing of construction equipment in the City shall occur only between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday. Any such work beyond said hours and days is strictly prohibited unless previously specifically authorized in writing by the City Engineer or designee or by project conditions of approval. This provision shall not apply to homeowner home improvements.”

4.13.3 Significance Thresholds

Pursuant to the CEQA Guidelines, the proposed HEU would have a significant impact related to noise or vibration if it would result in:

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies;
- b) Generation of excessive groundborne vibration or groundborne noise levels; or
- c) For a project located within the vicinity of a private airstrip 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, expose people residing or working in the project area to excessive noise levels.

With regard to criteria (a), the proposed HEU would result in a significant construction and/or operational noise impact if it would:

- Conflict with or violate any applicable provision of Municipal Code Chapter 9.30 (Noise) or Chapter 15.01 (General Provisions), Section 15.01.101 (Construction Working Hours);
- Conflict with or violate any applicable standard or policy in the City's General Plan Noise Element; or
- Generate operational traffic noise levels that increase ambient noise levels at off-site locations by:
 - 5 dBA or more where the ambient noise level with the project would be below 60 DNL;
 - 3 dBA or more where the ambient noise level with the project would be between 60 DNL and 70 DNL; or
 - 1 dBA or more where the ambient noise level with the project would be above 70 DNL.

With regard to criterion (b), the proposed HEU would result in a significant construction and/or operational vibration impact if it would:

- Generate construction-related vibration levels that exceed Caltrans' guidance for potential building damage (see Table 13-4); or
- Generate construction-related vibration levels that exceed FTA or Caltrans' criteria for human annoyance (see Table 13-5).

With regard to criterion (c), the proposed HEU would expose people living or working in the Planning Area to excessive airport-related noise levels if it would conflict with an applicable airport land use compatibility plan or otherwise expose people to excessive airport-related noise levels from a private air facility.

4.13.4 Impacts and Mitigation Measures

This section describes potential noise and vibration impacts associated with implementation of the HEU and recommends mitigation measures as needed to reduce significant impacts. Noise-related impacts from future development pursuant to the HEU can be divided into short-term construction-related impacts and long-term noise exposure impacts. Construction-related impacts are associated with construction activities likely to occur in conjunction with future development of housing sites. Long-term noise exposure is associated with major noise sources (e.g., traffic and stationary sources) and changes in noise levels that may occur in the City as a result of housing site development.

Existing Noise Regulations (Temporary/Construction Impacts)

Impact NOISE-1 – Would the HEU result in generation of a substantial temporary increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Analysis of Impacts

Implementation of the HEU and the development of future housing sites would involve construction that would result in temporary noise generation, primarily from the use of heavy-duty construction equipment. Construction projects would be spread throughout the City; however, no two projects would likely occur in close proximity contemporaneously. In addition, construction equipment would be spread throughout a work area and may not operate concurrently in the same area of the work site at the same time.

The proposed HEU primarily supports higher density residential and mixed-use development. As shown in Section 3, Project Description, Table 3-1 and Table 3-2, the proposed HEU could result in an additional 868 dwelling units and 2,364 residents in the City over an approximately 10-year period.

The HEU would focus new development near major roadways (e.g., Clayton Road, Marsh Creek Road, Oakhurst Drive) and key focal points (e.g., Town Center). These projects could affect existing or future land uses, including potentially sensitive residential, school, and park/open space land uses that may or may not currently be present near proposed housing sites. Since individual project-specific information is not available at this time, potential short-term (construction-related) noise impacts can only be evaluated based on the typical construction activities associated with residential, commercial, and retail development. Potential construction source noise and vibration levels were developed based on methodologies, reference noise levels, typical equipment usage, and other operating factors documented and contained in the FHWA's Construction Noise Handbook (FHWA 2006), FTA's Transit Noise and Vibration Impact Assessment document (FTA 2018), and Caltrans' Transportation and Construction Vibration Guidance Manual (Caltrans 2013a). Reference levels are noise emissions for specific equipment or activity types that are well-documented and for which their usage is common practice in the field of acoustics.

Construction activities associated with potential development projects could include: staging, demolition, site preparation (e.g., land clearing), fine and mass grading, utility trenching, foundation work (e.g., excavation, pouring concrete pads, drilling for piers), material deliveries (requiring travel along City roads), building construction (e.g., framing, concrete pouring, welding), paving, coating application, and site finishing work. In general, these activities would involve the

use of worker vehicles, delivery trucks, dump trucks, and heavy-duty construction equipment such as (but not limited to) backhoes, tractors, loaders, graders, excavators, rollers, cranes, material lifts, generators, and air compressors. These types of construction activities would generate noise and vibration from the following sources:

- Heavy equipment operations at different work areas. Some heavy equipment would consist of mobile equipment such as a loader and excavator that would move around work areas; other equipment would consist of stationary equipment (e.g., cranes or material hoists/lifts) that would generally operate in a fixed location until work activities are complete. Heavy equipment generates noise from engine operation, mechanical systems, and components (e.g., fans, gears, propulsion of wheels or tracks), and other sources such as back-up alarms. Mobile equipment generally operates at different loads, or power outputs, and produces higher or lower noise levels depending on the operating load. Stationary equipment generally operates at a steady power output that produces a constant noise level.
- Vehicle trips, including worker, vendor, and haul truck trips. These trips are likely to primarily occur on key arterial roads and travel corridors such as, but not limited to, Clayton Road, Marsh Creek Road, Ygnacio Valley Road, Pine Hollow Road, and Oakhurst Drive.

Table 4.13-7 presents the noise levels associated with the typical types of construction equipment that could be used to construct future development projects at housing sites.

Construction noise impacts generally occur when construction activities occur in areas immediately adjoining noise sensitive land uses, during noise sensitive times of the day, or when construction durations last over extended periods of time. Demolition, site preparation, and grading phases typically result in the highest temporary noise levels due to the use of heavy-duty equipment such as bulldozers, excavators, graders, loaders, scrapers, and trucks. As shown in Table 4.13-7, the worst-case L_{eq} and L_{max} noise levels associated with the operation of construction equipment are predicted to be approximately 82 and 85 dBA, respectively, at a distance of 50 feet from the equipment operating area. At an active construction site, it is not uncommon for two or more pieces of construction equipment to operate at the same time and in close proximity. The concurrent operation of two or more pieces of construction equipment would result in noise levels of approximately 85 to 88 dBA at a distance of 50 feet from equipment operating areasⁱ.

ⁱ As shown in Table 4.13-7, a single bulldozer provides a sound level of 81 dBA L_{eq} at a distance of 50 feet; when two identical sound levels are combined, the noise level increases to 84 dBA L_{eq} and when three identical sound levels are combined, the noise level increases to 86 dBA L_{eq} . These estimates assume no shielding or other noise control measures are in place at or near the work areas.

**Table 4.13-7
Typical Construction Equipment Noise Levels (dBA)**

Equipment	Reference Noise Level at 50 Feet (L_{max}) ^(A)	Percent Usage Factor ^(B)	Predicted Noise Levels (L_{eq}) at Distance ^(C)					
			50 Feet	100 Feet	200 Feet	300 Feet	400 Feet	500 Feet
Auger Drill Rig	85	0.2	78	72	66	62	60	58
Backhoe	80	0.4	76	70	64	60	58	56
Boring Jack Power Unit	80	0.5	77	71	65	61	59	57
Bulldozer	85	0.4	81	75	69	65	63	61
Compact roller	80	0.2	73	67	61	57	55	53
Compressor	80	0.4	76	70	64	60	58	56
Concrete Mixer	85	0.4	81	75	69	65	63	61
Crane	85	0.16	77	71	65	61	59	57
Delivery Truck	84	0.4	80	74	68	64	62	60
Excavator	85	0.4	81	75	69	65	63	61
Front End Loader	80	0.4	76	70	64	60	58	56
Generator	82	0.5	79	73	67	63	61	59
Horizontal Boring Hydraulic Jack	80	0.25	74	68	62	58	56	54
Impact Pile Driver (low)	95	0.2	88	82	76	72	70	68
Impact Pile Driver (high)	101	0.2	94	88	82	78	76	74
Man Lift	85	0.2	78	72	66	62	60	58
Paver	85	0.5	82	76	70	66	64	62
Pneumatic tools	85	0.5	82	76	70	66	64	62
Pumps	77	0.5	74	68	62	58	56	54
Roller	85	0.2	78	72	66	62	60	58
Scraper	85	0.4	81	75	69	65	63	61
Tractor	84	0.4	80	74	68	64	62	60
Vacuum Truck	85	0.4	81	75	69	65	63	61
<p>Sources: Caltrans 2013a and FHWA 2010</p> <p>(A) L_{max} noise levels based on manufacturer's specifications.</p> <p>(B) Usage factor refers to the amount of time the equipment produces noise over the time period.</p> <p>(C) Estimate does not account for any atmospheric or ground attenuation factors. Calculated noise levels based on Caltrans, 2009: L_{eq} (hourly) = L_{max} at 50 feet – $20\log(D/50) + 10\log(UF)$, where: L_{max} = reference L_{max} from manufacturer or other source; D = distance of interest; UF = usage fraction or fraction of time period of interest equipment is in use.</p>								

The magnitude of each individual future project's temporary and periodic increase in ambient noise levels would be dependent upon a number of project-specific factors that are not known at this time, including: the amount and type of equipment being used; the distance between the area where equipment is being operated and the location of the specific land use or receptor where noise levels are being evaluated; the time of day construction activities are occurring; the presence or absence of any walls, buildings, or other barriers that may absorb or reflect sound waves; the total duration of the construction activities; and the existing ambient noise levels near construction areas. For example, sustained construction noise levels of 85 dBA could be approximately 10 to 20 dBA above typical traffic noise levels along major roadways such as Kirker Pass Road and Clayton Road, and up to approximately 20 to 30 dBA above daytime ambient conditions in areas of the City away from major roadways (see Table 4.13-2). Typically, sustained construction noise levels of 80 to 85 dBA or higher would require the implementation of construction noise control practices such as staging area restrictions (e.g., siting staging areas away from sensitive receptors), equipment controls (e.g., covered engines and use of electrical hook-ups instead of generators), and/or the installation of temporary noise barriers of sufficient height, size (length or width), and density to achieve targeted noise reductions.

The City's existing General Plan Noise Element and Municipal Code ensure that potential construction activities would not occur during the most sensitive time periods (e.g., evening and nighttime periods); however, the City's standards do not set numeric thresholds for construction noise. In particular, while some potential housing sites are located away from noise-sensitive land uses (e.g., Site Q), most are located adjacent or in close proximity to sensitive residences, schools, and open space areas. Without mitigation, the future development of housing sites could result in construction activities that could temporarily increase ambient noise levels by 10 dB or more, which would be considered a doubling of loudness, or otherwise have the potential to annoy sensitive land uses. This is considered a potentially significant impact. Accordingly, Mitigation Measure NOI-1 is recommended to be incorporated into future development projects that could be supported by the HEU.

Level of Significance Before Mitigation

The potential for a substantial temporary increase in ambient noise levels that could result from construction activities on housing sites near existing sensitive receptors is considered a potentially significant impact.

Mitigation Measures

MM NOI-1: Reduce Potential Housing Site Development Construction Noise Levels. To reduce potential noise levels from construction activities pursuant to the HEU, the City shall require that future development projects subject to discretionary approval comply with the following:

- 1) *Notify Residential and Commercial Land Uses of Planned Construction Activities.* This notice shall be provided at least one week prior to the start of any construction activities, describe the noise control measures to be implemented by the Project, and include the name and phone number of the designated contact for the Applicant/project representative and the City of Clayton responsible for handling construction-related noise complaints (per Section 7). This notice shall be provided to:
 - A) The owner/occupants of residential dwelling units within 500 feet of construction work areas; and
 - B) The owner/occupants of commercial buildings (including institutional

buildings) within 100 feet of work areas or within 400 feet of construction work areas if pile driving equipment will be used.

- 2) *Restrict Work Hours.* Construction-related work activities, including material deliveries, shall be subject to the requirements of City Municipal Code Section 15.01.101. Construction activities, including deliveries, shall occur only during the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise authorized in writing by the City Engineer or designee or other project conditions of approval. If such authorization is granted, construction-related work activities shall still conform to the requirements of General Plan Policy 3b., which limits construction activities to the hours 7:00 a.m. to 5:30 p.m. on weekdays and 9:00 a.m. to 6:00 p.m. on weekends when adjacent neighbors are affected. The applicant/project representative and/or its contractor shall post a sign at all entrances to the construction site informing contractors, subcontractors, construction workers, etc. of this requirement.
- 3) *Control Construction Traffic and Site Access.* Construction traffic, including soil and debris hauling, shall follow City-designated truck routes and shall avoid local roads in the City that contain residential dwelling units as much as possible unless an alternative route that provides access to the specific project location is not available.
- 4) *Construction Equipment Selection, Use, and Noise Control Measures.* The following measures shall apply to construction equipment used to develop housing sites:
 - A) Contractors shall use the smallest size equipment capable of safely completing work activities.
 - B) Construction staging shall occur as far away from residential and commercial land uses as possible.
 - C) All stationary noise-generating equipment such as pumps, compressors, and welding machines shall be shielded and located as far from sensitive receptor locations as practical. Shielding may consist of existing vacant structures or a three- or four-sided enclosure provide the structure/barrier breaks the line of sight between the equipment and the receptor and provides for proper ventilation and equipment operations.
 - D) Heavy equipment engines shall be equipped with standard noise suppression devices such as mufflers, engine covers, and engine/mechanical isolators, mounts, etc. These devices shall be maintained in accordance with manufacturer's recommendations during active construction activities.
 - E) Pneumatic tools shall include a noise suppression device on the compressed air exhaust.
 - F) The applicant/project representative and/or their contractor shall connect to existing electrical service at the site to avoid the use of stationary power generators unless electrical service is not available or the electricity provider indicates service cannot be provided.
 - G) No radios or other amplified sound devices shall be audible beyond the property line of the construction site.
- 6) *Implement Construction Activity Noise Control Measures:* The following measures shall apply to construction activities in the Plan Area:
 - A) Demolition: Activities shall be sequenced to take advantage of existing shielding/noise reduction provided by existing buildings or parts of buildings, and methods that minimize noise and vibration, such as sawing concrete blocks and prohibiting on-site hydraulic breakers, crushing, or

other pulverization activities, shall be employed when activities occur adjacent to sensitive residential areas.

- B) **Demolition Site Preparation, Grading, and Foundation Work:** During all demolition, site preparation, grading, and structure foundation work activities within 500 feet of a residential dwelling unit or 400 feet of a commercial building (including institutional buildings), a 6-foot tall physical noise barrier shall be installed and maintained around the work site perimeter to the maximum extent feasible given site constraints and access requirements. Physical barriers shall consist of a solid material (i.e., free of openings or gaps other than weep holes) that has a minimum rated transmission loss value of 20 dB. The noise barrier may be removed following the completion of building foundation work (i.e., it is not necessary once framing and typical vertical building construction begins provided no other grading, foundation, etc. work is still occurring on-site).
- C) **Pile Driving:** If pile driving activities are required within 500 feet of a residential dwelling unit or 400 feet of a commercial building, the piles shall be pre-drilled with an auger to minimize pile driving equipment run times.
- 7) ***Prepare a Construction Noise Complaint Plan.*** The Construction Noise Complaint Plan shall: A) Identify the name and/or title and contact information (including phone number and email) for a designated project and City representative responsible for addressing construction-related noise issues; B) Includes procedures describing how the designated project representative will receive, respond, and resolve construction noise complaints; C) At a minimum, upon receipt of a noise complaint, the project representative shall notify the City contact, identify the noise source generating the complaint, determine the cause of the complaint, and take steps to resolve the complaint; D) The elements of the Construction Noise Complaint Plan may be included in the project-specific noise evaluation prepared to satisfy Section 7 or as a separate document.

Level of Significance After Mitigation

As described in the preceding analysis, future HEU development projects could result in a substantial temporary increase in ambient noise levels if construction activities were to occur adjacent or in close proximity to sensitive land uses such as residences, schools, open space, and other sensitive land uses. To reduce potential construction noise levels, Mitigation Measure NOI-1 is recommended to be incorporated into the approvals of future project development projects. This measure would reduce construction noise levels associated with future development of housing sites through a combination of notification/disclosure, permissible work times, equipment noise controls, and construction activity management measures designed to ensure construction noise does not result in a substantial temporary increase in ambient noise levels. Mitigation Measure NOI-1 would require equipment noise suppression devices (e.g., mufflers, engine covers, etc.), temporary shielding of stationary noise sources, and the use of temporary barriers during construction phases that usually involve the largest, loudest, and highest number of construction equipment (e.g., grading). In combination, these measures are expected to reduce potential construction noise levels by 5 to 15 dBA and result in less than significant construction noise levels. Therefore, this impact would be less than significant with mitigation.

Existing Noise Regulations (Permanent/Operational Impacts)

Impact NOISE-2 – Would the HEU result in generation of a substantial permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Analysis of Impacts

The implementation of the HEU potentially could change the existing amounts and types of land uses within the City. Specifically, potential housing sites could result in the development of up to 868 dwelling units and 20,000 square feet of commercial space. These potential land use changes could increase the number of residents and employees in the City which, in turn, would lead to increased vehicle traffic on the local roadway system. This increase in vehicle traffic could result in traffic-related noise levels that pose land use compatibility issues or result in a substantial permanent increase in traffic-related noise levels throughout the City. The implementation of the HEU could also involve increases in stationary noise and other sources of noise within the City. These potential effects are evaluated below.

Increases in Traffic Noise Levels

Although the HEU does not authorize any specific development project nor increase existing vehicular traffic levels, the City contracted with a professional transportation engineering firm (Fehr and Peers) to conduct travel demand modeling associated with the proposed HEU land use changes (see Chapter 4.17, Transportation). The travel demand modeling provides a sufficient level of detail to generally evaluate the potential future increases in traffic-related noise levels associated with projected growth. Future 2040 traffic noise levels with the HEU were computed using the same methodology (TNM Version 3.1) and data sources used to calculate existing (Year 2020) and future (Year 2040) baseline traffic noise levels (see Section 4.13.2), except that 2040 HEU traffic levels were obtained from the traffic and VMT modeling prepared for the HEU and entered into the traffic model. The distances to the modeled traffic noise DNL contours are shown in Table 4.13-8. In addition, Table 4.13-9 summarizes the net change in Year 2040 traffic noise levels.

**Table 4.13-8
Future HEU Traffic Noise Contour Distances (2040)**

<u>Road / Segment</u>	Predicted DNL 50 Feet from Road Centerline (dBA)	DNL Contour and Distance from Road Centerline in Feet			
		75	70	65	60
Clayton Road					
City Limit to Mt. Zion Drive	72.9	31	97	308	975
Mt Zion Dr to Marsh Creek Road	71.1	20	64	204	644
South of Marsh Creek Road	66.9	8	24	77	245
Mitchell Canyon Road					
South of Clayton Road	51.4	0	1	2	7
Oakhurst Drive					
Cam Estrada to Clayton Road	65.6	6	18	57	182
Pine Hollow Drive					
El Camino Drive to Mitchell Canyon Road	47.5	0	0	1	3

City Limit to El Camino Drive	59.7	1	5	15	47
Kirker Pass Road					
Clayton Road to Concord Boulevard	75.4	55	173	548	1,734
Marsh Creek Road					
Clayton Road to Mountaire Pkwy	70.9	19	62	195	615
Mountaire Pkwy to Marsh Creek Road	63.2	3	10	33	104
Clayton Rd to Regency Drive	69.7	15	47	148	467
Regency Drive to City Limit	68.8	12	38	120	379
Source: MIG, 2022 (see Appendix E)					
(A) DNL values are as estimated 50 feet from the road center.					

Table 4.13-9
Year 2040 Traffic Noise Levels With and Without the HEU

Road / Segment	Year 2040 Without HEU		Year 2040 With HEU		Net Change	
	ADT	DNL^(A)	ADT	DNL^(A)	ADT	DNL
Clayton Road						
City Limit to Mt. Zion Drive	27,903	72.9	31,021	73.4	3,118	0.5
Mt Zion Dr to Marsh Creek Road	20,650	71.1	23,402	71.7	2,752	0.6
South of Marsh Creek Road	5,909	66.9	6,925	67.5	1,015	0.6
Mitchell Canyon Road						
South of Clayton Road	627	51.4	733	51.6	106	0.2
Oakhurst Drive						
Cam Estrada to Clayton Road	6,542	65.6	7,055	65.8	513	0.2
Pine Hollow Drive						
El Camino Drive to Mitchell Canyon Road	391	47.5	501	48.3	110	0.8
City Limit to El Camino Drive	4,447	59.7	4,151	59.4	-296	-0.3
Kirker Pass Road						
Clayton Road to Concord Boulevard	40,896	75.4	41,826	75.5	930	0.1
Marsh Creek Road						
Clayton Road to Mountaire Pkwy	29,432	70.9	31,308	71.1	1,876	0.2
Mountaire Pkwy to Marsh Creek Road	4,933	63.2	5,229	63.5	296	0.3
Clayton Rd to Regency Drive	10,818	69.7	12,072	70.1	1,254	0.4
Regency Drive to City Limit	10,818	68.8	12,072	69.3	1,254	0.5
Source: MIG, 2022 (see Appendix E)						
(A) DNL values are estimated at 50 feet from the road center.						

As shown in Table 4.13-9, the results of the traffic noise modeling indicate that traffic noise levels within the City would continue to be highest along major travel corridors such as Clayton Road, Kirker Pass Road, Marsh Creek Road, and Oakhurst Drive; however, the HEU would not substantially increase traffic volumes or traffic noise levels along these roadways. Specifically, the modeling shows:

- Traffic noise levels on the modeled segments of Clayton Road would be between approximately 66.9 DNL and 72.9 DNL without the HEU and between approximately 67.5

DNL and 73.4 DNL with the HEU. For both scenarios, traffic noise levels exceed the limit (60 DNL) identified in the City's existing General Plan as requiring mitigation; however, the HEU would not increase noise levels by 1.0 decibel or more along any modeled segment of Clayton Road and, therefore, would not result in a perceptible change in traffic noise levels. This is considered a less than significant impact on a project and cumulative basis.

- Traffic noise levels on the modeled segment of Kirker Pass Road would be 75.4 DNL without the HEU and 75.5 DNL with the HEU. For both scenarios, traffic noise levels exceed the limit (60 DNL) identified in the City's existing General Plan as requiring mitigation; however, the HEU would not increase noise levels by 1.0 decibel or more along any modeled segment of Kirker Pass Road and, therefore, would not result in a perceptible change in traffic noise levels. This is considered a less than significant impact on a project and cumulative basis.
- Traffic noise levels on the modeled segments of Marsh Creek Road would be between approximately 63.2 DNL and 70.9 DNL without the HEU and between approximately 63.5 DNL and 71.1 DNL with the HEU. For both scenarios, traffic noise levels exceed the limit (60 DNL) identified in the City's existing General Plan as requiring mitigation; however, the HEU would not increase noise levels by 1.0 decibel or more along any modeled segment of Marsh Creek Road and, therefore, would not result in a perceptible change in traffic noise levels. This is considered a less than significant impact on a project and cumulative basis.
- Traffic noise levels on the modeled segment of Oakhurst Drive would be 65.6 DNL without the HEU and 65.8 DNL with the HEU. For both scenarios, traffic noise levels exceed the limit (60 DNL) identified in the City's existing General Plan as requiring mitigation; however, the HEU would not increase noise levels by 1.0 decibel or more along any modeled segment of Oakhurst Road and, therefore, would not result in a perceptible change in traffic noise levels. This is considered a less than significant impact on a project and cumulative basis.

Pursuant to the State noise standards, California Building Code, Section 1207.4, new residential structures would be required to be constructed such that interior noise levels do not exceed 45 dBA DNL. Standard construction techniques and materials are commonly accepted to provide a minimum exterior to interior noise attenuation (i.e., reduction) of 22–25 dBA with all windows and doors closed (HUD 2009a and 2009b).ⁱⁱ These interior noise reductions would be adequate for some developments occurring under the HEU to meet interior noise standards. New residential development along Clayton Road, Kirker Pass Road, and Marsh Creek Road could require additional noise attenuation design features since traffic noise levels along these roadways are estimated to exceed 70 DNL under conditions with and without the HEU. Adherence to the State's mandatory noise standards would ensure residential and mixed-use structures within the Planning Area meet or exceed the 45 dBA DNL standard.

ⁱⁱ The U.S. Department of Housing and Urban Development (HUD) Noise Guidebook and supplement (2009a, 2009b) includes information on noise attenuation provided by building materials and different construction techniques. As a reference, a standard exterior wall consisting of 5/8-inch siding, wall sheathing, fiberglass insulation, two by four wall studs on 16-inch centers, and 1/2-inch gypsum wall board with single strength windows provides approximately 35 dBs of attenuation between exterior and interior noise levels. This reduction may be slightly lower (2-3 dBs) for traffic noise due to the specific frequencies associated with traffic noise. Increasing window space may also decrease attenuation, with a reduction of 10 dBs possible if windows occupy 30% of the exterior wall façade.

The City's existing Noise Element includes policies to reduce exposure to traffic noise, including:

- Policy 2a requires sound mitigation to 45 DNL for indoor noise levels and 60 DNL for outdoor noise levels in new developments.
- Policy 2b requires setbacks, sound walls, and site design measures where new uses are exposed to noise.
- Policy 2d requires developers to conduct noise studies to determine an appropriate noise reduction plan in the event development is proposed in areas where roadway or fixed point sources exceed 60 DNL.

The City's existing Noise Element establishes the overall goal and intent of the City to protect noise sensitive uses and minimize annoying levels of noise for all land uses. As discussed above, the proposed HEU would not result in a significant increase in traffic noise levels in the City. The City's Noise Element also establishes clear and enforceable policies to consider operational noise impacts during the development review process and to limit new development in noise impacted areas unless the development includes mitigation measures to reduce noise levels to acceptable levels. For these reasons, this impact is considered less than significant.

Increases in Stationary and Other Sources of Noise

Stationary and other sources of noise in and near the City include, but are not limited to, landscape and building maintenance activities, stationary mechanical equipment (e.g., pumps, generators, HVAC units), garbage collection activities, commercial and industrial activities (e.g., CEMEX Clayton Quarry), and other stationary and area sources such as people's voices, amplified music (e.g., Concord Pavilion), and public address systems.

Noise generated by residential or commercial uses is generally short-term and intermittent. The HEU could result in the development of up to 868 dwelling units and 20,000 square feet of commercial space within the City, including some mixed use development in which residential and commercial uses are integrated into a single development project. These types of developments tend to have higher noise levels associated with the mix of land uses contained within them. Future planned development could also result in new stationary and area sources as well as exposure of new sensitive land uses to existing stationary and area sources.

The City's existing General Plan includes goals and policies that protect noise sensitive uses from harmful and annoying levels of noise levels and minimize the impact of operational noise levels throughout the City, including policies requiring developers to conduct noise studies in areas exposed to noise levels above 60 DNL (Policy 2d), limiting new development in noise impacted areas unless the development includes mitigation measures to reduce noise levels to acceptable levels (Policy 2a), and restricting stationary source noise levels, including a 55 DNL residential noise limit from sound and power equipment (Policies 3c and 3d). In addition, Clayton Municipal Code Chapter 9.30 (Noise) establishes the City's standards related to noise, including specific prohibitions on certain potentially loud, annoying, and unnecessary noises that may disturb the peace and quiet of a neighborhood or annoy a reasonable person of normal sensitivity (see Table 4.13-6).

The City's existing Noise Element policies would protect residents from excessive stationary noise sources and ensure new land uses meet the Clayton Municipal Code noise standards through evaluation and design considerations. Thus, stationary and other sources of noise would be controlled by the General Plan goals and policies, and the Municipal Code. Therefore, stationary noise sources associated with the future development of housing sites would comply with City

standards and would not expose people to a substantial permanent increase in noise levels. This impact would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

No significant impact has been identified. No mitigation is required.

Ground-borne Vibration and Noise Levels

Impact NOISE-3– Would the HEU result in generation of excessive groundborne noise levels?

Analysis of Impacts

Temporary Construction Vibration Levels

Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved. Vibration generated by construction equipment spreads through the ground and diminishes with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, result in low rumbling sounds and detectable vibrations at moderate levels, and at high levels can cause sleep disturbance in places where people normally sleep or annoyance in buildings that are primarily used for daytime functions and sleeping (e.g., a hospital). Ground vibration can also potentially damage the foundations and exteriors of existing structures even if it does not result in a negative human response. Pile drivers and other pieces of high-impact construction equipment are generally the primary cause of construction-related vibration impacts. The use of such equipment is generally limited to sites where there are extensive layers of very hard materials (e.g., compacted soils, bedrock) that must be loosened or penetrated to achieve grading and foundation design requirements. The need for such methods is usually determined through site-specific geotechnical investigations that identify the subsurface materials within the grading envelope, along with foundation design recommendations and the construction methods needed to safely permit development of a site.

Construction equipment and activities are categorized by the nature of the vibration they produce. Equipment or activities typical of continuous vibration include excavation equipment, static compaction equipment, vibratory pile drivers, and pile-extraction equipment. Equipment or activities typical of transient (single-impact) or low-rate, repeated impact vibration include impact pile drivers, and crack-and-seat equipment. Pile driving and blasting activities produce the highest levels of ground vibration and can result in structural damage to existing buildings.

Since individual project-specific information is not available at this time, potential short-term construction-related vibration impacts that may result from the HEU can only be evaluated based on the typical construction activities associated with residential, commercial, and industrial development. Potential construction source vibration levels were developed based on methodologies, reference noise levels, and typical equipment usage and other operating factors documented and contained in the FHWA's Construction Noise Handbook (FHWA, 2006), FTA's Transit Noise and Vibration Impact Assessment document (FTA 2018), and Caltrans' Transportation and Construction Vibration Guidance Manual (Caltrans, 2020). Reference levels are vibration emissions for specific equipment or activity types that are well-documented and for which their usage is common practice in the field of acoustics.

Future development as a result of the HEU would occur in primarily suburban settings where land may already be disturbed and, therefore, is not likely to require blasting, which is typically used to remove unwanted rock or earth. Standard construction equipment (e.g., bulldozers, trucks, jackhammers) generally does not cause vibration that could cause structural or cosmetic damage but may be felt by nearby receptors. Table 4.13-10 presents the typical types of equipment that could be used for the future development of housing sites.

Table 4.13-10
Ground-borne Vibration and Noise from Typical Construction Equipment

Equipment	Peak Particle Velocity (in/sec) ^(A)			Velocity Decibels (VdB) ^(B)		
	25 feet	50 feet	100 feet	25 feet	50 feet	100 feet
Small bulldozer	0.003	0.001	0.001	58	49	40
Jackhammer	0.035	0.016	0.008	79	70	61
Rock Breaker	0.059	0.028	0.013	83	74	65
Loaded truck	0.076	0.035	0.017	86	77	68
Auger Drill Rig	0.089	0.042	0.019	87	78	69
Large bulldozer	0.089	0.042	0.019	87	78	69
Vibratory Roller	0.210	0.098	0.046	94	85	76
Impact Pile Driver (upper range)	1.518	0.708	0.330	112	103	94
Impact Pile Driver (typical)	0.644	0.300	0.140	104	95	86
Sonic Pile Driver (upper range)	0.734	0.42	0.160	105	96	87
Sonic Pile Driver (typical)	0.170	0.079	0.037	93	84	75
Sources: Caltrans 2013 and FTA 2018						
(A) Estimated PPV calculated as: $PPV(D) = PPV(ref) * (25/D)^{1.1}$ where $PPV(D)$ = Estimated PPV at distance; $PPV(ref)$ = Reference PPV at 25 ft; D = Distance from equipment to receiver; and n = ground attenuation rate (1.1 for dense compacted hard soils).						
(B) Estimated L_v calculated as: $L_v(D) = L_v(25 \text{ feet}) - 30 \log(D/25)$ where $L_v(D)$ = estimated velocity level in decibels at distance, $L_v(25 \text{ feet})$ = RMS velocity amplitude at 25 ft; and D = distance from equipment to receiver.						

As shown in Table 4.13-10, specific vibration levels associated with typical construction equipment are highly dependent on the type of equipment used. For structural damage, the use of typical equipment during construction activities (e.g., bulldozer, jack hammer, trucks, etc.) would produce PPV levels up to 0.042 in/sec at 50 feet. These PPV values are well below Caltrans' guidelines standards for potential structural damage for the types of buildings in and adjacent to potential housing sites, which generally consist of modern residential and commercial and structures (0.5 PPV for continuous vibration sources; see Table 4.13-4). Similarly, the use of specific vibration-generating equipment such as a vibratory roller or pile driver would not exceed Caltrans' structural damage criteria for modern commercial and industrial structures unless impact hammers were required to be used within approximately 30 feet of any building, which would not occur given the nature and type of development permitted by zoning regulations for the housing sites (i.e., development would consist of low- to mid-rise multi-family buildings that would not require deep pier foundations).

For human annoyance and interference responses, the use of typical equipment (e.g., bulldozer, jack hammer, trucks, etc.) during construction could produce vibration levels that exceed FTA annoyance criteria for residential land uses (72VdB for frequent events, see Table 4.13-3), as well as Caltrans' slightly perceptible vibration detection threshold (0.012 PPV, see Table 4.13-5), at distances up to 150 feet from work areas. The use of typical equipment would exceed FTA annoyance criteria for institutional land uses (75 VdB for frequent events, see Table 4.13-3) at distances up to 75 feet from construction work areas. Since Caltrans' vibration detection thresholds are not dependent on land use, there is no change in the distance (150 feet from work areas) at which vibration from typical equipment could be slightly perceptible to commercial land use receptors. For specific vibration-generating equipment such as a vibratory roller or pile driver, vibrations could be perceptible at greater distances (generally up to 400 feet from work areas); the use of impact hammers would have the potential to produce groundborne vibrations that may be perceptible at distances greater than 400 feet from work areas. It is noted that, as would be required by Mitigation Measure NOI-1 (Reduce Potential Housing Site Development Construction Noise Levels), construction activities would be limited to daytime hours only and, therefore, potential construction-induced vibrations would not have the potential to be perceptible and annoy residential or commercial receptors during the more sensitive nighttime period. It is also noted that, as would be required by Mitigation Measure NOI-1, any pile driving activities occurring within 500 feet of a residential dwelling unit or 400 feet of a commercial building would require pre-drilling with an auger to minimize pile driving equipment run times.

The above vibration estimates represent potential vibration levels based on typical equipment operations and assume there is no change in elevation between work areas and receptor locations and no change in subsurface conditions that may affect vibration transmission through soil media and structures. As discussed above, the future development of potential housing sites is not anticipated to have the potential to result in structural damage to buildings. Construction-related groundborne vibrations have the potential to be perceptible at buildings within approximately 150 feet of typical construction work areas and 400 feet or more of construction work areas involving impact hammer equipment. With regards to annoyance, although typical construction activities may generate perceptible ground-borne vibration levels at structures within approximately 150 feet of work areas, these levels would not be excessive because they would be intermittent (not occur every day), limited in duration (equipment would move throughout work areas and not operate in the same location for a prolonged amount of time), and occur during the daytime only (when receptors would not be sleeping and, therefore, are considered less sensitive to vibration levels). In addition, as would be required by Mitigation Measure NOI-1, any pile driving activities occurring near residential and commercial buildings would require pre-drilling with an auger rig to reduce vibration levels and pie driver run times. For these reasons, the future development of potential housing sites would have a less than significant impact on human annoyance and responses.

Long-Term Ground-borne Vibration Levels

The proposed HEU could result in the development of new residential and mixed-use development projects on potential housing sites. The HEU would not result in the development of new stationary or mobile vibration sources. No impact would occur.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

None required.

Excessive Airport-related Noise Levels

Impact NOISE-4 – For a project located within the vicinity of a private airstrip 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 HEU expose people residing or working in the area to excessive noise levels?

Analysis of Impacts

The closest airport to the City is Buchanan Field Airport, located approximately 5.6 miles northwest of the City boundary. The City is not located in any noise contour zone associated with this airport (Contra Costa Public Works 2008). There are no private airstrips located in the Planning Area. The Housing Element is not located within the vicinity of a private air strip or in an airport land use plan area and would not expose people residing or working in the Planning Area to excessive airport-related noise levels.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact NOISE-5– Would the HEU cause substantial adverse cumulative impacts with respect to noise or vibration?

Analysis of Impacts

The development of future housing sites would result in construction noise and vibration as individual development projects are constructed over time. Each individual development would be subject to City regulations and policies regarding construction noise and vibration (See Impact Noise-1 and Noise-3). In addition, Mitigation Measure NOI-1 includes measures to reduce construction noise levels associated with future development of housing sites through a combination of notification/disclosure, permissible work times, equipment noise controls, and construction activity management measures designed to ensure construction noise would not result in a substantial temporary increase in ambient noise levels. Mitigation Measure NOI-1 would require equipment noise suppression devices (e.g., mufflers, engine covers, etc.), temporary shielding of stationary noise sources, and the use of temporary barriers during construction phases that usually involve the largest, loudest, and highest number of construction equipment (e.g., grading). In combination, these measures are expected to reduce potential construction noise levels by 5 to 15 dBA and result in less than significant individual construction noise levels. The measures would also reduce vibration associated with vibration-inducing equipment such as pile drivers. In general, when one source of noise is 10 dB higher than another, the perceived noise level will be the same as the louder source. In the unlikely event that two construction projects were occurring in the same area such that an individual receptor could be impacted by the combined noise level from both projects, Mitigation Measure NOI-1 would minimize the HEU project's contribution to the combined effect. Therefore, potential HEU construction noise would not make a cumulatively considerable contribution to a significant cumulative construction noise impact.

Once constructed, development projects would contribute to the potential permanent increases in noise levels evaluated under Impact Noise-2. The proposed HEU would not generate significant

increases in traffic noise levels on a cumulative basis. The City's existing General Plan Noise Element sets forth the City's intent to establish clear and enforceable noise regulations for all land uses, to consider operational noise impacts during the development review process, and to limit new development in noise impacted areas unless the development includes mitigation measures to reduce noise levels to acceptable levels. These policies would protect residents from excessive stationary noise sources and ensure new land uses meet the Clayton Municipal Code noise standards through evaluation and design considerations. Therefore, future housing site operations would not make a cumulatively considerable contribution to a significant cumulative operational noise impact.

Level of Significance Before Mitigation

As explained under Impact Noise-1, the potential for a substantial temporary increase in ambient noise levels that could result from construction activities on housing sites near existing sensitive receptors is considered a potentially significant impact.

Mitigation Measures

See Mitigation Measure NOI-1.

Level of Significance After Mitigation

As explained under Impact Noise-1, Mitigation Measure NOI-1 would reduce construction noise levels associated with future development of housing sites through a combination of notification/disclosure, permissible work times, equipment noise controls, and construction activity management measures designed to ensure construction noise does not result in a substantial temporary increase in ambient noise levels. In combination, these measures are expected to reduce potential construction noise levels by 5 to 15 dBA and minimize potential HEU project contribution to the combined construction noise effects. Therefore, this impact would be less than significant with mitigation.

Other Disclosures and Planning Considerations (Potential Impacts of the Environment on the Project).

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." Per this ruling, a Lead Agency is not required to analyze how existing conditions might impact a project's existing or future population except where specifically required by CEQA; however, a Lead Agency may elect to disclose information relevant to a project even if it not is considered an impact under CEQA. Furthermore, the City's General Plan Noise Element sets noise standards for receiving land uses that require evaluation for consistency and compliance even if such evaluation is not required by CEQA to be identified as a physical impact of the project. This section discusses the existing noise environment and the degree to which the existing environment is compatible and consistent with City goals, policies, and standards for the HEU's noise environment.

General Plan Noise and Land Use Compatibility

Existing (Year 2020) and future (Year 2040) baseline traffic noise exposure levels along most major roads (e.g., Clayton Road, Oakhurst Drive, Marsh Creek Road) in the City generally exceed 60 DNL at a distance of 50 feet from the center of the roadway, with higher volume and higher speed roadways like Clayton Road (between the north City limit and Marsh Creek Drive), Marsh Creek Road (between Clayton Road and Mountaire Parkway), and Kirker Pass Road (between Clayton Road and Concord Boulevard) having baseline traffic noise exposure levels above 70 DNL (see Table 4.13-2). The proposed HEU would not substantially change future baseline traffic

noise levels, contributing less than a 1.0 decibel change to 2040 baseline traffic noise levels for all roadways in the City. In addition, quarry operations south of the City (CEMEX Clayton Quarry) and events and activities at the Concord Pavilion (north of the City) are known sources of noise that have historically annoyed Clayton residents.

The City's General Plan establishes a goal to reduce noise levels below 70 DNL and to levels of minimum annoyance (below 60 DNL) where feasible. General Plan Noise Element Policy 2d requires developers to conduct noise studies to determine an appropriate noise reduction plan in the event development is proposed in areas where roadway or fixed point sources exceed 60 DNL, and Policy 2a requires the incorporation of noise attenuation measures to meet a 60 DNL for outdoor noise levels and a 45 DNL for indoor noise levels. In addition, the California Building Standards Code also establishes a 45 DNL standard for habitable rooms, and the California Green Building Standards Code establishes additional standards for interior noise levels (50 dBA L_{eq}) that may apply if a building is located within a 65 DNL noise contour of an airport, freeway, railroad, industrial source, etc., or otherwise exposed to a noise level of 65 dBA on an hourly L_{eq} basis, which would likely be the case for projects near Kirker Pass Road.

Based on the currently identified housing site locations (see Exhibit 3-4), development on Sites A, B, E, G, I, L, M, Q, R, and S could be potentially exposed to traffic noise levels above 60 DNL unless site and building design features are incorporated into the project to reduce noise exposure in outdoor areas. In addition, Site J could be exposed to noise levels from quarry activities from CEMEX Clayton Quarry above 60 DNL. Therefore, the development of most future housing sites (10 of 18) would likely require the incorporation of specific site design (e.g., setbacks), noise control (e.g., barriers or berms to block noise), and/or building attenuation measures (e.g., specific exterior wall assemblies, windows and doors with high STC ratings, etc.) to ensure outdoor and interior noise levels meet applicable City General Plan guidelines and State building code standards. Based on existing and potential future DNL traffic noise levels modeled for the HEU, between approximately 6 and 16 dBA of exterior noise attenuation may be needed to meet an outdoor noise level of 60 DNL (provided the outdoor use area was located 50 feet from the center of the roadway). Furthermore, exterior wall and ceiling assemblies may need to have a combined STC value of up to 31 dBA to achieve required indoor noise levels of 45 DNL (for residential uses, assuming the exterior façade was located 50 feet from the center of the roadway).

The actual level of exterior noise and exterior to interior noise attenuation required for each individual future development project will depend on factors such as the distance from major noise sources such as Clayton Road, updated traffic noise modeling results or ambient noise measurements that capture actual development patterns over time, and the presence of any intervening shielding or other attenuating factors that may reduce noise levels in specific parts of developed housing sites. As noted, the City's existing Noise Element establishes the overall goal and intent of the City to protect noise sensitive uses and minimize annoying levels of noise for all land uses. As discussed above, the proposed HEU includes housing sites that may be exposed to traffic and stationary source noise levels above 60 DNL; however, the City's Noise Element establishes clear and enforceable policies to consider operational noise impacts during the development review process and to limit new development in noise impacted areas unless the development includes mitigation measures to reduce noise levels to acceptable levels. These policies would ensure that the future development of housing sites would be compatible with the ambient noise environment in which the project is located and consistent with the City's General Plan noise standards.

4.13.5 References

- ¹ Contra Costa Public Works. *Buchanan Field Master Plan*. (2008) <https://www.contracosta.ca.gov/4016/Buchanan-Field-Master-Plan-RevOct-2008> [Accessed July 2022].
- ² U.S. Federal Transit Administration (FTA). *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No. 0123. (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 July 2022].
- ³ California Department of Transportation. *Transportation and Construction Vibration Guidance Manual*. (2020). <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvqm-apr2020-a11y.pdf> [Accessed July 2022].

4.14 – POPULATION, HOUSING, AND EMPLOYMENT

This EIR chapter addresses population and housing impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”), and whether the HEU will induce substantial unplanned population growth or displace substantial numbers of existing people or housing.

4.14.1 *Environmental Setting*

The Planning Area includes a mix of residential, commercial, industrial, institutional, and open space uses. The Planning Area totals 9 square miles or 5,800 acres. The corporate boundaries of the City of Clayton encompass approximately 4 square miles or 2,600 acres, while the Clayton Sphere of Influence (SOI) totals approximately 1 square mile or 628 acres. The portions of the Planning Area located outside the City’s corporate boundaries and Sphere of Influence areas, encompassing approximately 4 square miles or 2,572 acres, are undeveloped and comprised of mostly open space or agricultural uses. A description of population, housing, and employment characteristics within the Planning Area is provided below.

Population

The Association of Bay Area Governments (ABAG) conducts socioeconomic research involving land use, housing, population trends and employment among other demographic topics in the Bay Area region. ABAG provides projections and estimates to local governments in the region as foundations for those agencies’ long range planning efforts. In their Plan Bay Area 2040 adopted in 2017, Clayton was estimated to have a population of 10,630 in 2020, and a population of 11,255 in 2040, comprising an approximate 6 percent increase.¹ The California Department of Finance estimates that the 2021 population for Contra Costa County and the City of Clayton was 1,153,854 and 11,268 residents, respectively.²

Housing

ABAG’s Plan Bay Area 2040 estimated the City of Clayton had 3,990 households in 2020 and Contra Costa County was estimated to have 399,615 total households.³ The Metropolitan Transportation Commission (MTC) and ABAG jointly adopted Plan Bay Area 2050 in October 2021. This updated report estimates that Contra Costa County had 383,000 households in 2015 and is projected to increase its number of households to 551,000 by 2050, comprising a 44 percent increase (see Table 4.14-2).⁴ In addition, ABAG released the Regional Housing Needs Allocation (RHNA) Plan, a plan to increase regional housing needs in the Bay Area within the 2023-2031 period. This plan was approved in accordance with the California Department of Housing and Community Development (HCD) and is designed to disburse projected housing needs in the region amongst all Bay Area cities and counties.⁵ The City of Clayton has been assigned a RHNA of 570 housing units; this allocation of units will require a change to land use designations within the Planning Area.

Employment

According to ABAG's Plan Bay Area 2040, it was estimated that Clayton's 2020 employment base was 2,110 workers and would decrease to 2,095 workers by 2040⁶ ESRI data for Clayton estimates 1,510 employees in Clayton.⁷

The ABAG population, housing, and employment projections for the City, County, and ABAG area for 2040 and 2050 are shown in Tables 4.14-1 and 4.14-2.⁸

Table 4.14-1
2040 ABAG Demographic Projections - City of Clayton and Contra Costa County

ABAG Projections¹	2010	2015	2020	2025	2030	2035	2040	Change² 2010-2040
<u>Total Households</u>								
City of Clayton	3,745	3,895	3,990	4,070	4,125	4,105	4,105	+9.6%
Contra Costa County	368,585	386,755	399,615	422,435	440,765	461,065	475,390	+29.0%
<u>Total Population</u>								
City of Clayton	9,960	10,420	10,630	10,880	11,070	11,140	11,255	+13.0%
Contra Costa County	1,036,970	1,093,170	1,128,660	1,198,715	1,257,790	1,329,330	1,387,295	+33/8%
<u>Persons/Household</u>								
City of Clayton	2.66	2.67	2.66	2.67	2.68	2.71	2.74	+3.0%
Contra Costa County	2.79	2.80	2.80	2.81	2.83	2.86	2.89	+3.6%
<u>Total Jobs</u>								
City of Clayton	1,980	2,080	2,110	2,125	2,130	2,135	2,095	+5.8%
Contra Costa County	352,290	406,130	414,290	423,845	458,255	483,810	498,115	+41.4%
<u>Jobs/Housing³</u>								
City of Clayton	0.53	0.53	0.53	0.52	0.52	0.52	0.51	-0.4%
Contra Costa County	0.96	1.05	1.04	1.00	1.04	1.05	1.05	+9.4%

Source: Plan Bay Area 2040, Projections 2040, Association of Bay Area Governments, July 2017

¹ 2010 value from pre-run microdata that most closely approximates the 2010 federal Census data

² Arithmetic Average = 2040 value minus 2010 value then divided by 2010 value (result in percent)

³ Total Jobs divided by Total Households

Table 4.14-2
2050 ABAG Projections for RHNA Process

ABAG Projections¹	2015	2050	Growth	Percent Growth
<u>Total Households</u>				
Contra Costa County	383,000	551,000	169,000	+44%
ABAG Area	2,677,000	4,043,000	1,367,000	+51%
<u>Total Jobs</u>				
Contra Costa County	404,000	534,000	130,000	+32%
ABAG Area	4,005,000	5,408,000	1,403,000	+35%
<u>Jobs/Housing²</u>				
Contra Costa County	1.05	0.97	-0.08	-7.6%
ABAG Area	1.50	1.34	-0.16	-10.7%

Source: Growth Pattern, Plan Bay Area 2050, January 21, 2021

¹ Data tables below summarize the regional, county, and sub-county growth pattern for households and jobs in the Plan Bay Area 2050 Final Blueprint. Jurisdiction-level growth projections are developed solely for the 2023-2031 Regional Housing Needs Allocation (RHNA) process

This Page Intentionally Left Blank

4.14.2 Regulatory Framework

Federal

U.S. Department of Housing and Urban Development (HUD)

HUD oversees the Federal Housing Administration (FHA), the largest mortgage insurer in the world, as well as regulates housing industry business and provides project-based rental assistance and other rental assistance programs that provide support for low and very low-income households.

State

California Department of Housing and Community Development (HCD)

HCD enforces standards for housing construction, maintenance of farmworker housing, and pre-manufactured/factory-built homes. HCD also proposes amendments to California's residential building standards for new construction to the California Building Standards Commission and helps train local governments to better understand new requirements. HCD works with regional governments to determine their housing needs and reviews every city's and county's general plan housing element to determine its compliance with state law.

Housing Element Law (California Government Code Article 10.6)

State law (Government Code Section 65302(c)) requires each California city and county to prepare and maintain a current housing element as part of the jurisdiction's general plan, with goals and programs to attain a statewide objective of providing "decent housing and a suitable living environment for every California family." Under state law, each jurisdiction must adopt an update their housing element every eight years. Housing elements are also subject to review by HCD, who is authorized to certify that the housing element is consistent with state law.

California Department of Finance, Demographic Research Unit

The Demographic Research Unit uses population data to establish appropriation limitations, distribute various federal program funds, and aid in the planning and evaluation of programs. State agencies and departments, local governments, the federal government, school districts, public utilities, the private sector, and the public use the data. Staff provide demographic research and analysis, produce current population estimates, and future projections of population and school enrollment, and disseminate U.S. Census data.

Regional

Association of Bay Area Governments (ABAG)⁹

ABAG is a joint powers authority of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, ABAG is designated as a Metropolitan Planning Organization (MPO), and under state law, ABAG is designated as a Regional Transportation Planning Agency and a Council of Governments.

Regional Housing Needs Allocation (RHNA)

RHNA is developed through a process directed by ABAG. The RHNA represents the number of housing units divided into various household income categories—that have been calculated to represent Clayton's fair share of the regional housing need during the Housing Element planning period. By law, the City is required to show in the Housing Element that adequate sites are

available to accommodate construction of new housing units it meet or exceed its the RHNA throughout the eight-year planning cycle.

Contra Costa County Housing Authority (CCCHA)

The CCCHA is a public agency chartered by the state to administer the development, rehabilitation or financing of affordable housing programs. The CCCHA works with cities to administer the Housing Choice Vouchers Program; support the County Housing Authority's applications for additional allocations; and assist the County Housing Authority in marketing the program to home seekers and property owners.

Local

City General Plan

The Land Use and Housing Elements of the current Clayton General Plan (2000, as amended) contains the following goals, objectives, and policies related to population, housing, and employment growth:

Land Use Element (2017)¹⁰

Goal 2. To encourage a balance of housing types and densities consistent with the rural character of Clayton.

Goal 10. To provide housing opportunities which serve the varied social and economic segments of the Clayton community.

Objective 1. To retain the rural character of Clayton through a predominance but not exclusive use of single-family, low-density residential development balancing needs of the housing element and preservation of open space.

Policy 1a. Establish density designations based on terrain, circulation, adjacent uses and area characteristics.

Policy 1b. Identify a variety of densities, which decrease as slope increases.

Policy 1c. Permit limited high-density areas.

Policy 1d. Preserve historic structures and open space areas with uses such as community facilities, bed and breakfast facilities, or large single-family homes.

Policy 1e. Encourage the clustering of development to preserve open space.

Objective 4. To plan for and promote adequate commercial facilities to serve the needs of Clayton residents.

Policy 4a. Expand the commercial tax base in appropriate areas.

Housing Element (2015-2023)¹¹

Adequate Sites and New Construction

Goal I. Provide for adequate sites and promote the development of new housing to accommodate Clayton’s fair share housing allocation.

Policy I.1 The City shall designate and zone sufficient land to accommodate Clayton’s projected fair share housing allocation as determined by the Association of Bay Area Governments.

Policy I.2 The City shall actively support and participate in the development of extremely low-, very low-, low-, and moderate-income housing to meet Clayton’s fair share housing allocation. To this end, the City shall help facilitate the provision of affordable housing through the granting of regulatory concessions and available financial assistance.

Policy I.3 The City shall encourage the development of second dwelling units on new and existing single-family-zoned lots.

Policy I.4 The City shall aggressively promote mixed-use or second-story residential units above commercial uses in the Town Center.

Regulatory Relief and Incentives

GOAL II. To the extent feasible, remove governmental constraints for affordable and special needs housing.

Policy II.1 The City shall seek to meet the special housing needs of individuals with disabilities and developmental disabilities, extremely low-, very low-, and low-incomes, large families, senior citizens, farmworkers and their families, female-headed and single-parent households, and others with special needs.

Policy II.2 The City shall encourage affordable housing by granting regulatory incentives to projects that provide affordable units.

Rental and Homeownership Assistance

Goal III. Increase housing opportunities for lower-income renters and first-time homebuyers.

Policy III.1 The City shall promote assistance to lower-income renters and first-time homebuyers by promoting programs available through Contra Costa County and the Contra Costa County Housing Authority.

Policy III.2 Preserve units at risk of losing affordability covenants and converting to market-rate rents or sale prices.

Equal Access

Goal IV. Ensure equal housing opportunities for all persons in Clayton regardless of age, race, religion, sex, marital status, national origin, color, disability, or other barriers that prevent choice in housing.

Policy IV.1 The City shall promote housing opportunities for all persons regardless of age, race, religion, sex, marital status, national origin, color, disability, or other barriers that prevent choice in housing.

Policy IV.2 The City shall strive to increase public awareness and acceptance of affordable housing in the community.

Policy IV.3 The City shall offer reasonable accommodations for households with disabilities with respect to zoning, permit processing, and building codes and shall support programs to modify existing units to better serve the needs of disabled persons.

Energy Conservation

Goal V. Encourage and maintain energy efficiency in new and existing housing.

Policy V.1 The City shall continue to promote energy conservation in the design of all new residential structures and shall promote incorporation of energy conservation and weatherization features in existing homes.

Regional Planning

Goal VI. Promote and participate in the resolution of housing, employment, and transportation issues on a regional basis in cooperation with all Contra Costa County jurisdictions.

Policy VI.1 The City shall actively support regional-based solutions to the housing, employment, and transportation issues initially within Contra Costa County and ultimately within the Bay Area.

City Municipal Code

The City's Municipal Code has no ordinances or chapters that deal directly with population, housing, or employment growth.

4.14.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to population and housing if it would:

- a) 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); or
- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.14.4 Impacts and Mitigation Measures

This section describes potential impacts related to population growth, housing displacement, and physical displacement of existing units on the housing inventory sites, which could result from the implementation of the HEU and, if necessary, includes mitigation measures as needed to reduce significant impacts.

Population Growth

Impact POP-1 – Would the HEU 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)?

Analysis of Impacts

The updated Housing Element identifies how the City plans to accommodate its RHNA of at least 570 units. In Section 3, Project Description, Table 3-3 indicates the HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area, which represents a 21.07 percent increase over existing (2020) conditions. This increase in housing would result in a projected population increase of 2,364 additional persons. The 2000 General Plan had a maximum build-out of 3,399 units which would generate 11,217 persons at 3.3 persons per unit. This included the existing 1,540 units in the City but did not include the 555 units that could be developed outside of the City limits.

The following goals, objectives, and policies of the proposed HEU address new housing to accommodate increased population projections by ABAG:

Goal 1 ***Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.***

Policy 1.2 **Impacts of New Housing.** Consider and mitigate the impacts of new housing on the City’s infrastructure, open space, natural resources, and public services.

In addition, the following General Plan Growth Management Element goals, objectives, and policies address new housing to accommodate increase population projections by ABAG:

Goal 2 ***Design a street system that while accommodating urban development is consistent with orderly growth.***

Goal 4 ***Assure that new residential, business, and commercial growth pays for the facilities required to meet the demands resulting from that growth.***

Policy 1a Clayton will continue to implement its adopted development fees to require developers to pay the costs necessary to mitigate the impacts of their development on the local street system.

Policy 1b Clayton will participate in TRANSPAC's regional development mitigation program and establish fees, exactions, assessments, or other mitigation measures to fund regional or subregional transportation improvements needed to mitigate the impacts of planned development on the regional transportation system.

Policy 1c Clayton will periodically review the existing adopted development fees to determine if the fees accurately reflect the needed traffic mitigation associated with development.

Policy 1d As part of the development review process for projects estimated to generate over 100 peak-hour vehicle trips, Clayton will require the developer/applicant to provide the City with a traffic impact study consistent with the Technical Guidelines published by the Contra Costa Transportation Authority.

Policy 1e Development projects expected to generate over 100 peak-hour vehicle trips in the peak direction will not be approved by the City unless a finding of consistency can be made with the Reporting Intersection Traffic Level of Service Standards.

Policy 1f The City will not use Local Street Improvement and Maintenance funds allocated to Clayton, pursuant to Measure J by the Contra Costa Transportation Authority, to replace developer funding for transportation projects determined to be required for growth to comply with standards.

Table 4.14-1 shows that only 115 new units are projected by ABAG for the City from 2020 to 2040, while the current RHNA allocation for the City is 570 new units from only 2023 to 2031. It should be noted the RHNA is based on the state's desireⁱ to encourage more housing throughout the state. Based on available evidence, the HEU is inconsistent with the growth projections of ABAG and Plan Bay Area 2050 because those long-term projections do not take into account jurisdiction-specific, short-term RHNA requirements. Table 4.14-1 also indicates the City's population growth projected by ABAG is beyond what was anticipated when the City's General Plan and its EIR were adopted in 2000.

Once the City has adopted the HEU, it will transmit its new growth numbers to ABAG, and those estimates will be incorporated into the next revisions to the Plan Bay Area. Any further action by the City would not resolve the regional impact of the RHNA conflicting with the Plan Bay Area projections, and in any case would be infeasible because only ABAG can resolve this policy and program conflict. Therefore, there is no feasible mitigation available to the City to reduce this

ⁱ At a press conference on September 19, 2020, the Governor stated that over the past decade, California has averaged less than 100,000 new homes per year, significantly slower than that of most other states. Gov. Newsom then set a goal of 3.5 million new housing units to be built by 2025 or about 500,000 units per year. He outlined a suite of proposals he hoped would make it easier for builders to build such as altering the state's oft-abused environmental-impact law (CEQA) to allow more housing, revamping how local governments get their tax dollars and clamping down on cities that obstruct new construction [Sacramento Bee, September 20, 2020].

potential impact. If growth occurs according to the proposed HEU, substantial unplanned population and housing growth may be induced into the City/SOI. The City's Land Use Element and updated Housing Element demonstrate the City has exercised adequate local planning to accommodate growth based on the mandated RHNA. However, the inconsistency between the RHNA and Plan Bay Area 2050 is a potentially significant population impact.

Unfortunately, the City cannot feasibly resolve this inconsistency in adopted plans at this time, but it can accommodate this future growth according to the RHNA at the local level with adherence to the proposed amended goals and policies of the General Plan Land Use Element and Housing Element. Therefore, potential population, housing, and employment changes from future development under the HEU are considered to have less than significant impacts under CEQA, and no mitigation is required.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Housing Displacement

Impact POP-2 – Would the HEU displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Analysis of Impacts

As outlined in POP-1 above, the updated Housing Element identifies how the City plans to accommodate its RHNA of at least 570 units. In Section 3, Project Description, Table 3-3 indicates the HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area; this increase represents a 21.07 percent increase over existing (2020) conditions. The 2000 General Plan had a maximum build-out of 3,399 units which would generate 11,217 persons at 3.3 persons per unit. This included the existing 1,540 units in the City but did not include the 555 units that could be developed outside of the City limits. The following goals and policies of the proposed HEU address new housing to accommodate displacement of existing people and/or housing:

Goal 2 ***Encourage a variety of housing types, densities, and affordability levels to meet the diverse needs of the community, including a mix of ownership and rental.***

Policy 2.1 **Adequate Housing Sites.** Maintain and implement land use policies and zoning regulations that accommodate a range of residential housing types that can fulfill local housing needs and accommodate the City's Regional Housing Needs Allocation of at least 570 units.

Policy 2.2 **Variety of Densities and Housing Types.** Implement land use policies and standards that allow for a range of residential densities and housing types that will enable households of all types and income levels opportunities to find suitable ownership and rental housing in the City.

Policy 2.3 **Accessory Dwelling Units.** Promote construction of accessory dwelling units as a way to increase the housing stock, particularly for lower-income households,

seniors, young adults and persons with disabilities, recognizing that ADUs also promote investment in existing properties and reduce ongoing housing costs for property owners.

Policy 2.4 Urban Lot Splits. Recognize urban lot splits, as defined and allowed by State law, as a viable means to create new housing.

Policy 2.5 Mixed-use Development. Promote mixed-use development in Downtown Clayton that includes residential uses above ground-floor commercial and office uses, with ground-floor residential allowed under limited circumstances, such as alongside streets or behind street-facing commercial uses on Central and Main Streets.

Policy 2.6 Housing on Religious Institution Lands. Create land use regulations that encourage the development of housing, particularly below market-rate housing, on properties owned by religious institutions.

Table 4.14-1 shows that only 115 new units are projected by ABAG for the City from 2020 to 2040 while the current RHNA for the City is 570 new units from only 2023 to 2031. It should be noted the RHNA is based on the state's desire to encourage more housing throughout the state. Based on available evidence, the HEU is inconsistent with the growth projections of ABAG and Plan Bay Area 2050 because those long-term housing projections do not take into account jurisdiction-specific short-term RHNA requirements. Table 4.14-1 also indicates the City's housing growth projected by ABAG is beyond what was anticipated when the City's General Plan and its EIR were adopted in 2000.

Once the City has adopted the HEU, it will transmit its new growth projections to ABAG, and those estimates will be incorporated into the next revisions to the Plan Bay Area. Any further action by the City will not resolve the regional impact of the RHNA conflicting with the Plan Bay Area projections, and in any case would be infeasible because only ABAG can resolve this policy and program conflict. Therefore, there is no feasible mitigation available to the City to reduce this potential policy impact.

The preliminary 6th cycle sites data in the proposed Housing Element indicates development of a total of 18 sites would result in approximately 868 new housing units spread across the City. This potential number of new units is 52 percent greater than the current RHNA (570 units). The preliminary 6th cycle housing inventory sites identified by the City are a mix of developed and undeveloped sites. Projects at undeveloped sites would not result in the removal of existing housing and, therefore, would not result in displacement of a substantial number of persons. The sites that are currently developed with residential uses would be redeveloped with higher residential densities under the HEU over a period of years. Persons inhabiting dwelling units on sites identified by the City under the proposed HEU would be given ample time under state law to find alternative housing accommodations should the owner of a given site decide to redevelop the site at a higher density. For these reasons, the HEU would not displace substantial numbers of existing people or housing which could necessitate construction of replacement housing elsewhere either in the City or the SOI. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact POP-3 – Would the HEU cause substantial adverse cumulative impacts with respect to population and housing?

Analysis of Impacts

As discussed in Impact POP-1 and Impact POP-2 above, the HEU would substantially increase the number of housing units and the population projected in the City over those projected in the 2000 General Plan. One reason for this change in anticipated growth is the City's recent increased RHNA unit count from ABAG, which is in turn based on the state's desire to encourage more housing throughout the state. However, the state housing goal conflicts with its desire to reduce vehicle miles traveled (VMT) in an effort to reduce vehicular air pollution and greenhouse gas emissions.

The Housing Element of the existing General Plan and proposed HEU both contain a number of goals and policies to accommodate anticipated population and housing growth and prevent displacement of residents while providing more housing opportunities in the future. The surrounding jurisdictions in the region have similar goals and policies to be consistent with state planning and housing laws. While the proposed HEU has cumulative implications for ABAG's regional plans, the City itself cannot solve the inherent conflict between the goals and directives of the RHNA and the growth projections of the Plan Bay Area 2050. Once the City has adopted the HEU, it will transmit its new growth projections to ABAG, and those estimates will be incorporated into the next revisions to the RHNA and Plan Bay Area. Any further action by the City will not resolve the regional impact of conflicting RHNA and Plan Bay Area forecasts and is infeasible because only ABAG can resolve this policy and program conflict. The HEU would change land uses that would result in housing and population growth within the Planning Area. However, this level of growth can be accommodated at the local level by assignment of zoning and land use designations on properties within the City of Clayton, so the HEU does not represent a substantial adverse cumulative impact with respect to population and housing.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.14.5 References

- ¹ Association of Bay Area Governments. *Forecasts and Projections; ABAG Projections 2040*. (2017). <http://projections.planbayarea.org/>.
- ² State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2021*. Sacramento, California, May 2021. <https://dof.ca.gov/2022/03/15/e-5population-and-housing-estimates-for-cities-counties-and-the-state-2011-2021-with-2010-censusbenchmark/>.
- ³ Association of Bay Area Governments. *Forecasts and Projections; ABAG Projections 2040*. (2017). <http://projections.planbayarea.org/>.
- ⁴ Association of Bay Area Governments. *Forecasts and Projections; ABAG Plan Bay Area 2050*. (2021). https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPatern_Jan2021Update.pdf.
- ⁵ Association of Bay Area Governments. *Regional Housing Needs Allocation*. (2022). <https://abag.ca.gov/our-work/housing/rhna-regional-housing-needs-allocation>.
- ⁶ Association of Bay Area Governments. *Forecasts and Projections; ABAG Projections 2040*. (2017). <http://projections.planbayarea.org/>.
- ⁷ ESRI Business Summary (2021).
- ⁸ Plan Bay Area 2050, Association of Bay Area Governments (ABAG), October 2021. <https://www.planbayarea.org/#:~:text=Plan%20Bay%20Area%202050%20is%20the%20region%E2%80%99s%20long-range,realize%20the%20Vision%20of%20Plan%20Bay%20Area%202050>.
- ⁹ Association of Bay Area Governments (ABAG), Web: <https://abag.ca.gov/>. [Accessed March 2022].
- ¹⁰ City of Clayton. *General Plan. Land Use Element* (2017). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-II-land-use-element-051617.pdf>.
- ¹¹ City of Clayton. *General Plan. Housing Element*. (2015-2023). <https://claytonca.gov/community-development/housing/housing-element/>.

4.15 – PUBLIC SERVICES

This EIR chapter addresses public services impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). Issues of interest are public services impacts identified by the CEQA Guidelines: whether the HEU would result in substantial adverse physical impacts associated with the provision of public services and public service facilities that could cause significant environmental impacts.

4.15.1 *Environmental Setting*

Exhibit 4.15-1 (Existing Public Facilities) shows the location of public facilities currently serving the City of Clayton.

Fire Protection

The City is primarily served by the Contra Costa County Fire Protection District (CCCFPD) for emergency medical services (EMS), and fire and rescue services. The CCCFPD serves a population of 600,000 persons with a service area of 306 square miles.¹ The CCCFPD employs a total of 329 staff and deploys a variety of apparatus and ambulances from 26 staffed fire stations located throughout the service area.

According to state-wide data, the Planning Area is served by two CCCFPD Fire Stations, Station #11 and Station #8, that serve a population of 11,838 people in an area of 4 square miles.² CCCFPD Fire Station #11 is located on 6500 Center Street in the central portion of the City. Station #8 is located at 4647 Clayton Road in the City of Concord. In addition to these CCCFPD stations, California Department of Forestry and Fire Protection (CAL FIRE) Sunshine Station at 11851 on Marsh Creek Road is located in the southeast portion of Clayton.³ CCCFPD Station #11 houses fire engine 11 with a minimum of 3 on-duty staff, while Station 8 houses fire engine 8 with a minimum of 8 on-duty personnel.² The entire City is within three driving miles of Fire Station #11 which means that essentially the entire Planning Area is within a 5-minute emergency response time from this station, assuming an average driving speed of 35 miles per hour. Station #8 is 1.7 miles northwest of the City in Concord and has ready access to the central and northern portions of the City, while the Sunshine Station is 3 miles southeast of the City.

Based on communication with CCCFPD staff, average response times range from 3 to 6 minutes depending on time of day and distance from a given fire station to the location of emergency calls within the Planning Area.⁴ This estimate is supported by data from Figure 101, Travel Time by Region, in the CCCFPD annexation study conducted in 2021. CCCFPD gets its funding from ongoing property taxes paid to the County Assessor by property owners and from one-time Fire Development Protection Fees paid to the City prior to issuance of building permits.

Police Protection

Law enforcement services in Clayton are provided by the Clayton Police Department, which operates out of the second floor of City Hall at 6000 Heritage Trail in the central part of the City. The City’s adopted 2022/2023 police budget designates \$2,738,617 in Total Expenditures.⁵ The entire City is within 3.5 driving miles of the police department, which means that essentially the

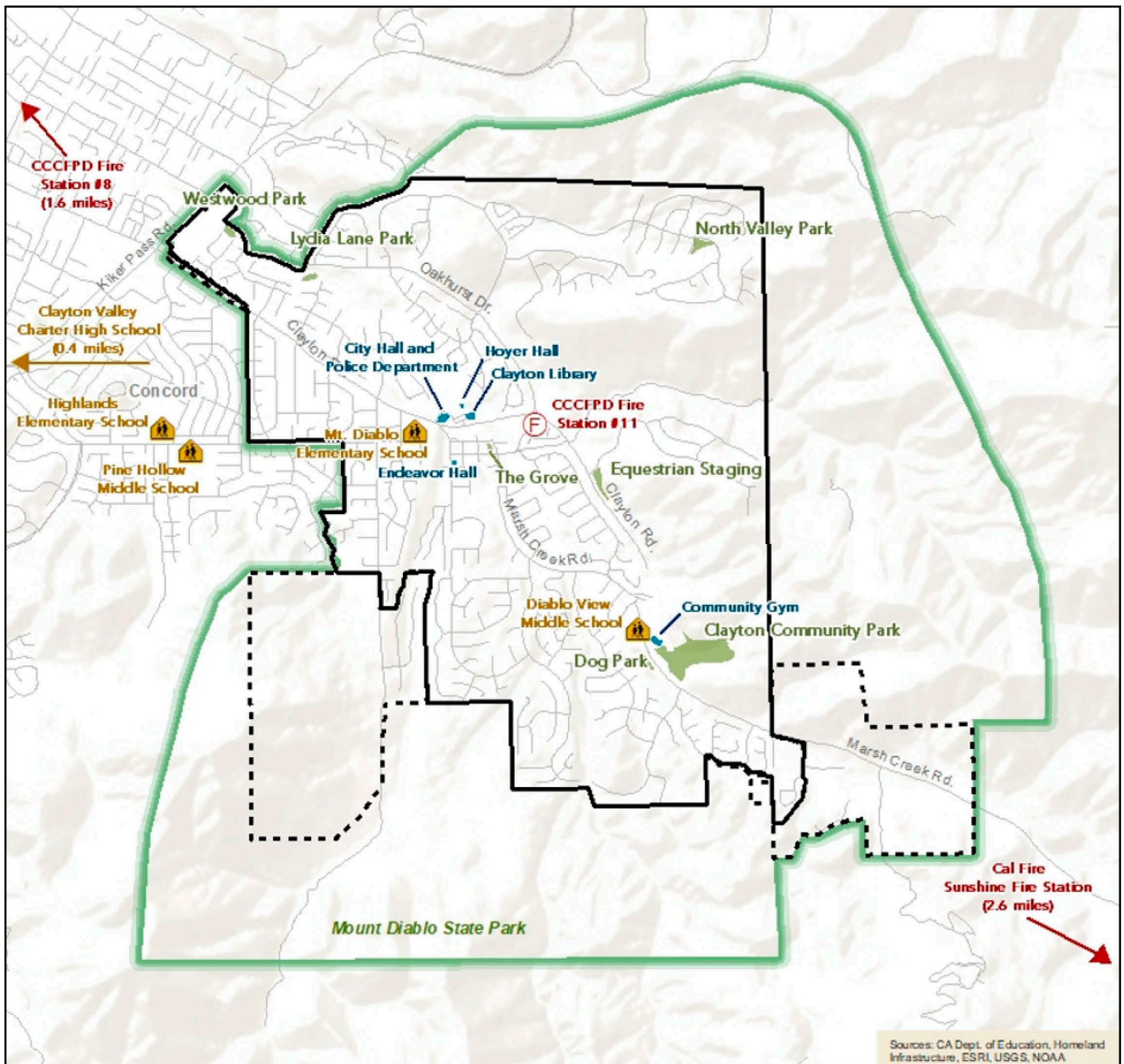
entire City is within a 5-minute emergency response time from this location assuming an average driving speed of 35 miles per hour.

Based on correspondence with Clayton Police Department Interim Police Chief Joseph Kreins, current staffing of the police department consists of 2 civilian staff, 7 sworn officers, 3 sergeants and the Chief of Police.⁶ The 11 sworn staff share 8 police SUVs, 1 police specialty pick-up truck, and a police motorcycle. According to Chief Kreins, generally the police department has 1 sergeant and 1 officer on duty at any one time. During peak call times, there is 1 sergeant and 2 officers on duty. At current levels, the average response time to Priority 1 (in-progress) calls is approximately 2 to 3 minutes, and the average response time to all other calls is approximately 5 to 10 minutes. The Police Department provides public safety services 24 hours a day, 7 days a week. As a result, there is a gap in supervision during one weekday and both weekend days when two officers are on duty and no supervisor is working. Scheduled vacations, mandatory trainings and unforeseen illnesses create additional periods when officers are working without a supervisor.

Schools

The Planning Area is served by the Mt. Diablo Unified School District (MDUSD), which operates 31 elementary schools, 9 middle schools, and 5 high schools throughout the cities of Clayton, Concord, Martinez, Pittsburg, Pleasant Hill, Walnut Creek and the unincorporated community of Bay Point.⁷ There are two schools located in Clayton and operated by MDUSD: Mt. Diablo Elementary School and Diablo View Middle School. The Clayton Valley Charter High School District Office is located in the Planning Area as well, with the charter school itself located in the City of Concord. The MDUSD has approximately 3,232 full and part-time employees, including 1,699 teachers and other certificated personnel; 1,359 classified employees such as clerical staff, custodians, and bus drivers; and 174 management personnel.

According to the MDUSD's 2019/20 School Fee Justification Study ("Study"), MDUSD's school facilities in school year 2019/2020 had a collective capacity of 34,411 students.⁸ Of these 34,411 seats, 16,002 are at the elementary school level, 8,857 are at the middle school level, and 9,552 are at the high school level. Based on data provided by MDUSD, student enrollment was 30,724 in school year 2019/20. Comparing student enrollment to facilities capacity showed that facilities capacity exceeded student enrollment at school levels in school year 2019/20. However; to establish a nexus and a justifiable residential School Fee Level, the Study evaluated the number and cost of new facilities required to house students generated from future residential development within the MDUSD's boundaries. Based on data provided by the Association of Bay Area Governments (ABAG), approximately 21,077 additional residential units are expected to be constructed within the MDUSD's boundaries through calendar year 2040 ("Future Units"). Of these 21,077 Future Units, 13,478 were anticipated to be single family detached ("SFD") and 7,599 were anticipated to be multi-family attached ("MFA") units. To determine the impact on the MDUSD from Future Units, the Study multiplied the number of Future Units by estimated Student Generation Factors ("SGFs") to determine the projected 2040 student enrollment from Future Units. The results were that 2,608 unhoused elementary school students, 47 unhoused middle school students, and 754 unhoused high School students are anticipated to be generated from Future Units.



Facilities





-  School Facility
-  Fire Station
-  Clayton Community Facility
-  Clayton Parks and Recreation Facilities

Exhibit 4.15-1 Existing Public Facilities

<http://www.migcom.com> • 951-787-9222



Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.

To adequately house the projected unhoused students, MDUSD determined that it will need to construct new elementary school facilities as well as expand existing middle school and high school facilities. Using design capacities of 950 students at the elementary school, 27 students per classroom at the middle school, and 27 students per classroom at the high school level, MDUSD determined that it will need to construct three new elementary schools, two new middle school classrooms, and 28 new high school classrooms to accommodate the projected unhoused students from the Future Units. MDUSD currently collects School Impact Fees (SIFs) from new development to help fund construction of school facilities. SIFs may be levied for both residential and commercial construction, pursuant to Education Code Section 17620 and California Government Code Section 65995.

Parks

The City of Clayton has seven public parks on approximately 25.3 acres, plus 27 miles of trails spread across approximately 515 acres of natural open space.⁹ Along with parks maintained by the City, Mt. Diablo State Park borders the Planning Area to the south, and the Black Diamond Mines Regional Preserve managed by the East Bay Regional Park District bounds Clayton to the northeast. Planned linkages between these two parks will create 40,000 acres of open space surrounding most of Clayton.¹⁰ Creeks running through Clayton connect parks through a natural greenbelt system. City parks are generally located in the eastern portion of the City, off Oakhurst Drive and Marsh Creek Road. City residents also have access to a number of trails, greenways, and open space in the City and surrounding region. For more information, see Chapter 4.16, Recreation. Mt. Diablo State Park offers community members nearby access to an extensive trail system with scenic views. Clayton's trail system is also affiliated with the Mokelumne Crest to Coast Trail which travels from the Carquinez Strait to the Sierra Nevada, and the American Discovery Trail, which runs through the continent to Delaware Bay on the East Coast.¹¹ Table 4.15-1 identifies and describes the City Parks and other recreational facilities.

Table 4.15-1
City Parks and Recreation Facilities

Park/Facility Name (size)	Address	Amenities
Parks		
Clayton Community Park (20 acres)	7411 Marsh Creek Road	Picnic Tables, Rentable Picnic Areas, Rentable Group Picnic Areas, Barbeques, Rentable Baseball Diamonds, Rentable Soccer Fields, Play Equipment, Restrooms, Drinking Fountains, Grass, Trails/Trail Access.
The Grove (0.6 acre)	6100 Main Street	Picnic Tables, Rentable Picnic Areas, Rentable Group Picnic Areas, Play Equipment, Restrooms, Drinking Fountains, Water Play Areas, Grass, Trails/Trail Access.
Lydia Lane Park (2.4 acres)	North Lydia Lane	Picnic Tables, Play Equipment, Trails/Trail Access, Grass.
North Valley Park (1.3 acres)	Keller Ridge Drive at Golden Eagle Way	Picnic Tables, Play Equipment, Trails/Trail Access, Grass.

Park/Facility Name (size)	Address	Amenities
Westwood Park (0.3 acre)	Access from Cardinet Trail at O'Hara Court	Picnic Tables, Trails/Trail Access, Grass.
Dog Park (0.5 acre)	Across from Community Park	Picnic Tables, Drinking Fountains, Trails/Trail Access, Dogs Allowed Off Leash.
Equestrian Staging Area (0.2 acre)	Peacock Creek Drive at Clayton Road	Picnic Tables, Trails/Trail Access, Horse Trailer Parking.
Total Parkland = 25.3 acres	--	--
Facilities		
City Hall First Floor Conference Room	6000 Heritage Trail	Room Rental.
City Hall Courtyard	6000 Heritage Trail	Courtyard Rental.
Clayton Community Gym	700 Gym Court	Available to Public Outside of School Hours. Host Youth Sports Leagues & Clinics.
Endeavor Hall	6008 Center Street	Hall and Outdoor Courtyard Rental.
Fountain	Oakhurst Drive/Center Street/Clayton Road	Operational Requests Available.
Hoyer Hall	6125 Clayton Road	Hall Rental.
Clayton Community Library	6125 Clayton Road	Study Rooms, Story Room, and informational resources.
<i>Source: City of Clayton: Parks and Recreation. (2021).</i>		

Libraries

The Clayton Community Library was built in 1995 and is located at 6125 Clayton Road. There are two additional Contra Costa County Libraries located near Clayton: the Concord Library at 2900 Salvio Street and the Ygnacio Valley Library at 2661 Oak Grove Road. The Clayton Community Library offers various amenities including study rooms, event halls, children's story rooms, and Wi-Fi, among other services.¹² These three libraries are operated by the Contra Costa County Library (<https://ccclib.org/>) which maintains 28 libraries throughout the County. Most residential neighborhoods within the Planning Area are within 1.5-mile of the Clayton Community Library and City Hall.

4.15.2 Regulatory Framework

Federal

Federal Emergency Management Agency

In March 2003, the Federal Emergency Management Agency (FEMA) became part of the U.S. Department of Homeland Security. FEMA's continuing mission within the department is to lead the effort to prepare the nation for all hazards and effectively manage federal response and recovery efforts following any national incident. FEMA also initiates proactive mitigation activities, trains first responders, and manages the National Flood Insurance Program and the U.S. Fire Administration.

Disaster Mitigation Act of 2000

This legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide. The act is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities.

Uniform Fire Code

The Uniform Fire Code (UFC) contains federal regulations relating to construction and maintenance of buildings and the use of premises, including specialized technical regulations related to fire and life safety. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and premises.

Occupational Safety and Health Administration Regulations

The Occupational Safety and Health Administration (OSHA), under the United States Department of Labor, sets and enforces workplace standards and provides training, outreach, education, and assistance.

National Incident Management System

Originally issued in 2004, the National Incident Management System (NIMS) provides a consistent nationwide template to enable partners across the nation to work together to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity. Since the Federal Emergency Management Agency (FEMA) last revised the NIMS guidance in 2008, the FEMA Administrator, in the role as the head of the National Integration Center, is charged with managing and maintaining NIMS, and in accordance with the Post-Katrina Emergency Management Reform Act, issues regular revisions to NIMS guidance and support for its implementation.

State

Standardized Emergency Management System & National Incident Management System (SEMS)

As part of the federal NIMS and the State's SEMS, local agencies have primary authority regarding rescue and treatment of casualties and making decisions regarding protective actions for the community. When a major incident occurs, the first few moments are critical in terms of reducing loss of life and property. First responders must be sufficiently trained to understand the nature and the gravity of the event to minimize the confusion that inevitably follows catastrophic

situations. This on-scene authority rests with the local emergency services organization and the incident commander.

California Office of Emergency Services (Cal OES)

Cal OES serves as the lead State agency for emergency management in California. Cal OES coordinates the State response to major emergencies in support of local government. It is also responsible for collecting, verifying, and evaluating information about emergencies, facilitating communication with local government, and providing affected jurisdictions with additional resources when necessary. Cal OES may task State agencies to perform work outside their day-to-day and statutory responsibilities. Local jurisdictions first use their own resources and, as they are exhausted, obtain more from neighboring cities and special districts, the county in which they are located, and other counties throughout the state through the Statewide Mutual Aid System.

California Fire Code (Title 24, Part 9, California Code of Regulations)

The California Fire Code incorporates the Uniform Fire Code with necessary California amendments. This code prescribes regulations consistent with nationally recognized good practices for the safeguarding, to a reasonable degree, of life and property from the hazards of fire and explosions. It also addresses dangerous conditions arising from the storage, handling, and use of hazardous materials and devices; conditions hazardous to life or property in the use or occupancy of buildings or premises, and provisions to assist emergency response personnel.

California Public Resources Code 4291 (PRC 4291)

PRC 4291 requires homeowners to address wildland fire hazards through creation of defensible space and other building construction mitigation measures.

California Building Code

The 2019 California Building Code (CBC) became effective January 1, 2020, including Part 9 of Title 24, the California Fire Code. Section 701A.3.2 of the CBC requires any enforcing agency for which an application for a building permit is submitted to comply with applicable sections of the code.

California Health and Safety Code (Sections 13000 *et seq.*)

This code establishes State fire regulations, including regulations for building standards (also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

Education Code Section 17620

This state law allows school districts to directly assess fees on new residential and commercial construction within their respective boundaries. These fees must be used to fund the construction of new school facilities necessitated by the impact of residential and commercial development activity. These fees can also be used to fund reconstruction of school facilities or reopening of schools to accommodate development-related enrollment growth. Fees are collected prior to the issuance of a building permits by a city or county.

Leroy F. Green School Facilities Act (1998)

California Government Code Section 65995 sets base limits and additional provisions for school districts to levy development impact fees and to help fund expanded facilities to house new pupils that may be generated by new development. Sections 65996(a) and (b) state that such fees collected by school districts provide full and complete school facilities mitigation under CEQA.

These fees may be adjusted by a school district based on specified state requirements and procedures.

State Public Park Preservation Act (California Public Resource Code Section 5400 – 5409)

The State Public Park Preservation Act is the primary instrument for protecting and preserving parkland in California. Under the Act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This ensures a no net loss of parkland and facilities.

Quimby Act (California Government Code Section 66477)

The Quimby Act allows cities and counties to adopt park dedication standards/ordinances requiring developers to set aside land and/or pay fees in lieu of parkland dedication. The City has adopted an ordinance implementing the provisions of the Quimby Act into its subdivision ordinance (Clayton Municipal Code Section 16.12.010 - Parkland Dedication).

Local

Clayton General Plan

The 2000 Clayton General Plan includes goals, objectives, and policies to minimize potential damage and hazards to public services including, but not limited to, police, fire, parks, schools, and other facilities:

Safety Element

Goal 1. To reduce potential risk to new development by proper planning and to minimize existing risk through coordinated City-County actions.

Fire Protection

Objective 10. To incorporate measures for fire protection into development proposals and city plans.

Policy 10a. Identify high fire hazard areas on a development constraints map.

Policy 10b. Submit all new developments for review by the Fire District so that fire-fighting needs can be estimated and services be adequately provided.

Policy 10c. Require development proposals to meet standards for adequate fire flows appropriate to fire risk created.

Policy 10d. Designate locations in the community disaster plan to be used in case of a large fire or disaster. The elementary school has been used in the past for assembly, and City Hall can be used for communications.

Policy 10e. Establish fees and assessments to support enhancement of fire protection services in cooperation with Consolidated Fire District Planning and Budgeting.

Objective 11. To reduce fire risk by promoting fire safe residences in high risk areas.

Policy 11a. Construct homes located in high fire hazard areas with fire-resistant materials and landscape the surroundings with fire resistant vegetation. Attention should be given to treatment of shake roofs or alternative roofing and requirement of spark arrestors.

Policy 11b. Reduce fire risk through adequate fire break, control burning and fuel removal.

Emergency Preparedness

Objective 12. To employ planning measures to promote public safety.

Policy 12a. Encourage the use of citizen action programs such as Neighborhood Alert and Operation Identification to reduce crime risk.

Policy 12b. Provide Planning Commission and Police Department review of projects to insure that crime-inviting features are minimized.

Policy 12c. Encourage communication among the public protection agencies on matters of mutual concern.

Objective 13. To evaluate the potential for disaster and to continue planning for mitigation and response to emergency.

Policy 13a. Keep major arterials free for evacuation in case of a major emergency.

Policy 13b. Improve circulation to and from the Town Center.

Policy 13c. Support community disaster planning as an ongoing effort.

Policy 13d. Develop and improve emergency communication network planning.

Implementation Measure 4. Prepare fire hazard maps and alert residents to danger.

Implementation Measure 5. Construct roads and turn-arounds to provide enough clearance to accommodate firefighting equipment.

Implementation Measure 6. Provide yearly update to community disaster plans for all feasible emergencies including locations for relief, decision making and other aspects of thoughtful preparation. Include a review of primary exit routes.

Community Facilities Element

Goal 1. To provide for an efficient infrastructure and facility plan and program for improvement of existing infrastructure.

Objective 1. To establish a series of facility plans to identify existing conditions and to identify a program to fulfill current and future needs.

Policy 1e. Identify fire protection needs for the City of Clayton and implement them through new development.

Policy 1f. Identify school needs for the City of Clayton.

Policy 1g. Identify needs for public facilities including City Hall capacity, library and cultural facilities.

Objective 3. To provide cultural and sports facilities for the community.

Policy 3a. Identify the facilities desired by the community, i.e., soccer/playfield, swimming complex, tennis courts, library, community playhouse and public meeting rooms.

Implementation Measure 1. Requires fees and/or conditions of development approval from commercial and residential development; identify other funding sources.

Objective 5. To charge a fee for various municipal services and/or improvements based on actual cost experience of the City or needs of the community as a whole.

Policy 5a. Review the City fee schedule on an annual basis and either decrease or increase based on actual cost.

Policy 5b. Ensure that each new development approved by the City provides necessary improvements to meet the needs of the development and/or the community as a whole.

Policy 5c. Require a Property Development Fee from residential and non-residential for the purpose of capital expenditures as needed.

Policy 5e. Require a Parkland Dedication Fee from residential and non-residential for the purpose of implementing the Open Space/Conservation Element.

Open Space/Conservation Element

Goal 1. To maintain a system of active open space along stream channels and passive open space within hillsides as a means to preserve the rural character of the community.

Objective 1. To promote the City's greenbelts as the basis of its open space system.

Policy 1d. Promote City/regional mapping of Clayton greenbelt system and city – system linkages to State and regional parks and trails.

Objective 2. To develop neighborhood parks within the greenbelt system adjacent to other community facilities.

Policy 2a. Continue requirement for parkland dedication for neighborhood parks that are compatible with the system of greenbelts.

Policy 2b. Set aside neighborhood parkland where new school sites are identified to establish common facilities and help promote their use.

Policy 2c. Review each park/greenbelt area for maintenance needs, and identify alternative methods to provide maintenance including home – owner associations, park districts, volunteer measures and dedication to State and regional park systems.

Policy 2d. Consider establishment of a community park.

Objective 3. To establish an open space conservation designations to preserve natural resources, to manage resources, to provide for outdoor recreation, to promote health and safety and to ensure orderly growth.

Policy 3a. Apply Public Park/Open Space designation to areas of public park and recreation facilities.

Implementation Measure 1. Prepare a greenbelt path map for public information.

Implementation Measure 2. Develop pathway standards.

Implementation Measure 4. Investigate East Bay and State park fund applications, gift dedication, purchase and resale of property, district formation and scenic easements.

Growth Management Element

Public Facilities and Services

Goal 1. Provide police protection to the public and its property through effective law enforcement and the incorporation of crime prevention features into new development.

Goal 2. Develop and maintain a system of active open spaces and trails along creek channels and within developed parks as well as the maintenance of passive open spaces along hillsides as a means of preserving the rural character of the City.

Goal 3. Incorporate fire safety precautions in existing developed areas and in planning for new development.

Goal 6. Assure that new residential, business, and commercial growth pays for the facilities required to meet the demands resulting from that growth.

Objective 1. Development Mitigation: The City shall adopt and maintain a development mitigation program to ensure that new growth pays its fair share of the costs associated with that growth.

Policies/Implementation Measures

Policy 1a. The City will continue to implement its adopted development fees to require developers to pay the costs necessary to mitigate the impacts of development on public facilities and services.

Policy 1b. The City will review the existing adopted development fees and adopt additional development fees, as necessary, to insure that new growth is paying its fair share of the costs associated with the provision of facilities for police, parks, fire protection, sanitary sewer, water and flood control.

Policy 1c. All new development shall contribute to or participate in the improvement of the police, parks, fire protection, sanitary sewer, water and flood control systems in proportion to the demand generated by the project occupants and users.

Objective 2. Achieving Performance Standards: The City shall maintain the public facilities and services performance standards.

Policies/Implementation Measures

Policy 2a. Clayton will approve development projects only after making findings that: (1) after participation in the adopted development mitigation programs, performance standards will be

maintained; or (2) project-specific mitigation measures will be required of the project to insure maintenance of standards.

Policy 2b. Capital projects necessary to maintain and improve public facilities and services to comply with the performance standards will be included in Clayton's 5-year CIP.

Policy 2c. Clayton will monitor and periodically review the adopted performance standards to determine if they accurately reflect the desires of the City.

Development Impact Fees

The City of Clayton collects Development Impact Fees and other related fees in order to fund certain public services and facilities. The Community Facilities Development fee (Clayton Municipal Code [CMC] Section 3.16.020) is intended to mitigate the unfavorable impacts attributed to new development by providing financing for improvements for certain public facilities and requiring developers of new projects to pay their fair share of the construction costs of these improvements. The Fire Development Protection fee (CMC Section 3.18.040) establishes development fees in order to provide a method of financing fire protection facilities necessitated by the needs of new construction and development for adequate fire protection facilities and services. The Parkland Dedication fee (CMC Section 16.12.010) provides a method to pay for community recreation facilities and programming.¹³ The City also assesses open space in-lieu fees, on a project-by-project basis (CMC Section 17.28.100) to ensure certain projects include active and passive open space.

City Municipal Code

Title 17, Zoning, Chapter 17.33, Public Facility (PF) District, provides a list of permitted uses and regulations for lots, setbacks, building heights, and other design guidelines for public facilities located on properties zoned PF District. Permitted uses in the PF District include governmental and quasi-public administrative offices; publicly-owned parks, recreational facilities, libraries, museums, community centers and schools; fire stations and public safety facilities; government corporation yards; public utilities facilities; and similar public service and ancillary uses. CMC Section 17.28.100 (Open Space) establishes requirements for active and passive open spaces to be included, and/or payment of fees to be paid, with developments on land zoned Planned Development (PD) District.

4.15.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the project would have a significant impact related to public services if it would:

- a) 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:
 - I. Fire protection;
 - II. Police protection;
 - III. Schools;
 - IV. Parks; or
 - V. Other public facilities.

4.15.4 Impacts and Mitigation Measures

This section describes potential impacts related to the provision of public services, which could result from the implementation of the HEU. This section also recommends mitigation measures as needed to reduce significant impacts.

New or Altered Government Services

Impact PS-1 – Would the HEU 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:

I. Fire Protection

Analysis of Impacts

In Chapter 3, Project Description, Table 3-3 indicates the HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area, which represents a 21 percent increase over existing (2020) conditions. This increase in housing would result in a population increase of up to 2,364 additional persons who would generate an increased need for fire protection services.

The existing General Plan contains a number of goals, objectives, and policies relative to fire protection services. The *Safety Element* has Goal 1 that deals with reducing risk in the City, and Objectives 10 and 11 specifically address fire protection service and incorporating fire protection into development design to reduce risk, having the fire department review all new development, and using development impact fees to fund fire protection in the City. Objective 11 also aims to reduce fire risk by promoting fire safe residences in high-risk areas. Finally, Goal 1 of the *Growth Management Element* helps to ensure that new residential, business, and commercial growth pays for the facilities required to meet the demands resulting from that growth. These existing

General Plan goals, objectives, and policies help the City ensure adequate fire protection services are provided to its residents now and in the future.

In addition, the HEU contains the following goals, objectives, and policies relative to fire protection services:

Goal 1. *Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.*

Policy 1.2 *Impacts of New Housing.* Consider and mitigate the impacts of new housing on the City's infrastructure, open space, natural resources, and public services.

The increase in City residents and land use intensity in the Planning Area would result in an incremental increase in demand for fire services and existing fire protection resources within the City. However, with continued payment of fees for fire protection services from CCCFPD, future housing projects developed mainly within the urbanized portion of the Planning Area would not extend Clayton's service area beyond its current municipal boundary and would not have a significant effect on fire service demands. Development Impact Fees (DIF) for fire protection services and facilities are based on staffing levels plus overhead cost shares established at the time the annual CCCFPD contract is approved by the City Council. These fees are updated annually based on salary and employee benefits and overhead as agreed by the CCCFPD and the City. At present, the City's DIF for fire protection service is \$300 per single family residential unit, \$200 per mobile home or multi-family unit, and \$0.20 per square foot for non-residential development per the City's Municipal Code Section 3.18.040.

In the event that additional fire protection facilities and/or resources are needed in the Planning Area, property tax revenue from new development would also provide the districts in the county with a funding source to meet new growth needs. Additionally, development within the proposed Planning Area would be subject to current Building Code and CCCFPD requirements for fire sprinkler systems, fire alarm systems, fire flow, and equipment and firefighter access, as well as Fire Code requirements. Compliance with these standards would be ensured through the plan check process prior to the issuance of building permits and would reduce the potential for fire emergencies at future project sites. Finally, based on the location of the fire stations in and around the City and the location of housing inventory sites inside the current municipal boundary, it is expected that response times would be within the national standard of 5 minutes or less for fires and basic life support, and 8 minutes or less for advanced life support after implementation of the HEU.

For these reasons, the construction or expansion of existing fire facilities would not be required as a result of adoption of the HEU. Therefore, the HEU would not result in substantial adverse physical impacts associated with the provision of new or physically altered facilities.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

II. Police Protection

Analysis of Impacts

In Section 3, Project Description, Table 3-3 indicates the HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area, which represents a 21 percent increase over existing (2020) conditions. This increase in housing would result in a population increase of up to 2,364 additional persons who would generate an increased need for police protection services. The increase in City residents and land use intensity in the Planning Area would result in an increased demand for Clayton Police Department services and resources within the City. Future housing would incrementally increase service ratios and needs as growth occurs, but it is not expected to require construction of new police facilities. Property tax growth would provide the City with at least a portion of the funding needed to meet additional staffing and equipment needs generated by new growth. Finally, based on the way police services are distributed in and around the City (i.e., via patrol cars), the small size of the City, and the location of the housing inventory sites within City limits such that no expansion beyond the current municipal boundary would occur, it is expected that response times within the urbanized portions of the City where most of the HEU growth would occur would be within the national standard of 5 minutes or less for primary emergency calls.

The existing General Plan also contains a number of goals, objectives, and policies relative to police protection. The *Safety Element* has Goal 1 that deals with reducing risk in the City, and Objective 12 and its policy 12a encourage community involvement to help reduce the risk of crime over the long-term. In addition, policy 12b requires the Planning Commission and Police Department to review proposed new development projects to assure they contain crime reduction design and planning. *Community Facilities Element* Goal 1 requires planning for future infrastructure and programs to serve the community, which is supported by Objective 5 and its policies 5a-c to maintain fees on new development for various municipal services and/or improvements based on actual cost experience of the City (including police service). Finally, the *Growth Management Element* contains Goal 1 under Public Facilities and Services that also requires crime prevention design for new development, as well as Objective 1 and its supporting policies 1a-c which require the City to maintain a mitigation program to ensure that new development pays its fair share of the costs associated with growth. These existing General Plan goals, objectives, and policies help the City ensure that adequate police protection facilities and services are provided to its residents now and in the future. In addition, the proposed HEU contains the following goals, objectives, and policies relative to police protection services:

Goal 1. *Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.*

Policy 1.2 *Impacts of New Housing.* Consider and mitigate the impacts of new housing on the City's infrastructure, open space, natural resources, and public services.

The need for new or expanded police facilities is not expected as result of adoption of the HEU. Therefore, the HEU would not result in substantial adverse physical impacts associated with the provision of new or physically altered facilities.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

III. Schools

Analysis of Impacts

In Section 3, Project Description, Table 3-3 indicates the HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area, which represents a 21 percent increase over existing (2020) conditions. This increase in housing would result in a population that would include some school-aged children. These new resident children would require school facilities and services for approximately 13 years (ages 5-18 and Kindergarten through 12th grade). The 868 new housing units under the HEU could potentially generate up to 2,364 additional persons within the Planning Area which, according to the School Fee Justification Study student generation factors, would result in an estimated additional 274 K-12 students. This would equate to an additional 136 elementary school students, 64 middle school students, and 74 high school students.¹⁴ In a letter dated June 3, 2022, Dr. Lisa Gonzales, Chief Business Officer of MDUSD, states that MDUSD does not have future capacity for additional students at this time in its current school sites and that any changes that result in additional housing would create increased need for student housing in the form of new schools.

New residential development in Clayton is required to pay the legally established School Impact Fees (SIFs) at the time any new development is proposed. Since the SIFs are based on building square footage, it is not possible at this time to know exactly how much SIFs funds would be generated by new development under the proposed HEU. As stated in California Government Code Section 65996, payment of school impact fees in accordance with California Government Code Section 65995 and/or Education Code Section 17620 is deemed to constitute full and complete mitigation for potential impacts to schools caused by development.

MDUSD can also enter directly into additional, voluntary mitigation agreements with residential developers in order to offset increased demand for school facilities from future residential development, and the City will continue to assist the MDUSD in this capacity by sending development applications to the MDUSD for future residential developments within the MDUSD's boundaries.

For the reasons stated above, impacts related to the need for new school facilities as a result of the proposed HEU would be less than significant with adherence to existing regulations and statutory requirements for payment of SIFs.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

IV. Parks

Analysis of Impacts

The residents, employees, and visitors of the Planning Area use nearby parks and recreation facilities. At present, City-owned and operated parks constitute 25.3 acres of parkland. The HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area, which represents a 21 percent increase over existing (2020) conditions. This increase in housing would result in a population increase of up to 2,364 additional persons, which would generate an incremental increase in demand for recreational facilities and programs. At present, the City maintains approximately 2.25 acres of parkland per 1000 residents. Clayton residents

have access to open space areas and recreational trails in the adjacent Mt. Diablo State Park and in nearby regional facilities outside of City boundaries. The current General Plan does not indicate the City has an identified parkland deficiency.

The additional 2,364 residents from implementation of the proposed HEU would generate a need for an additional 11.8 acres of parkland based on state and federal guidelines (5 acres per 1,000 population). Implementation of the proposed HEU would decrease the City's existing park ratio to 2.0 acres per thousand residents if no additional parks are added as housing increases under the HEU. For additional information on park facilities and services, see Section 4.16, *Recreation*.

The City currently has 25.3 acres of parkland, most of which is in the 20-acre Clayton Community Park. Based on the current national and state recommended standard (National Recreation and Parks Association (NRPA) and the State Quimby Act) of 5 acres per 1,000 population, the City should have 61.3 acres of parkland at present. In addition, the additional 2,364 residents expected from new housing under the HEU would generate a need for an additional 11.8 acres based on the federal and state standard.ⁱ

The *Community Facilities Element* of the existing General Plan contains a number of goals and policies relative to parks and recreational facilities. Policy 3a under Objective 3 of Goal 1 requires the City to identify the local need for various recreational facilities, including soccer/playfields, a swimming complex, tennis courts, library, community playhouse and public meeting rooms. In addition, Objective 2 of the *Open Space/Recreation Element* requires the City to develop neighborhood parks within the greenbelt system adjacent to other community facilities. More specifically, Policies 2a through 2d of this Objective require the City to: maintain parkland dedications by new development to fund new parks; continue working with local schools for new parkland and shared facilities; and explore methods to maintain parks in the future. Objective 3 expands these requirements by applying the Public Park/Open Space designation to areas of public park and recreation facilities to preserve natural resources and provide for outdoor recreation.

In addition to these existing goals, objectives, and policies, the following goals and policies of the proposed HEU address recreational facilities or programs to accommodate increased population from additional housing in the City:

Goal 1. *Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.*

Policy 1.2 *Impacts of New Housing.* Consider and mitigate the impacts of new housing on the City's infrastructure, open space, natural resources, and public services.

These goals, objectives, and policies of the existing General Plan and HEU demonstrate the City's long-term commitment to providing sufficient parks and recreational facilities for its residents.

All new dwelling units developed under the proposed HEU would be subject to the City's Development Impact Fee (DIF) fees¹⁵ for parkland dedication – the fee for single family residential is currently \$2,569 per unit, and the fee for multi-family residential is currently \$1,666.00 per unit or \$2,180.00 per duplex unit. This parks and recreation funding mechanism would offset the incremental increase in demand for park facilities from implementation of the HEU. All future

ⁱ 2,364 thousand population times 5 acres per thousand population = 11.8 acres

residential development within the City would be required to pay the parkland DIF. For the above reasons, impacts to existing recreational facilities would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

V. Other Public Facilities

Analysis of Impacts

Other public facilities and services provided within the Planning Area include library services and City administrative services.

The additional 2,364 residents that could result from implementation of the proposed HEU would generate an incremental need for additional library services and possibly City administrative services. Although many library and City services are now available online, it is possible this increased demand would result in an increased need for library or City administration facilities. The City currently maintains a Development Impact Fee (DIF) for “Community Facilities Development” that could be used for new or expanded library or City administration facilities in the future.

The existing General Plan contains a number of goals, objectives, and policies relative to community facilities. The *Community Facilities Element* contains Goal 1 that emphasizes efficient infrastructure plans and Objective 1 strives to identify future community facility needs. In that regard, Policy 1g specifically mentions City Hall, library, and other cultural facilities, while Objective 3 and Policy 3a focus on facilities desired by the community, such as soccer/playfields, swimming complexes, tennis courts, library, community playhouse and public meeting rooms. The implementation measures for these various goals, objectives, and policies require the establishment and regular updating of impact fees for new development, which the City maintains as previously discussed.

In addition, the Public Facilities and Services sub-section of the City’s *Growth Management Element* contains Goal 6 which states that “new residential, business, and commercial growth needs to pay for the facilities required to meet the demands resulting from that growth”. Objective 1 of that goal is to maintain a development mitigation program for that purpose (i.e., to pay for impacts of future growth).

In addition to these existing goals, objectives, and policies, the following goals and policies of the proposed HEU address recreational facilities or programs to accommodate increased population from additional housing in the City:

Goal 1. *Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.*

Policy 1.2 *Impacts of New Housing.* Consider and mitigate the impacts of new housing on the City’s infrastructure, open space, natural resources, and public services.

The Community Facilities DIF currently in place in the City is \$450 per single family residential unit and \$125 per multi-family residential unit per CMC Section 3.16.020. Specific community

facilities, either new, expanded, or rehabilitated, are included in the City's Capital Improvement Program (CIP), which typically projects planned public improvements over 5-year period so it is clear what facilities will be added in the future in the City as growth occurs.

Based on available evidence, it is anticipated that existing library and City administrative services could accommodate the increase in demand due to implementation of the proposed HEU with creating new or expanded facilities. Therefore, impacts to other public facilities from growth in the area would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact PS-2 – Would the HEU cause substantial adverse cumulative impacts with respect to public services?

Analysis of Impacts

The HEU does not include specific housing development projects on specific sites at this time. Future development in the Planning Area would generally increase land use intensities and overall population in the City and County. These increases could then cause incremental and cumulative increases in the number of calls for fire and/or police protection services, the need for park facilities, or expanded or new schools. Development of residential projects within the boundaries of the MDUSD that serves the Planning Area would lead to incremental increases in the number of students needed to be housed and educated. Development of residential projects in the Planning Area would also lead to increases in the number of people who use the City's parks and library facilities and City services.

The HEU would result in an increase of approximately 2,364 residents in the Planning Area. The increase in demand for public services in the City attributable to the HEU would be incremental as growth occurred over time and would be offset to a large degree by DIF payments and other development fees and increased property tax revenues to the City.

Projects constructed within the Planning Area over the life of the HEU would also be required to be developed in accordance with applicable fire and building codes and emergency access requirements. Compliance with these requirements would help prevent and/or ameliorate fire emergencies (automatic sprinkler systems and fire alarms) and would help facilitate more expedient emergency response (adequate fire flows, turning radii, width of emergency accesses). These design practices and operational practices would also help lessen the demand for police protection services within the Planning Area by creating "defensible space" as encouraged by the Police Department and other public safety organizations.

The CCCFPD reviews fire station placement and fire services through its annual budget process, and resources are expanded or reassigned as necessary to meet increases in service demands. Similarly, the Clayton Police Department annually evaluates its service needs. Payment of Development Impact Fees and increased property tax revenues by future projects/residents in the Planning Area would help offset the costs of increased service needs as necessary and would ensure that performance objectives for fire and police services are not substantially affected by

incremental increases in land use intensity within service areas. The need for new facilities as a result of these development projects has not been identified by either department.

Regarding school services, the contribution of future housing projects within the Planning Area to increased demand for such educational facilities and services could be substantial. However, MDUSD can accommodate increases in students resulting from specific development projects on specific sites in the future through the collection of School Impact Fees as prescribed by State Law and which is defined as providing “full and complete” for potential impacts to school facilities.

Potential cumulative impacts with respect to incremental increases in demand for parks would be offset by required DIF fees, property tax revenue increases and City’s subdivision ordinance dedications/fees depending on the specific jurisdiction.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.15.5 References

- ¹ Fire District Annexation Feasibility Study, Phase Two, Volumes 1 and 2, CCCFPD, July 2021. <https://cccfpd.org/annexation-1> [Accessed May 2022].
- ² “County Office database, Fire Departments in Clayton, California. <https://www.countyoffice.org/clayton-ca-fire-departments/> [Accessed May 2022].
- ³ Contra Costa County Fire Protection District. *Station Addresses*. (2021). https://cccfpd.org/station_address/ [Accessed May 2022].
- ⁴ Email Correspondence with Contra Costa County Fire Protection District Assistant Chief Terence Carey. May/June 2022.
- ⁵ City of Clayton. *Adopted City Budgets*. (2021). <https://claytonca.gov/fc/finance/budgeting/adopted-citybudgets-page/city-adopted-budget-fy-2022.pdf> [Accessed May 2022].
- ⁶ Email Correspondence with Clayton Police Department Interim Police Chief Joseph Kreins. May/June 2022.
- ⁷ Mount Diablo Unified School District. *Our Schools*. (2021). <https://www.mdusd.org/ourschools> [Accessed May 2022].
- ⁸ School Fee Justification Study, Mount Diablo Unified School District, April 27, 2020. <https://mdusd-ca.schoolloop.com/file/1516177890045/1575703006235/7310912508292245420.pdf> [Accessed May 2022].
- ⁹ City of Clayton. *Trail System*. (2022). <https://claytonca.gov/parks-and-recreation/trail-system/> [Accessed May 2022].
- ¹⁰ City of Clayton. *Trail System*. (2022). <https://claytonca.gov/parks-and-recreation/trail-system/> [Accessed May 2022].
- ¹¹ City of Clayton. *Trails and Open Space*. (2022). <https://claytonca.gov/maintenance/trails-and-open-space/> [Accessed May 2022].
- ¹² City of Clayton. *Library*. (2021). <https://claytonca.gov/library/> [Accessed May 2022].
- ¹³ Development Impact Fees outlined in Municipal Code Section 16.12.010 <https://claytonca.gov/fc/community-development/planning/applications-and-fees/development-impact-fees-012216.pdf> [Accessed May 2022].
- ¹⁴ School Fee Justification Study, Mount Diablo Unified School District, April 27, 2020. <https://mdusd-ca.schoolloop.com/file/1516177890045/1575703006235/7310912508292245420.pdf> [Accessed May 2022].
- ¹⁵ Development Impact Fees outlined in Municipal Code Section 16.12.010 <https://claytonca.gov/fc/community-development/planning/applications-and-fees/development-impact-fees-012216.pdf> [Accessed May 2022].

4.16 – RECREATION

This EIR chapter addresses recreation impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). Issues of interest are recreation impacts identified by the CEQA Guidelines and whether the HEU would: 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, or include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.16.1 Environmental Setting

The City of Clayton has seven parks on approximately 25.3 acres, plus 27 miles of trails spread across approximately 515 acres of natural open space.¹ Along with parks maintained by the City, Mt. Diablo State Park borders the Planning Area to the south, and the Black Diamond Mines Regional Preserve managed by the East Bay Regional Park District bounds Clayton to the northeast. Planned linkages between these two parks will create 40,000 acres of open space surrounding most of Clayton.² Creeks running through Clayton connect parks through a natural greenbelt system. Parks are generally located in the eastern portion of the City, off Oakhurst Drive and Marsh Creek Road. With local parks and the surrounding county and state open spaces available, there are park options available to all residents by foot, bike, or short drive.

Community Recreation Facilities

The City of Clayton has multiple facilities and public areas for comfortably hosting events with large groups of people. Recreation facilities offer spaces for community-members to stay active. Clayton Community Park and Gym offer sports amenities for baseball, soccer, basketball and volleyball, among other activities. The Clayton Community Gym was developed for public use through a joint effort between the Clayton Redevelopment Agency and Mount Diablo Unified School District, and it is currently managed by the City.³ Tables 4.16-1 (City Parks and Recreation Facilities) and 4.16-2 (Recreation Buildings and Public Facilities) list City-managed parks and public facilities and their amenities in Clayton.

Table 4.16-1
City Parks and Recreation Facilities

Park Name	Address	Amenities
Community Park (20 acres)	7411 Marsh Creek Road	Picnic Tables, Rentable Picnic Areas, Rentable Group Picnic Areas, Barbeques, Rentable Baseball Diamonds, Rentable Soccer Fields, Play Equipment, Restrooms, Drinking Fountains, Grass, Trails/Trail Access
The Grove (0.6 acre)	6100 Main Street	Picnic Tables, Rentable Picnic Areas, Rentable Group Picnic Areas, Play Equipment, Restrooms, Drinking Fountains, Water Play Areas, Grass, Trails/Trail Access
Lydia Lane Park (2.4 acres)	North Lydia Lane	Picnic Tables, Play Equipment, Trails/Trail Access, Grass

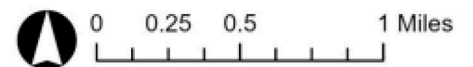
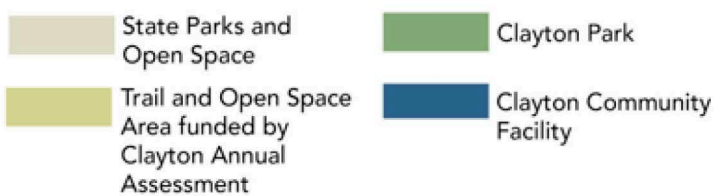
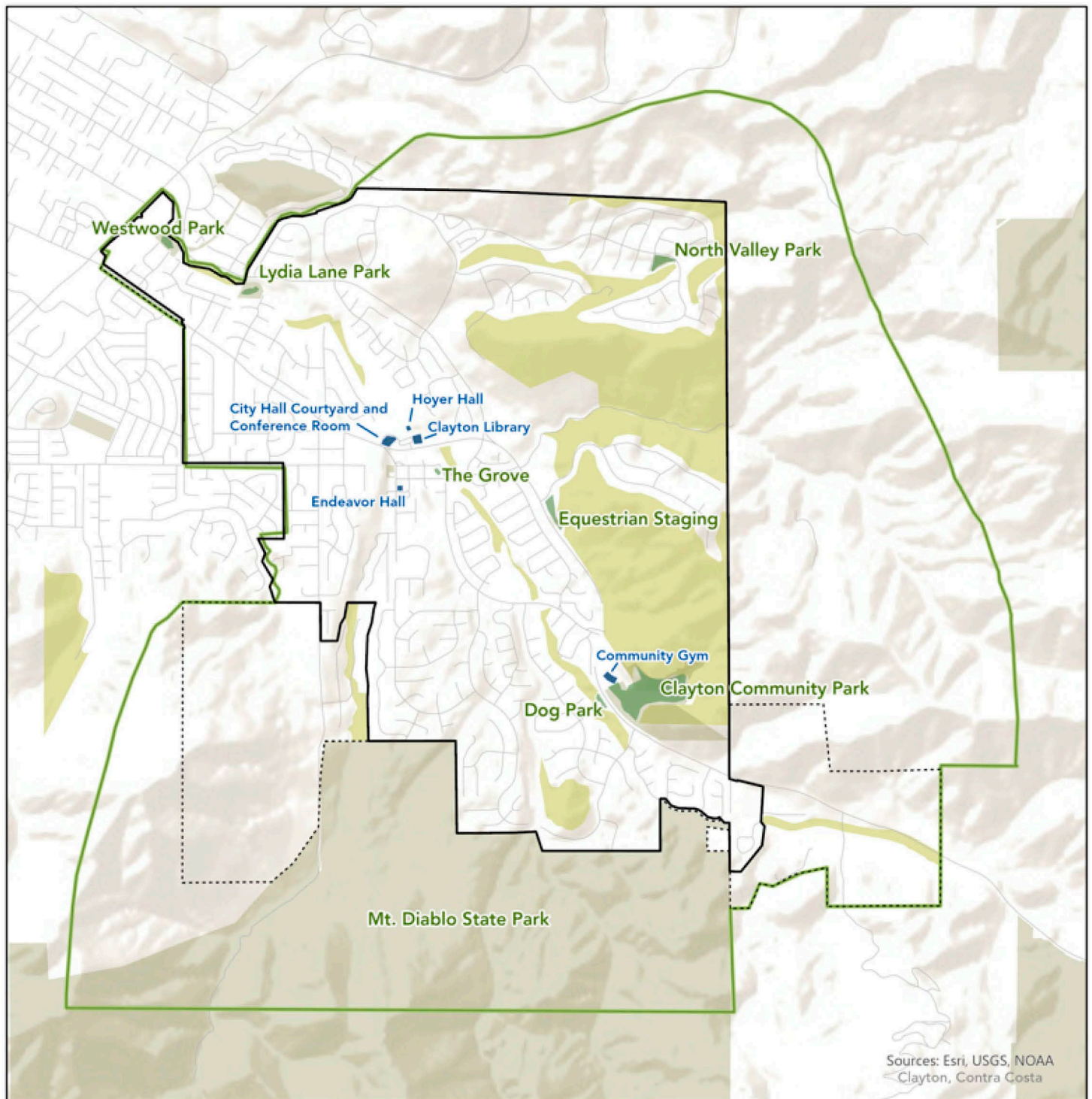
Park Name	Address	Amenities
North Valley Park (1.3 acres)	Keller Ridge Drive at Golden Eagle Way	Picnic Tables, Play Equipment, Trails/Trail Access, Grass
Westwood Park (0.3 acre)	Access from Cardinet Trail at O'Hara Court	Picnic Tables, Trails/Trail Access, Grass
Dog Park (0.5 acre)	Across from Community Park	Picnic Tables, Drinking Fountains, Trails/Trail Access, Dogs Allowed Off Leash
Equestrian Staging Area (0.2 acre)	Peacock Creek Drive at Clayton Road	Picnic Tables, Trails/Trail Access, Horse Trailer Parking
Total Parkland = 25.3 acres	--	--
Source: City of Clayton: <i>Parks and Recreation</i> . (2021).		

**Table 4.16-2
Recreation Buildings and Public Facilities**

Facility Name	Address	Programs
City Hall First Floor Conference Room	6000 Heritage Trail	Room Rental
City Hall Courtyard	6000 Heritage Trail	Courtyard Rental
Clayton Community Gym	700 Gym Court	Available to Public Outside of School Hours. Host Youth Sports Leagues & Clinics
Endeavor Hall	6008 Center Street	Hall and Outdoor Courtyard Rental
Fountain	Oakhurst Drive/Center Street/Clayton Road	Operational Requests Available
Hoyer Hall	6125 Clayton Road	Hall Rental
Clayton Community Library	6125 Clayton Road	Study Rooms, Story Room, Hoyer Hall, and Informational Resources
Source: City of Clayton: <i>Parks and Recreation</i> . (2021).		

Trails and Open Space

Trails, greenways, and open space within the Planning Area are illustrated in Exhibit 4.16-1 (Trails, Greenways, and Open Space). Clayton's location on the northern slope of Mt. Diablo State Park offers community members nearby access to an extensive trail system with scenic views. Clayton's trail system is also affiliated with the Mokelumne Crest to Coast Trail which travels from the Carquinez Strait to the Sierra Nevada, and the American Discovery Trail, which runs through the continent to Delaware Bay on the East Coast.⁴ Trails within the City include the George Cardinet Trail, which follows Mt. Diablo Creek for 1.46 miles, starting at the Clayton Community Library and moving northwest until ending at Lydia Lane Park. The Diablo View Trail connects with the former trail, beginning at the Library and winding down southwards for 1.4 miles along Clayton Road. The Blue Oak Trail starts off Oakhurst Drive, and winds through open space for 1.64 miles, and features a steeper incline and switchbacks.⁵ The Planning Area also includes trail access points that connect into Mount Diablo State Park and the Black Diamond Mines Regional Preserve. Clayton City Council formed a Trails and Landscape Committee; this body oversees the operations of the Landscape Maintenance District and acts as an outlet for citizens to voice their opinions on matters relating to road and trail maintenance, landscaping, and other open space issues.



This Page Intentionally Left Blank.

4.16.2 Regulatory Framework

State

State Public Park Preservation Act (California Public Resource Code Sections 5400 – 5409)

The State Public Park Preservation Act is the primary instrument for protecting and preserving parkland in California. Under the Act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This ensures a no-net-loss of parkland and facilities.

Quimby Act (California Government Code Section 66477)

The Quimby Act allows cities and counties to adopt park dedication standards/ordinances requiring developers to set aside land and/or pay fees in lieu of parkland dedication. The City has adopted an ordinance implementing the provisions of the Quimby Act into its subdivision ordinance (Clayton Municipal Code Section 16.12.010 - Parkland Dedication).

Local

City General Plan

The 2000 City General Plan includes goals, objectives, and policies to minimize potential damage and hazards to public services including, but not limited to, police, fire, parks, schools, and other facilities:

Community Facilities Element⁶

Goal 1. To provide for an efficient infrastructure and facility plan and program for improvement of existing infrastructure.

Objective 1. To establish a series of facility plans to identify existing conditions and to identify a program to fulfill current and future needs.

Policy 1g. Identify needs for public facilities including City Hall capacity, library and cultural facilities.

Objective 3. To provide cultural and sports facilities for the community.

Policy 3a. Identify the facilities desired by the community (i.e., soccer/playfield, swimming complex, tennis courts, library, community playhouse and public meeting rooms).

Implementation Measure 1. Requires fees and/or conditions of development approval from commercial and residential development; identify other funding sources.

Objective 5. To charge a fee for various municipal services and/or improvements based on actual cost experience of the City or needs of the community as a whole.

Policy 5e. Require a Parkland Dedication Fee from residential and non-residential for the purpose of implementing the Open Space/Conservation Element.

Open Space/Conservation Element^Z

Goal 1. To maintain a system of active open space along stream channels and passive open space within hillsides as a means to preserve the rural character of the community.

Objective 1. To promote the City's greenbelts as the basis of its open space system.

Policy 1d. Promote City/regional mapping of Clayton greenbelt system and city – system linkages to State and regional parks and trails.

Objective 2. To develop neighborhood parks within the greenbelt system adjacent to other community facilities.

Policy 2a. Continue requirement for parkland dedication for neighborhood parks that are compatible with the system of greenbelts.

Policy 2b. Set aside neighborhood parkland where new school sites are identified to establish common facilities and help promote their use.

Policy 2c. Review each park/greenbelt area for maintenance needs, and identify alternative methods to provide maintenance including home – owner associations, park districts, volunteer measures and dedication to State and regional park systems.

Policy 2d. Consider establishment of a community park.

Objective 3. To establish an open space conservation designations to preserve natural resources, to manage resources, to provide for outdoor recreation, to promote health and safety and to ensure orderly growth.

Policy 3a. Apply Public Park/Open Space designation to areas of public park and recreation facilities.

Implementation Measure 1. Prepare a greenbelt path map for public information.

Implementation Measure 2. Develop pathway standards.

Implementation Measure 4. Investigate East Bay and State park fund applications, gift dedication, purchase and resale of property, district formation and scenic easements.

City Municipal Code

Clayton City Municipal Code (CMC) Title 11, Parks, Recreation, and Leisure, Chapter 11.04, City Parks, provides design and operational guidelines for local City parks.⁸ In addition, Title 17, Zoning, Chapter 17.33, Public Facility (PF) District, provides a list of permitted uses and regulations for lots, setbacks, building heights, and other design guidelines for public facilities.

Development Impact Fees

The City of Clayton assesses Development Impacts Fees on new development in the City to fund community facilities development (CMC Section 3.16.020) and parkland dedication (CMC Section 16.12.210) to pay for community recreation facilities.⁹ The City also assesses open space in lieu fees on a project-by-project basis (CMC Section 17.28.100) to ensure certain projects include active and passive open space.

Local School District

The City maintains agreements with the local school district for certain recreation uses and facilities within Clayton. This arrangement expands the supply of specialized park space and benefits local youth. The City is committed to the joint agreement involving maintenance, scheduling, safety and liability. The Planning Area is served by the Mt. Diablo Unified School District, which oversees operations of 31 elementary, 9 middle, and 5 high schools throughout Clayton and in nearby unincorporated communities and the cities of Concord, Martinez, Pleasant Hill and Pittsburg. One elementary school (Mt. Diablo Elementary) and one junior high school (Diablo View Middle) are within Clayton's corporate boundaries.

4.16.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to recreation if it would:

- a) 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; or
- b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.16.4 Impacts and Mitigation Measures

This section describes potential impacts related to increases in the use of existing recreational facilities and the potential impacts from construction of recreational facilities.

Local and Regional Recreational Facilities

Impact REC-1 – Would the HEU 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?

Analysis of Impacts

The residents, employees, and visitors of the Planning Area use nearby parks and recreation facilities. As shown in Table 4.16-1, City-owned and operated parks encompass 25.3 acres of parkland. The HEU identifies how the City plans to accommodate its RHNA of at least 570 units. In Section 3, Project Description, Table 3-3 indicates that the HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area, which represents a 21 percent increase over existing (2020) conditions. This increase in housing would result in a population increase of up to 2,364 additional persons who would generate an increased need for new or expanded recreational facilities or programs.

Both the National Recreation and Parks Association (NRPA)¹⁰ and the State Quimby Act¹¹ recommend a city maintain 5 acres of parkland per 1,000 population. Based on this guideline and the City's 2020 population of 12,265 residents, the City should have 61.3 acres of parkland at present. Currently, the City has approximately 25.3 acres in 7 City parks to serve City residents. Since it currently has 25.3 acres of parkland, most of which is in the 20-acre Community Park, the City is currently deficient by 36 acres of dedicated parkland according to the NRPA and Quimby Act standards. However, the City does not currently have a locally-adopted parkland standard, and the General Plan does not identify a parkland deficiency within the City. At present,

the City maintains approximately 2 acres of parkland per 1,000 residents, and there does not appear to be an identified parkland deficiency within the City based on local standards.

The *Community Facilities Element* of the existing General Plan contains a number of goals and policies relative to parks and recreational facilities. Policy 3a under Objective 3 of Goal 1 requires the City to identify the local need for various recreational facilities, including soccer/playfields, a swimming complex, tennis courts, library, community playhouse and public meeting rooms. In addition, Objective 2 of the *Open Space/Recreation Element* requires the City to develop neighborhood parks within the greenbelt system adjacent to other community facilities. More specifically, Policies 2a through 2d of this Objective require the City to: maintain parkland dedications by new development to fund new parks; continue working with local schools for new parkland and shared facilities; and explore methods to maintain parks in the future. Objective 3 expands these requirements by applying the Public Park/Open Space designation to areas of public park and recreation facilities to preserve natural resources and provide for outdoor recreation.

In addition to these existing goals, objectives, and policies, the following goals and policies of the proposed HEU address recreational facilities or programs to accommodate increased population from additional housing in the City:

Goal 1. *Maintain and enhance long-established housing and neighborhoods while accommodating moderate growth.*

Policy 1.2 *Impacts of New Housing.* Consider and mitigate the impacts of new housing on the City's infrastructure, open space, natural resources, and public services.

These goals, objectives, and policies of the existing General Plan and HEU demonstrate the City's long-term commitment to providing sufficient parks and recreational facilities for its residents. The additional 2,364 residents from implementation of the proposed HEU would generate a need for an additional 11.8 acres of parkland based on state and federal guidelines (5 acres per 1,000 population). Implementation of the proposed HEU would decrease the City's existing park ratio of 2.0 acres per thousand residents, without accounting for regional and state parks just outside City limits and if no additional parks are added as housing increases under the HEU. All new dwelling units developed under the proposed HEU would be subject to the City's Development Impact Fee (DIF) fees for parkland dedication – the fee for single family residential is \$2,569 per unit and the fee for multi-family residential is \$1,666.00 per unit or \$2,180.00 per duplex unit. This parks and recreation funding mechanism would offset the incremental increase in demand for park facilities from implementation of the HEU by providing funding for additional parks in the Planning Area as population increases. All future residential development within the City would be required to pay the parkland DIF. For the above reasons, impacts to existing recreational facilities would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Expansion of Recreational Facilities

Impact REC-2 – Does the HEU include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Analysis of Impacts

The HEU does not propose the construction or expansion of any specific recreational facilities. Based on the analysis in Impact REC-1, new housing under the HEU would increase the City's population (approximately 2,364 residents) which would increase the need for new or additional recreational facilities. New development would be required to provide onsite facilities or contribute in lieu fees for providing offsite recreational facilities per the City's General Plan (Community Facilities and Open Space/Recreation Elements). New developments under the HEU (including those that propose new recreational facilities) would be required to prepare and process CEQA compliance documentation and mitigate impacts from construction of new recreational facilities related to those developments, if necessary. In addition, any new parks or recreational facilities proposed by the City would require CEQA documentation and mitigation if necessary. Therefore, any impacts from new recreational facilities associated with new development under the HEU would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact REC-3 – Would the HEU cause substantial adverse cumulative impacts with respect to Recreation?

Analysis of Impacts

Development of residential projects within the City or its Sphere of Influence would incrementally increase the usage of parks and recreational facilities in the City and surrounding area. This additional use could potentially result in the need for additional parks and recreational facilities. However, such new development would be subject to the City's DIF parkland fee. Other cities in the surrounding area, as well as Contra Costa County¹² and the East Bay Regional Park District¹³, have similar park funding mechanisms which would help offset the incremental and cumulative increase in demand for park facilities from implementation of the HEU as well as other residential developments in the vicinity of the Planning Area.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.16.5 References

- ¹ City of Clayton. *Trail System*. (2022). <https://claytonca.gov/parks-and-recreation/trail-system/> [Accessed May 2022].
- ² City of Clayton. *Trail System*. (2022). <https://claytonca.gov/parks-and-recreation/trail-system/> [Accessed May 2022].
- ³ City of Clayton. *Community Gym*. (2022). <https://claytonca.gov/parks-and-recreation/community-gym/> [Accessed May 2022].
- ⁴ City of Clayton. *Trails and Open Space*. (2022). <https://claytonca.gov/maintenance/trails-and-open-space/> [Accessed May 2022].
- ⁵ City of Clayton. *Trails Inventory and Evaluation*. (2008). <https://claytonca.gov/fc/maintenance/clayton-trails-inventory.pdf> [Accessed May 2022].
- ⁶ City of Clayton. General Plan Revision and EIR. *Section VI Open Space/Conservation Element*. (2000). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-VI-open-space-and-conservation-element.pdf> [Accessed May 2022].
- ⁷ City of Clayton. General Plan Revision and EIR. *Section IX Community Facilities Element*. (2001). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-IX-community-facilities-element.pdf> [Accessed May 2022].
- ⁸ City of Clayton. *Municipal Code, Title 11, Parks, Recreation, and Leisure, Chapter 11.04, City Parks, and Title 17, Zoning, Chapter 17.33, Public Facility (PF) District*. https://library.municode.com/ca/clayton/codes/municipal_code [Accessed April 2022].
- ⁹ Development Impact Fees outlined in Municipal Code Section 16.12.010 <https://claytonca.gov/fc/community-development/planning/applications-and-fees/development-impact-fees-012216.pdf> [Accessed May 2022].
- ¹⁰ National Recreation and Parks Association (NRPA), NRPA Park Metrics. <https://www.nrpa.org/publications-research/ParkMetrics/> [Accessed May 2022].
- ¹¹ The Quimby Act, California Government Code Section 66477. <https://codes.findlaw.com/ca/government-code/gov-sect-66477.html> [Accessed May 2022].
- ¹² Contra Costa County, Parks and Recreation Department [Accessed May 2022]. <https://www.contracosta.ca.gov/446/Parks-and-Recreation>
- ¹³ East Bay Regional Park District <https://www.ebparks.org/parks> [Accessed May 2022].

4.17 – TRANSPORTATION

This EIR chapter includes a description of the physical and regulatory transportation setting for the City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”), and a description of the transportation impacts with respect to all modes of travel (vehicular, bicycle, pedestrian, and transit).

4.17.1 Environmental Setting

The City of Clayton is to the southeast of Concord, with the remainder of boundaries being made up of unincorporated open space and Mt. Diablo State Park. Clayton’s location in Central Contra Costa County is positioned away from any major highways. Major traffic is instead carried over several roadways in and around the city; there are no rail stations or railways in Clayton. The community is characterized by suburban residential homes surrounding the Town Center, the city’s downtown. The remainder of discussion in Environmental Setting will identify the existing roadways and personal and public modes of transportation.

Roadway Network

The Clayton circulation system consists of approximately 20.6 miles of arterial collector streets, local streets, private streets, cul-de-sacs, and greenbelts. The Clayton street classification system is described below.¹ Table 4.17-1 (Primary Street Descriptions) describes the primary streets within and immediately outside the City of Clayton. Clayton’s roadway network is shown in Exhibit 4.17-1 (Roadway Network).

Arterial Streets

Arterial streets such as Clayton Road, Kirker Pass Road, Marsh Creek Road, and Oakhurst Drive are designed to carry traffic through a city or from one major area to another within a city. Specific provisions, such as striping or grade separated lanes are required for non-motorized vehicles.

Collector Streets

Collector streets such as Eagle Peak Avenue, Peacock Creek Drive, Mountaire Parkway, Pine Hollow Road, Mitchell Canyon Road and El Molino Drive provide a direct connection between arterials and local streets and also provide access to activity centers such as schools, parks, and shopping centers. Specific provisions may be required for non-motorized vehicles.

Local Streets

Local streets such as Tiffin Drive, Lydia Lane and Weatherly Drive are typically two-lane streets that provide direct access to individual residential lots. These types of streets are not shown on the circulation plan. Local streets may be through or may dead end. Streets that will eventually go through should be posted with signs to prevent confusion.

Private Streets

Private streets such as Clark Creek Circle, have been developed as part of a private residential development. The streets are not built to City standard and must be maintained by the owners of properties along the street.

4.17 – Transportation

Cul-de-sacs

Cul-de-sacs such as Marquette court, Nottingham Place and Malibu Court are not intended to go through; however, they must provide adequate turn-around area for passenger and large emergency vehicles.

Greenbelts

Greenbelts found along Mt. Diablo, Peacock, Donner and Mitchell Creeks provide circulation via off-street trails through the community for pedestrians, horseback riders and bicycle riders.

**Table 4.17-1
Primary Street Descriptions**

Street Name	Connections/Description	Speed
Ygnacio Valley Road/ Kirker Pass Road	Ygnacio Valley Road is a major arterial that runs southwest-northeast from Walnut Creek and runs parallel to Clayton. North of its intersection with Clayton Road, it becomes Kirker Pass Road, and continues until it reaches Pittsburg.	45-55 mph
Clayton Road	Runs northwest-southeast through Concord, moving traffic to and from State Route (SR) 242 west of Clayton. After intersecting Ygnacio Valley Road, it enters the City of Clayton. It enters Clayton in the northwest corner and ends as it merges into Marsh Creek Road in the southeast corner. It connects with Oakhurst Drive and Mitchell Canyon Road.	40-45 mph
Concord Boulevard/ Oakhurst Drive	Begins in the center of Concord and moves east-west until Concord High School, where it runs northwest-southeast. Once in Clayton, it becomes Oakhurst Drive. Oakhurst Drive bends through the Planning Area until intersecting with Clayton Road and becoming Center Street. Indian Wells Way and Eagle Peak Avenue both collect and distribute traffic from Oakhurst Drive.	40 mph
Marsh Creek Road	Begins splitting off of Clayton Road near the city's center. Runs north-south to southeast, where it merges with Clayton Road, and then continues out of the southeast corner of the Planning Area into Marsh Creek Springs and leads to Marsh Creek State Park.	School Speed Limit: 25 mph. On main road: 35-45 mph
Pine Hollow Road	Runs outside of the Planning Area in Concord, moving in an east-west direction. In Clayton, intersects with Mitchell Canyon Road, and ends near Mt. Diablo Elementary School, converting into Pine Hollow Court as a cul-de-sac.	35 mph
Mitchell Canyon Road	Runs north-south, intersecting Clayton Road as North Mitchell Canyon Road. Intersects Pine Hollow Road and ends at the Mitchell Canyon Visitor Center outside of the City of Clayton.	25 mph

Local Public Transit System

Bus service in Clayton is provided by the County Connection, officially the Central Contra Costa Transit Authority (CCCTA). There are three service routes that run either in or just outside of the city. Routes 10 and 310 provide connections from within Clayton to other bus routes in and the Bay Area Rapid Transit (BART) light rail station in downtown Concord. Weekday routes operate between 4:30 a.m. to 10:00 p.m. Monday through Friday, and weekend routes operate 7:30 a.m.

to 9:30 p.m. on Saturday and Sunday. All County Connection buses are wheelchair accessible and equipped with bike racks. Bus routes are shown in Exhibit 4.17-2 (Local Transit Network).

- *Route 10 – Concord BART/Clayton:* This weekday route runs between the Concord BART station and Diablo View Middle School in Clayton. Main stop locations are provided along Clayton Road, Marsh Creek Road, and Washington Boulevard, providing access to downtown Clayton. Weekday headways vary along the route, ranging from 15 minutes to 60 minutes. Service begins in Concord at 5:00 a.m. with a last stop time of 10:08 p.m.
- *Route 310 – Concord BART/Clayton:* This weekend route runs between the Concord BART station and Diablo View Middle School in Clayton. Main stop locations are provided along Clayton Road, Marsh Creek Road, and Washington Boulevard, providing access to downtown Clayton. Weekend headways are 60 minutes throughout the route. Service begins in Concord at 7:36 a.m. with a last stop time of 9:25 p.m.
- *Route 93x – Antioch BART/Walnut Creek BART:* This weekday route runs from the Antioch BART station to the Walnut Creek BART station in the early morning, and in the reverse direction in the afternoon/evening. Main stop locations are provided along Kirker Pass Road and Ygnacio Valley Road, providing Concord and Clayton residents access to and from Antioch and Walnut Creek during weekday commute periods. Weekday headways vary along the route, ranging from 20 minutes to 60 minutes. Morning service begins in Antioch at 4:34 a.m. with a last stop time in Walnut Creek of 8:07 a.m. Afternoon/evening service begins in Walnut Creek at 3:06 p.m. with a last stop time in Antioch of 7:59 p.m.

Current Transportation Planning Efforts

As detailed below, there are multiple current transportation planning efforts within the Planning Area that identify various areas of transportation improvement.

Town Center Specific Plan

The Town Center Specific Plan (TCSP) was adopted in 1990, most recently amended in 2012, and outlines the goals for development of the center of Clayton. This includes expanding and supporting commercial businesses in the Town Center, providing municipal services, setting aesthetics and specific design features and guidelines, and identifying circulation issues and goals for existing and new roadways. Within the circulation chapter of the TCSP is the initial development of Oakhurst Drive, developed to alleviate traffic and give commuters more options moving in and out of the city through Ygnacio Valley/ Kirker Pass Road. Furthermore, the TCSP addresses parking spaces available in the Town Center, and outlines goals for development of new roads and circulation improvements.²

Town Center Parking Study

The Town Center Parking Study (TCPS), published in 2006, examines possible options for growing commercial uses in the study area. The study examines multiple private, public, and off-street parking areas, and how they affect land utilization. The study concludes that there is an over-abundance of parking that discourages new developments from locating in the study area. Alternative standards and methods are proposed in the study to accommodate a balance of adequate parking for community-members, while also alleviating costs to businesses.³

Marsh Creek Road Specific Plan

The Marsh Creek Road Specific Plan (MCRSP) was adopted in 1998 and amended most recently in 2021. The purpose of the MCRSP is to study 475 acres of the mostly undeveloped land along Marsh Creek Road and determine best practices moving forward with development. This involves

designating sites best suitable for residential development, while keeping in line with the city's character and protecting the natural features of the area.⁴

Neighborhood Traffic Management Program

The City of Clayton adopted the Neighborhood Traffic Management Program (NTMP) in 2003. The NTMP focuses on traffic easement and creating a safer suburban living experience for residents in the Planning Area. The program outlines various steps for implementing traffic control devices and traffic calming devices in neighborhoods, such as signage like speed limit signs, stop signs, and yield signs.⁵

Clayton Major Street Improvements

The Contra Costa Transportation Authority (CCTA) initiated major street improvements to Clayton Road, Marsh Creek Road, and Oakhurst Drive in the first phase of PROJECT # 24032. Phase One construction improvements on the streets were completed in 2017, with Phase Two beginning in 2018. Phase Two involves widening Pine Hollow Road, and installing new gutter, curb, and sidewalks along the road.⁶

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 5 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.

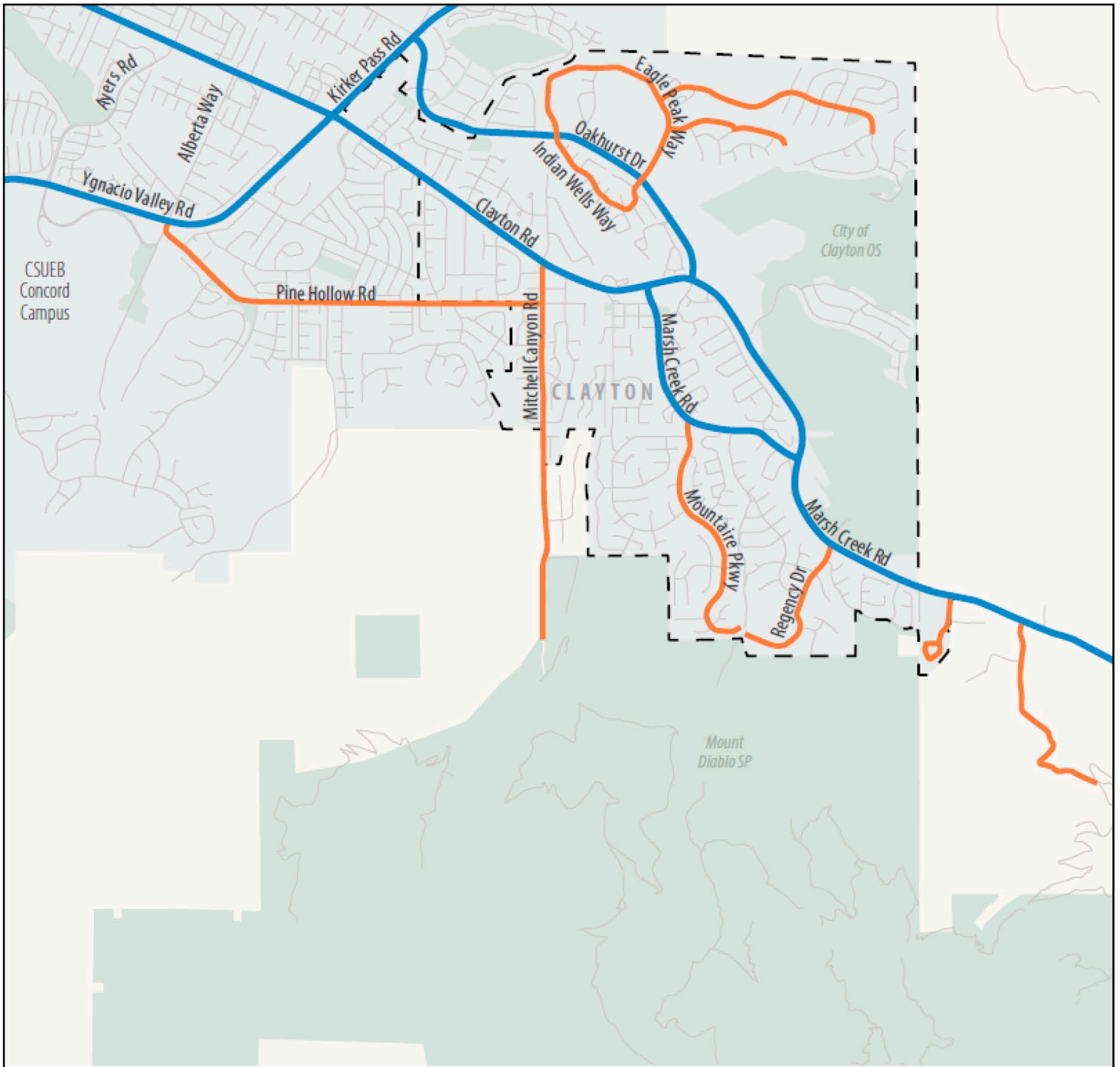
Existing and planned bicycle facilities are shown on Exhibit 4.17-3 (Local Bicycle Network), based on the *Contra Costa Countywide Bicycle and Pedestrian Plan* (2018). The plan identifies the following recommended bicycle facility improvements serving Clayton and the surrounding area.

- **Concord-Clayton Bikeway:** Construction of missing segments of on- and off-street bike lanes along the Concord-Clayton Bikeway. Missing segments include Mitchell Canyon

Road and Pine Hollow Road in Clayton. The full bike lanes will increase safety for students using the bike lanes to access Mt. Diablo Elementary School, one block off the bike route.

- **Marsh Creek Trail:** Add an off-street, multi-use path along Marsh Creek Road/Marsh Creek from Brentwood to Clayton.

This Page Intentionally Left Blank.

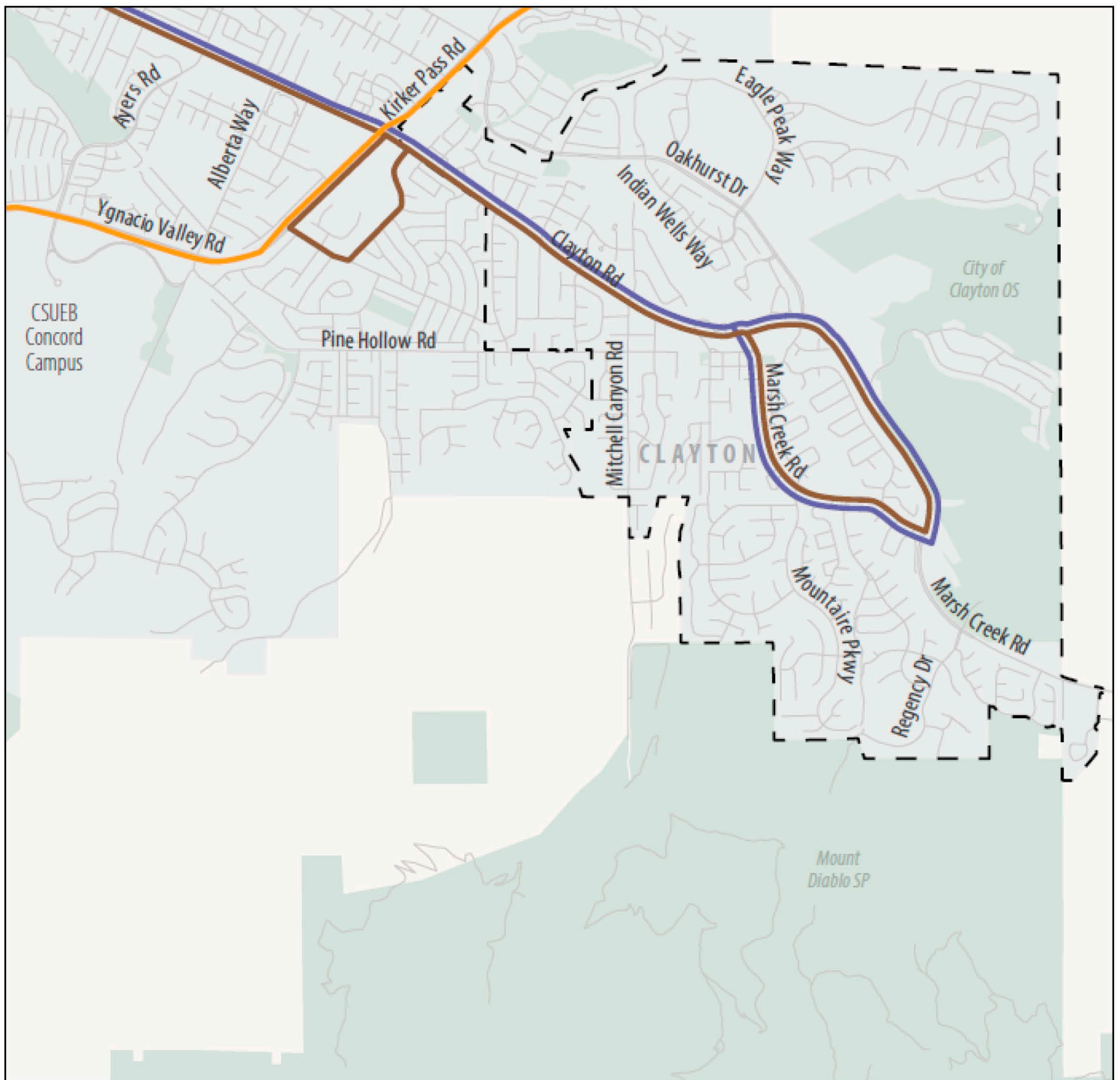


- Arterial Street
- Collector Street
- Residential Street
- City Boundary

Exhibit 4.17-1 Roadway Network

Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.

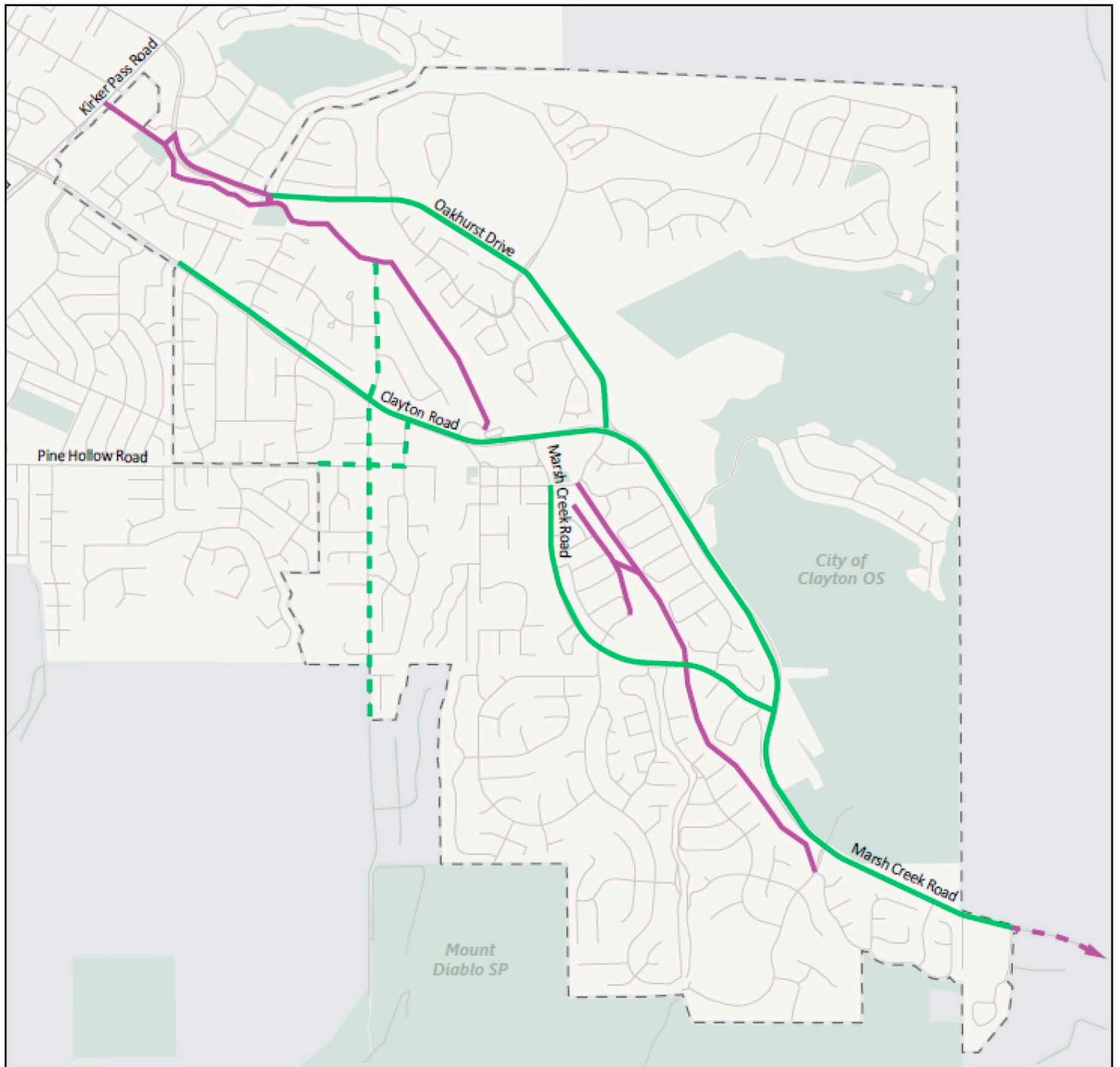


- County Connection Route 10
- County Connection Route 93x
- County Connection Route 310
- City Boundary

Exhibit 4.17-2 Local Transit Network

Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.



- Existing Class I
- - Proposed Class I
- Existing Class II
- - Proposed Class II
- City of Clayton

Exhibit 4.17-3 Local Bicycle Network

Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.

Pedestrian Facilities

The *Contra Costa Countywide Bicycle and Pedestrian Plan* (2018) identifies the following recommended pedestrian facility improvements within or adjacent to the Planning Area.

Clayton Town Center Pedestrian Safety Improvements

The Project is comprised of three elements to improve pedestrian safety in the Town Center of Clayton. The first component of the Project is a raised and lighted crosswalk system to be located on Oak Street in the east/west direction at Center Street. The second improvement is a tabletop or raised intersection at Old Marsh Creek Road and Main Street. The last element of the project is an additional raised and lighted crosswalk system to be located on Center Street in the north/south direction at Oak Street.

NOP Comments

In his comment letter dated March 29, 2022, Mark Leong, District Branch Chief for Caltrans, noted that Caltrans is focused on maximizing efficient development patterns, innovative travel demand reduction strategies, and multimodal improvements. Mr. Leong requested that projects within the City of Clayton be consistent with California Government Code Section 65088-65089.10 (Congestion Management). Mr. Leong also requested the City gain a determination of conformity from the Contra Costa Transportation Authority to determine that the Project is consistent with and conforms to the Regional Transportation Plan Consistency Requirements of the County's Congestion Management Plan. Mr. Leong also encouraged a sufficient allocation of fair share contributions toward multimodal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. Finally, Mr. Leong noted that Caltrans strongly supports measures to increase sustainable mode shares, thereby reducing vehicle miles traveled (VMT).

4.17.2 Regulatory Framework

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 Clayton adopted its Complete Streets policy on February 15, 2013.

Senate Bill 375

Senate Bill (SB) 375, approved in 2008, 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, SB 743 changes the focus of transportation impact analysis in the California Environmental Quality Act (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 State CEQA Guidelines, including the incorporation of SB 743 modifications. The Office of Administrative Law approved the Guidelines' changes, and as of July 1, 2020, the changes 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 the following:

- 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 15 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 reduction 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. In September 2020, Caltrans also issued the Transportation Analysis Under CEQA (TAC) guidance, which describes significance determinations for capacity increasing projects on the State Highway System. It is noted that the HEU does not propose any changes to the Caltrans-owned and -operated network. In December 2020, Caltrans also issued Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioner Guidance in, 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. Clayton serves on the Transportation Partnership and Cooperation (TRANSPAC) Committee, which is the regional transportation planning committee (RTPC) for Central Contra Costa County. TRANSPAC is composed of elected representatives, planning commissioners and technical staff from the six Central Contra Costa jurisdictions including the cities of Clayton, Concord, Martinez, Pleasant Hill, Walnut Creek and the unincorporated area of Central Contra Costa County. 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 Clayton 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.
- 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 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.

4.17 – Transportation

- 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 Clayton is included in the Central County Action Plan. The Action Plan includes both regional actions and actions for specific routes. There are currently no Routes of Regional Significance within Clayton; however, Ygnacio Valley Road/Kirker Pass Road, in the City of Concord but adjacent to Clayton's northern corporate boundary, is designated as a Route of Regional Significance. It is noted that Clayton Road is also designated a Route of Regional Significance between Treat Boulevard and Ygnacio Valley Road but is not so designated within Clayton.

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. The City of Clayton has chosen to follow the CCTA guidance. More detail on the VMT analysis methodology, metrics, and thresholds of significance is provided in Section 4.14.3, Methodology and Assumptions.

Local

City of Clayton General Plan

The City of Clayton General Plan is a comprehensive planning document that expresses the community's long-term vision for land use and provides the framework for future decision-making. The General Plan is the overarching policy document for the City of Clayton. The General Plan contains the current City of Clayton Housing Element, which was adopted in 2014. The various elements within the General Plan include goals and policies for the physical development of the City. The goals and policies from the current General Plan that are relevant to this transportation impact analysis are listed below.

Circulation Element⁷

Goal 1. To implement a circulation system which will preserve the atmosphere and unity of the area and which will assure adequate traffic capacity on major thoroughfares but will minimize through traffic in residential neighborhoods.

Objective 1. To reduce truck traffic through residential areas.

Policy 1a. Designate truck routes in concert with Concord and Contra Costa County.

Policy 1b. Develop truck routes with adequate setback and buffer.

Objective 2. To coordinate the increased use of Concord Boulevard with Concord to reduce traffic passing through the City of Clayton to Kirker Pass.

Policy 2a. Direct through traffic onto arterials with appropriate street and intersection design. Such appropriate street and intersection design may include but not be limited to: street widths;

traffic control devices; street surface modifications (pavement scoring, surface markers or bumps, speed humps or undulations); traffic diverters or barriers.

Policy 2b. Direct local traffic onto Marsh Creek Road, Center Street, Clayton Road and Concord Boulevard.

Policy 2c. Discourage through traffic conflicts with Mt. Diablo Elementary School.

Objective 3. To continue the development of Concord Boulevard based on existing alignment but respecting geological hazards and limitations.

Policy 3a. Investigate and remedy slide problem prior to extension of Concord Boulevard

Objective 4. To plan an efficient network of streets and trails which will link all neighborhoods of the community and allow safety and economy of movement.

Policy 4a. Establish connections between Clayton Road and Concord Boulevard via El Camino if study warrants.

Policy 4b. Establish connection between Regency Drive and Mountaire Parkway if study warrants it.

Policy 4c. Provide greenbelt connections creating node linkages between trails.

Policy 4d. Identify acceptable traffic service levels at key interchanges as a base for development analysis.

Objective 5. To provide mitigation for noise on arterials and truck routes with support for use of sound attenuation measures.

Policy 5a. Permit sound walls on Mitchell Canyon Road subject to City approval for safety.

Policy 5b. Review sound attenuation measures for development along Clayton Road, Concord Boulevard and Marsh Creek Road.

Policy 5c. Require sound attenuation as part of Clayton Road expansion when warranted.

Objective 6. To provide alternative routes of circulation through the Town Center

Policy 6a. Review route alternatives.

Policy 6b. Seek separation of local and through traffic.

Policy 6c. Prepare cost and benefit analyses of alternative routes.

Objective 7. To enhance the City's system of pedestrian, equestrian and bicycling paths and trails.

Policy 7a. Determine areas where greenbelt paths may need to be designed to separate equestrian, bicycle and pedestrian use.

Policy 7b. Identify pedestrian routes to school from different neighborhoods to make sure a safe route exists.

Policy 7c. Provide information concerning the greenbelt system and safe route system in the form of maps and street signs.

Policy 7d. Coordinate trails with other jurisdictions such as EBRPD, the State Department of Parks and Recreation, Contra Costa County and Concord.

Objective 8. To cooperate with Concord and Contra Costa County in design of the Regional Traffic System.

Policy 8a. Support the request of Concord to split Clayton traffic between Concord Boulevard and Clayton Road to the extent feasible upon completion of Concord Boulevard.

Policy 8b. Communicate with Contra Costa County regarding any action that will affect traffic on Marsh Creek Road in Clayton.

Objective 9. Establish a priority system to upgrade existing City streets to a City standard.

Policy 9a. Require developers to construct all streets within a development and to contribute an equitable share of the improvements of other streets serving the development.

Policy 9b. Seek State and County support for development and improvement of through-traffic arterials.

Policy 9c. Provide systematic upgrade of streets and roads to applicable standards.

Objective 10. To support the establishment and expansion of public transit and carpools.

Policy 10a. Participate in County-wide and area carpool/van pool programs.

Policy 10b. Assist in location of permanent and temporary park and ride locations.

Policy 10c. Provide free City application processing for park and ride lots on vacant parcels.

Implementation Measures

1. Prepare cost and benefit analysis of Town Center route alternatives.
2. Prepare a safe route to school map which is integrated into the circulation plan.
3. Establish a sign program for the greenbelt trail system.
4. Provide an analysis of roads in Clayton and establish a continuing infrastructure improvement program.
5. Identify potential park and ride lots
6. Determine roadway constructions standards.
7. Develop street standards for grade and section.
8. Encourage development of bus pullouts, shelters and benches.
9. Review off-site circulation needs and fee structure to adequately mitigate the effect of new developments.
10. Support discussions with Concord regarding off-site mitigation, fees and standards in Concord.

11. Identify emergency crossing and pedestrian access crossings to the Silver Creek II area.
12. Install appropriate street and intersection design methods to protect non-arterial streets from through traffic.
13. Use where appropriate the authority given the City by various vehicle code sections to prohibit use of certain commercial vehicles exceeding specific maximum gross weights or oversized or excessively noisy vehicles from using designated residential streets.

Community Design Element⁸

Goal 1. To maintain the rural and historical character of Clayton's neighborhoods.

Goal 2. To establish an attractive and vibrant pedestrian-friendly Town Center with a mixture of commercial, civic, recreational, and residential uses.

Overall Community Design

Objective 4. To facilitate circulation within Clayton without encouraging through traffic.

Policy 4a. Use the linear form of the Clayton Valley as the basis for directing traffic to either side of the valley floor.

Policy 4b. Minimize congestion by controlling arterial intersections.

Growth Management Element⁹

Traffic Services

Goal 1. Promote the development of a street system that minimizes adverse impacts on the environment and surrounding land uses.

Goal 2. Design a street system that while accommodating urban development is consistent with orderly growth.

Goal 3. Promote more efficient, less environmentally harmful modes of transportation (transit, car/van pools, bicycling, walking, etc.) and consider non-capacity increasing solutions to decrease dependence on the automobile (transit information, flex-schedules, preferential treatment for high occupancy vehicles, etc.)

Goal 4. Assure that new residential, business, and commercial growth pays for the facilities required to meet the demands resulting from that growth.

Objective 1. Development Mitigation: The City shall adopt and maintain a development mitigation program to ensure that new growth pays its fair share of the costs associated with that growth.

Policies/Implementation Measures

Policy 1a. Clayton will continue to implement its adopted development fees to require developers to pay the costs necessary to mitigate the impacts of their development on the local street system.

Policy 1b. Clayton will participate in TRANSPAC's regional development mitigation program and establish fees, exactions, assessments, or other mitigation measures to fund regional or

subregional transportation improvements needed to mitigate the impacts of planned development on the regional transportation system.

Policy 1c. Clayton will periodically review the existing adopted development fees to determine if the fees accurately reflect the needed traffic mitigation associated with development.

Policy 1d. As part of the development review process for projects estimated to generate over 100 peak-hour vehicle trips, Clayton will require the developer/applicant to provide the City with a traffic impact study consistent with the Technical Guidelines published by the Contra Costa Transportation Authority.

Policy 1e. Development projects expected to generate over 100 peak-hour vehicle trips in the peak direction will not be approved by the City unless a finding of consistency can be made with the Reporting Intersection Traffic Level of Service Standards.

Policy 1f. The City will not use Local Street Improvement and Maintenance funds allocated to Clayton, pursuant to Measure J by the Contra Costa Transportation Authority, to replace developer funding for transportation projects determined to be required for growth to comply with standards.

Objective 2. Multi-Jurisdictional Transportation Planning: The City shall participate in an on-going multi-jurisdictional planning process with other jurisdictions and agencies, the RTPC, and the Contra Costa Transportation Authority to create a balanced, safe, and efficient transportation system and to manage the impacts of growth.

Policies/Implementation Measures

Policy 2a. Clayton has and will continue to participate in multi-jurisdictional transportation planning by participating in the activities of the TRANSPAC Regional Transportation Planning Committee including the development of a Regional Route Action Plan and cooperating in planning for intersections subject to Findings of Special Circumstances.

Policy 2b. Clayton will participate in the Contra Costa Transportation Authority's conflict resolution process, as needed, to resolve transportation related disputes.

Policy 2c. Clayton will report its progress regarding the Growth Management Program to the Contra Costa Transportation Authority by submitting a compliance checklist and maintaining other necessary information.

Policy 2d. Clayton will assist the Contra Costa Transportation Authority in maintaining its travel demand modeling system by providing information on proposed transportation improvements, including those adopted as part of the City's Capital Improvement Program, planned and approved development within the City, and long-range plans relative to ABAG's projections for household and jobs within the City.

Objective 3. Transportation Systems Management (TSM): To promote maximum efficiency in the existing transportation system and to further the transportation goals of the Contra Costa Transportation Authority's Measure J Growth Management Program, Contra Costa's Congestion Management Program, and the Bay Area Clean Air Plan; to reflect an ongoing commitment to TSM efforts, in order to achieve traffic congestion management and air quality goals; and to comply with applicable state and federal laws.

Policies/Implementation Measures

Policy 3a. As part of its program to ensure the continuation of a proactive TSM program effort, aimed at reducing vehicle trips, vehicle emissions, and traffic congestion in the most efficient and cost-effective manner, the City will continue to implement its Transportation Demand Management Ordinance.

Policy 3b. The City will require design features that facilitate pedestrian access, bicycle use, ride sharing, and transit use to be incorporated within subdivision and development proposals, as appropriate. Design features may include bus turnouts and shelters, park and ride lots, preferential parking for car/van pools, and effective pedestrian, equestrian, and bicycle access features.

Policy 3c. The City will require that all developments (residential as well as non-residential) generating more than 100 peak hour trips, implement a TSM information program. The program shall seek to provide information to residents and employers on RIDES and other ride matching agencies, transit schedules, bicycle facilities, and locations of nearby Park and Ride lots.

Objective 4. Achieving LOS Standards: The City shall maintain and improve traffic operations compliant with LOS standards.

Policies/Implementation Measures

Policy 4a. In the event that any of Clayton's four reporting intersections identified above fail to meet its LOS standard, Clayton will consider amendments to the General Plan, Zoning Ordinance, Capital Improvement Program and/or other relevant plans and policies in order to attain the standard.

Policy 4b. Capital projects necessary to maintain and improve traffic operations to comply with LOS standards will be included in Clayton's 5-year Capital Improvement Program.

Objective 5. Environmentally Sensitive Transportation Routes: The City shall limit improvements to Marsh Creek Road in order to maintain the significance of the environmental resources present.

Policies/Implementation Measures

Policy 5a. Marsh Creek Road shall not be widened beyond the existing 2 lanes east of Pine Lane due to the significant environmental resources present. Marsh Creek Road may be improved by measures including but not limited to: repaving, improved shoulders, turn lanes, and acceleration/deceleration lanes.

General Growth Management

Goal 1. Support cooperative land use planning in Contra Costa County.

Goal 2. Support land use patterns consistent with the General Plans of local jurisdictions.

Goal 3. Support infill and redevelopment in existing urban and brownfield areas.

Objective 1. Address Housing Options: The City shall demonstrate reasonable progress in providing housing opportunities for all income levels and meeting housing goals.

Policies/Implementation Measures

Policy 1a. The City will prepare a biennial report on the implementation of actions outlined in the Housing Element of its General Plan to the Contra Costa Transportation Authority in order to demonstrate reasonable progress in providing housing opportunities for all income levels. The report will demonstrate reasonable progress by one of the following:

A comparison of the number of housing units approved, constructed, or occupied within Clayton over the preceding five years with the number of units needed on average each year to meet the housing objectives established in the Housing Element;

Illustrating how the City has adequately planned to meet the existing and projected housing needs through the adoption of land use plans and regulatory systems which provide opportunities for, and do not unduly constrain, housing development; or

Illustrating how the City's General Plan and zoning regulations facilitate the improvement and development of sufficient housing to meet the objectives established in the Housing Element.

Policy 1b. The City will consider the impacts all new developments would have on the local, regional, and county-wide transportation system, including the level of transportation capacity that can reasonable be provided.

Policy 1c. The City will incorporate policies and standards into the development approval process that support the accommodation of transit, bicycle, and pedestrian access for new developments.

Objective 2. Adopt an Urban Limit Line (ULL): Clayton shall adopt an ULL (MAC-ULL, County ULL, or a Local Voter ULL as defined in the Principles of Agreement to the Measure J GMP) that has been approved by the majority of the voters within the City.

Policies/Implementation Measures

Policy 2a. Clayton will implement and comply with the voter-approved ULL (adopted by the City in November 2007). Urban development will be restricted to within the line, subject to the policies and standards of the Land Use Element of the General Plan. Amendments to the City's ULL could only be made by first amending the County ULL, using adopted County procedures, and then adopting the amended ULL. Amendments to the City's ULL could also be made by adopting an entirely new voter-approved Local ULL. Any proposed amendments to the established ULL would need to be processed in accordance with applicable City of Clayton, Contra Costa County, and Contra Costa Local Agency Formation Commission (LAFCO) procedures.

Objective 3. Develop a Five-Year Capital Improvement Program (CIP): The City shall prepare and maintain annually or biennially a CIP that outlines the capital projects needed to implement the goals, policies, and programs of this General Plan for a minimum of the next five years. The CIP shall include approved projects and an analysis of the costs of the proposed projects as well as a financial plan for providing the improvements.

Policies/Implementation Measures

Policy 3a. Capital projects sponsored by Clayton and necessary to maintain standards and improve traffic operations will be included in the 5-Year CIP. Funding sources for the capital projects as well as project phasing will be generally identified in the CIP.

City Neighborhood Traffic Management Program (NTMP)

The City's NTMP was adopted on July 15, 2003. The program is a method of putting into practice some of the goals and direction of the City Council. Such goals include: implementation of a circulation system that will preserve the atmosphere and unity of the area and will ensure adequate traffic capacity on roads; providing for safe and efficient vehicular movement; minimizing the intrusion of through traffic on residential streets; implementation of physical and operational improvements to improve roadway and intersection capacity; and providing a safe environment for pedestrian movement. The program focuses on education and providing neighborhoods with tools for documentation and resolution of traffic problems.

Clayton is not located along a major highway or Interstate. Instead, major traffic is carried via Kirker Pass Road and Clayton Road/Marsh Creek Road. These two roads provide access to Interstate 680 and State Route 24 through Concord. The City jurisdiction includes 20.6 center-lane miles of paved streets, 14 consisting of arterials (both major and minor), collectors, and local streets. Most arterials provide northwest to southeast movement, with the exception of Kirker Pass Road, which runs southwest to northeast. Collectors run north-south and provide access to neighborhoods. Clayton experiences heavy commuter traffic originating from outside of the City.

City Municipal Code

CMC Title 10, Vehicles and Traffic, contains guidelines for vehicles operating safely within the City per the State Vehicle Code, and Title 12, Streets and Sidewalks, contains guidelines and regulations related to the design of streets and sidewalks.¹⁰

4.17.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to transportation and traffic if it would:

- a) Conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
- b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- d) Result in inadequate emergency access.

4.17.4 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. This section also describes potential impacts related to transportation and traffic that could result from the implementation of the HEU and recommends mitigation measures if needed to reduce significant impacts.

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 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 California 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), Public Resources Code (PRC) Section 21099, subdivision (b)(1), directed the OPR as follows:

The Office of Planning and Research shall prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines 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:

Upon 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. (emphasis added)

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:

Generally, 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.

Methodology and Assumptions

The VMT analysis methodology utilizes the procedures described in Appendix F of CCTA's Growth Management Program Implementation Guide (Revised February 17, 2021). 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 4.17-2, most HEU housing inventory sites do not meet these five potential screening approaches and thus require a full VMT assessment. It should be noted that a small portion of one of the proposed Housing Element sites does include provisions for a mixed-use development, consisting of approximately 20,000 square feet (SF) of retail use, and 49 multi-family dwelling units. Per the CCTA Project Screening Criteria listed above, the retail-use portion of the housing inventory site qualifies as a local-serving use; thus, a separate VMT assessment was not conducted for this retail use.

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.ⁱ In addition to the project-level evaluation in both baseline and future conditions, a cumulative assessment of the project's effect on total VMT rates countywide is presented.

ⁱ 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.

- **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 housing inventory sites, as well as to determine the Citywide average VMT per resident and the 85 percent of Citywide 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 Area -- are added to the 2020 model for the relevant TAZs comprising the housing inventory sites, and a full 2020 Plus Project model run is performed.
- **Baseline Plus Project Significance Assessment:** The 2020 Plus Project home-based VMT per resident for the relevant TAZs comprising the HEU housing inventory sites is compared to the 2020 Baseline Citywide home-based VMT per resident. If the home-based VMT per resident for the TAZs comprising the HEU sites is higher than 85 percent of the Citywide 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 Clayton that is approved but not yet constructed, and is run to determine the 2040 No Project home-based VMT per resident for the TAZs comprising the HEU housing inventory sites.ⁱⁱ
- **2040 Plus Project Conditions:** The proposed land use(s) – in this case, the proposed additional housing units within the HEU Planning Area -- are added to the 2040 No Project model for the relevant TAZs comprising the housing inventory sites, and a full 2040 Plus Project model run is performed.
- **2040 Plus Project Significance Assessment:** The 2040 Plus Project home-based VMT per resident for the relevant TAZs comprising the HEU housing inventory sites is compared to the 2020 Citywide home-based VMT per resident. If the home-based VMT per resident for the TAZs comprising the HEU project sites is higher than 85 percent of the Citywide 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.ⁱⁱⁱ

Existing Circulation System Plans, Ordinances, or Policies

Impact TRANS-1 – Would the HEU conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Analysis of Impacts

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

ⁱⁱ Note that the travel demand model based on Plan Bay Area 2050 was not available for use in this analysis.

ⁱⁱⁱ 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.

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, under General Plan Policy 2a, traffic shall be directed onto arterials with appropriate street and intersection design. Such appropriate street and intersection design may include but not be limited to: street widths; traffic control devices; street surface modifications (pavement scoring, surface markers or bumps, speed humps or undulations); traffic diverters or barriers. Policy 4d calls for the identification of acceptable traffic service levels at key interchanges as a base for development analysis. Policies 6a through 6c aim to provide alternative routes of circulation through the Town Center. Policy 7b aims to identify pedestrian routes to school from different neighborhoods to make sure a safe route exists. Policy 7d calls for the coordination of trails with other jurisdictions such as East Bay Regional Parks District, the State Department of Parks and Recreation, Contra Costa County and Concord. Policies 8a and 8b require cooperation with Concord and Contra Costa County in design of the Regional Traffic System. Policy 9a requires developers to construct all streets within a development and to contribute an equitable share of the improvements of other streets serving the development. Policy 9c aims to provide systematic upgrade of streets and roads to applicable standards.

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.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Conflicts with New VMT Thresholds

Impact TRANS-2 – Would the HEU conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b)?

Analysis of Impacts

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. A small portion of Housing Element Site G does include provisions for a mixed-use development, consisting of approximately 20,000 square feet (SF) of retail use, and 49 multi-family dwelling units. Per the CCTA Project Screening Criteria listed above, the retail-use portion of the Housing Element site qualifies

as a local-serving use; thus, a separate VMT assessment was not conducted for this retail use.

4. *Projects Located in Transit Priority Areas (TPAs)*. There are no areas within the HEU Planning Area that qualify as a TPA, so this criterion does not apply.
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 TAZ level, using the Contra Costa Countywide Travel Demand Model results. There are no TAZ's within the City of Clayton limits that can be defined as low-VMT areas. Furthermore, 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

Modeling 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.

Housing Element Update Land Use

Table 4.17-2 (HEU Land Use) shows the housing units associated with the No Project case, and Plus Project case. The No Project case includes housing units that are approved but not yet constructed or are in the City's development review process. Approved development would produce 24 single-family housing units plus four accessory dwelling units, and 81 multi-family housing units. The HEU Project would provide for 670 multi-family units and 198 single-family units within the associated planning limits (refer to the Project Description chapter for more information on the HEU planning limits). These totals are inclusive of approved development in the City.

**Table 4.17-2
HEU Land Use**

HEU Project Site	TAZ ¹	Land Use ²	Housing Units	
			No Project	Plus Project
A	20248	MF	-	39
B	20248	SF	-	32
D	20248	SF	-	8
E	20257	MF	-	32
F	20257	MF	-	22
G	20250	MF	-	49
H	20257	MF	-	33
I	20253	SF	-	128
J	20257	SF	21	21
K	20258	SF	-	2
L	20252	SF	7	7
M	20259	MF	-	238
N	20257	MF	-	29
O	20257	MF	81	81
P	20257	MF	-	13
Q	20252	MF	-	76
R	20248	MF	-	41
S	20250	MF	-	17
Total Multi-Family			81	670
Total Single-Family			28	198
Source: Fehr & Peers, 2022.				
Notes:				
1. MF = multi-family housing; SF = single-family housing				
2. TAZ = Contra Costa Countywide Travel Demand Model Traffic Zone Analysis				

VMT Results

Project-Level VMT Analysis

The Contra Costa Countywide Travel Demand Model was adjusted to reflect the relevant housing unit numbers for the No Project and Plus Project scenarios, for 2020 and 2040 conditions, and the resulting VMT metrics were reported. Table 4.17-3 (Home-Based VMT Summary:2020) presents the results for the 2020 Plus Project case, and Table 4.17-4 (Home-Based VMT Summary: 2040) presents the results for the 2040 Plus Project case.

**Table 4.17-3
Home-Based VMT Summary: 2020**

VMT Area	Home-Based VMT		Home-Based VMT/Resident	
	2020 Base	2020 Plus Project	2020 Base	2020 Plus Project
Countywide	20,030,865	20,101,485	17.3	17.4
Citywide	270,054	327,154	24.0	24.0
Housing Element Update	174,878	232,591	23.7	23.9
85 percent of 2020 Citywide VMT	---	---	20.4	20.4
HEU > 85 percent of Citywide VMT?	---	---	---	Yes

Source: Contra Costa Countywide Travel Demand Model; Fehr & Peers, 2022.

**Table 4.17-4
Home-Based VMT Summary: 2040**

VMT Area	Home-Based VMT			Home-Based VMT/Resident		
	2020 Base	2040 No Project	2040 Plus Project	2020 Base	2040 No Project	2040 Plus Project
Countywide	20,030,865	22,226,470	22,291,368	17.3	16.1	16.1
Citywide	270,054	270,993	321,502	24.0	23.5	23.6
Housing Element Update	174,878	176,817	227,924	23.7	23.1	23.4
85 percent of 2020 Citywide VMT	---	---	---	20.4	20.4	20.4
HEU > 85 percent of Citywide VMT?	---	---	---	---	---	Yes

Source: Contra Costa Countywide Travel Demand Model; Fehr & Peers, 2022.

The analysis indicates that:

- The City of Clayton VMT per resident of 24.0 miles-per-resident is higher than the Countywide VMT per resident of 17.3 miles-per-resident in the 2020 baseline, and is projected to be so in the 2040 scenario as well.
- Home-based VMT per resident in the County as a whole, and in the City of Clayton, is projected to decline between 2020 and 2040.
- Home-based VMT per resident with the HEU Project is projected to be higher than 85 percent of the baseline Citywide, in both 2020 and 2040.

These results suggest that the HEU's impact with respect to home-based VMT would be potentially significant. Additionally, individual development proposals under the HEU that do not screen out of further analysis may exceed the VMT criteria on a case-by-case basis. Therefore, projects that do not screen out will require a project-specific VMT analysis, and results of that analysis may exceed the VMT criteria. For these reasons, the impact is considered potentially significant, requiring mitigation.

Cumulative VMT Analysis

The year 2040 total Countywide VMT per service population (all residents and employees) is shown in Table 4.17-5 (Cumulative VMT Analysis) for the No Project and Plus Project scenarios. 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 well as through trips (that is, all VMT on the roadway network within Contra Costa County). As shown in the table, the HEU Plus Project scenario is not expected to cause an increase in total Countywide VMT per service population as compared to the No Project case. Therefore, the cumulative impact with respect to the Project's effect on VMT would be less than significant.

**Table 4.17-5
Cumulative VMT Analysis**

VMT Area	Total VMT		Total VMT/Service Population ¹	
	2040 No Project	2040 Plus Project	2040 No Project	2040 Plus Project
Countywide	30,299,119	30,342,036	16.1	16.1
VMT Rate Increasing with Project?	---	---	---	No
Source: Contra Costa Countywide Travel Demand Model; Fehr & Peers, 2022.				
Notes:				
Service Population consists of all residents and employees.				

Level of Significance Before Mitigation

Potentially significant with respect to project level VMT (less than significant for cumulative) .

Mitigation Measures

VMT-1: The Project shall implement the following 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 Clayton 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). Project developers may substitute any of the measures listed below with one or more alternative measures; provided, that any substitute measures would reduce GHG from VMT in an amount that is equal to or greater than the reduction achieved by the measure being replaced, and the amount of the reduction is supported by evidence. 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 of the measures below is generally expected to result in a net VMT reduction of 10 percent or less for development projects in suburban settings such as Clayton:

- 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 that 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 that do not screen out from VMT impact analysis would conservatively remain significant and unavoidable with mitigation.

Level of Significance After Mitigation

Significant and Unavoidable.

Design Feature Hazards

Impact TRANS-3– Would the HEU substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Analysis of Impacts

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 that 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 related to design feature hazards.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Emergency Access

Impact TRANS-4 – Would the HEU result in inadequate emergency access?

Analysis of Impacts

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 Clayton Standard Specifications (2015). Emergency access to new development sites proposed under the HEU would be subject to review by the City of Clayton and responsible emergency service agencies, thus ensuring the projects would be designed to meet all emergency access and design standards. The City also requires that traffic control shall be in conformance with the latest State of California standards, and that adequate traffic control equipment or personnel be provided during 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.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact TRANS-5 – Would the HEU cause substantial adverse cumulative impacts with respect to transportation and traffic?

Analysis of Impacts

As described in *Impact TRANS-2*, VMT impacts from the proposed Housing Element Update would be significant and unavoidable even with recommended mitigation (see Mitigation Measure VMT-1). Therefore, the HEU would also make an incremental but significant contribution to a regional (cumulative) VMT impact and would not be fully consistent with the General Plan (Circulation Element) in that regard.

Level of Significance Before Mitigation

Significant (i.e., not consistent with the new VMT threshold of the State and City).

Mitigation Measures

See Mitigation Measure VMT-1 in *Impact TRANS-2*.

Level of Significance After Mitigation

Significant and Unavoidable even with implementation of feasible mitigation.

4.17.5 References

- ¹ City of Clayton. Clayton General Plan Circulation Element. Page III-16. March 2000
- ² City of Clayton: Long Range Planning. *Town Center Specific Plan*. (2012). <https://claytonca.gov/fc/finance/Town-Center-Specific-Plan.pdf?t=1580845023>
- ³ City of Clayton: Long Range Planning. *Town Center Parking Study*. (2006). <https://claytonca.gov/fc/community-development/planning/long-range-planning/towncenterparkingstudy.pdf>
- ⁴ City of Clayton: Long Range Planning. *Marsh Creek Road Specific Plan*. (2005). <https://claytonca.gov/fc/community-development/planning/long-range-planning/marshcreekroadspecificplan.pdf>
- ⁵ City of Clayton: Regional Transportation Agencies. *Neighborhood Traffic Management Program*. (2003). <https://claytonca.gov/fc/engineering/traffic/ntmp.pdf>
- ⁶ Contra Costa Transportation Authority. *Clayton Major Street Improvements*. (2018). https://ccta.granicus.com/Viewer.php?view_id=1&clip_id=364&meta_id=32313
- ⁷ City of Clayton. *General Plan. Section III, Circulation Element*. (2000). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-III-circulation-element.pdf>.
- ⁸ City of Clayton. *General Plan. Section V, Community Design Element*. (2000). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-v-community-design-element.pdf>.
- ⁹ City of Clayton. *General Plan. Section XI, Growth Management Element*. (2000). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-xi-growth-management-element-12apr2011.pdf>.
- ¹⁰ City of Clayton. *Municipal Code. Title 10, Vehicles and Traffic and Title 12, Streets and Sidewalks*. <https://library.municode.com/ca/clayton/codes/municipal%20code>.

4.18 –TRIBAL CULTURAL RESOURCES

This section addresses potential impacts to Tribal Cultural Resources (TCR) associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). Issues of interest are potential impacts to Native American sites, features, places, cultural landscapes, sacred places, and objects with cultural value to Native American tribes that are identified within CEQA.

4.18.1 *Environmental Setting*

Tribal Cultural Resources encompass physical objects belonging to Native American peoples and tribes. The significance of such items is tied to their religion, their heritage, history, and their identity as a people. Their importance cannot be overstated. Prior to contact with Spanish colonizers, the area that is today Contra Costa County encompassed numerous tribes belonging to the Bay Miwok language group; a language different from Coast Miwok, Plains Miwok, and other languages used in the Bay Area.¹ Bay Miwok tribes had semi-permanent villages as well as mobile campsites that operated within a fixed radius of territory. According to Mission records, the Volvon tribe lived on the peak of what is now known as Mt. Diablo, and held territory to the east along Marsh Creek, and in what is now the City of Clayton.² The neighboring Chupcan tribe inhabited a large range of territory from Suisun Bay to the Diablo Valley, in areas that would later become Bay Point, Walnut Creek, Clyde, Pacheco, and Concord.³ Given that Concord and Clayton share a border, it is likely that the Chupcan tribe at some point also lived and traveled through what would become Clayton. Due to persistent Spanish expeditions into their territory, and the proliferation of diseases within the Spanish missions, the populations of all the Bay Miwok tribes declined rapidly, along with records of their people and language. Bedrock mortars pocket Mt. Diablo as markers of the tribes’ presence.⁴ Because of a lack of records and the loss of tribal history, the extent of the Volvon and Chupcan tribe’s presence in and around modern-day Clayton is difficult to measure.

Notice of Preparation (NOP) Comments and Tribal Consultation

No comments on the NOP were received pertaining to tribal cultural resources. Consistent with Public Resources Code Section 21080.3.1 (Assembly Bill 52 [2014]) and Government Code Section 65352 (Senate Bill 18 [2004]), the Native American Heritage Commission recommended consultation with California Native American Tribes, and the City notified local tribes of the proposed HEU on April 20, 2022 via email. Only one tribal representative responded to the request for consultation, Corrina Gould, Tribal Chair, of the Confederated Villages of Lisjan Nation. Ms. Gould requested copies of the documentation for the HEU, and in response, the City directed the tribal representatives to the City webpage where the draft Housing Element and its related documents had been posted. The City did not receive any other or subsequent requests for information or consultation within the 90 days following the April 20, 2022 invitation to consult.

4.18.2 Regulatory Framework

Federal

Section 106 of the Federal Guidelines

Section 106 of the National Historic Preservation Act (NHPA) states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the National Register of Historic Places and that the Advisory Council on Historic Preservation (ACHP) and State Historic Preservation Office must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations Part 800, on such undertakings.

Native American Graves Protection and Repatriation Act (NAGPRA) of 1990

The NAGPRA of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996 and 1996a, as amended) and Native American Graves and Repatriation Act of 1990 (25 U.S.C. 3001 *et seq.*, as amended)

These acts establish as national policy that traditional religious practices and beliefs, sacred sites (including right of access), and the use of sacred objects shall be protected and preserved. Native American remains are further protected by the Native American Graves Protection and Repatriation Act of 1990.

State

Native American Heritage Commission, Public Resources Code Sections 5097.9–5097.991⁵

Public Resources Code (PRC) Section 5097.91 established the Native American Heritage Commission (NAHC), whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under PRC Section 5097.9, a state policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites or sacred shrines located on public property. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner. PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

California Native American Graves Protection and Repatriation Act of 2001⁶

Codified in the California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection Act (CalNAGPRA) is consistent with the federal NAGPRA. Intended to “provide a seamless and consistent state policy to ensure that all California Indian human remains, and cultural items be treated with dignity and respect,” the CalNAGPRA also encourages

and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The act also provides a process for non–federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

Native American Heritage Commission (NAHC)

The NAHC, established in 1976, was created in response to efforts by Native Americans to protect their burial grounds from destruction. The NAHC authorizes Most Likely Descendants the right to determine the treatment, disposition, and analysis of Native American remains. Among the functions of the NAHC is maintenance of lists of Native American Contacts and Most Likely Descendants.

California Assembly Bill (AB) 52 (2014)

Codified into state law in 2014, AB 52 (Gatto) specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. AB 52 requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. AB 52 specifies examples of mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources. The bill makes the above provisions applicable to projects that have a notice of preparation or a notice of negative declaration filed or mitigated negative declaration on or after July 1, 2015. AB 52 amends Sections 5097.94 and adds Sections 21073, 21074, 2108.3.1., 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to the California PRC, relating to Native Americans.

California Senate Bill 18 (2004)

California Government Code Section 65352.3 incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB 18 (Burton) requires public notice to be sent to tribes listed on the Native American Heritage Commission's SB 18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in PRC Sections 5097.9 and 5097.993 that may be affected by the proposed adoption or amendment to a general or specific plan.

Health and Safety Code, Sections 7050 and 7052⁷

State Health and Safety Code (HSC) Section 7050.5 declares that, in the event of the discovery of human remains outside a dedicated cemetery, all ground disturbances must cease, and the county coroner must be notified. HSC Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code, Section 622.5

California Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Local

City General Plan

The City's existing 2000 General Plan specifies the following goals, objectives, and policies for the community's archaeological or tribal culturalⁱ resources:

Land Use Element⁸

Goal 1. To provide a mixture of land uses that responds to needs of the City of Clayton.

Goal 7. To enhance the sense of identity and pride in and to encourage historical awareness of Clayton.

Policy 7b. Support establishment of a Heritage Center that would permit uses that support historical heritage and community activity within the Town Center.

Community Design Element⁹

Goal 1. To maintain the rural and historical character of Clayton's neighborhoods.

Overall Community Design

Objective 1. To protect historical structures and sites of historical significance.

Policy 1a. Develop criteria for designating sites of historical significance.

Policy 1c. Ensure renovations of historic buildings and structures retain the building or structure's historic character.

Policy 1d. Pursue measures to promote attention to historic sites and structures.

Implementation Measure 1. Develop criteria for designating sites of historical significance.

City Municipal Code (CMC)

The CMC contains no titles or chapters that deal specifically with archaeological or tribal cultural resources.

ⁱ The General Plan does not have any goals, objectives, or policies that specifically reference archaeological or tribal resources but they are subsumed under the term historical resources under CEQA

4.18.3 Significance Thresholds

As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the HEU could result in a significant impact if it causes a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 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 is:

- a) 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 section 5020.1(k), or
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.18.4 Impacts and Mitigation Measures

Adverse Changes

Impact TRC-1 – Would the HEU cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 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 section 5020.1(k)?

Analysis of Impacts

Prior to European contact, the Planning Area was inhabited by several Native American Tribes for many thousands of years. Development began in the Clayton area in the mid 1800's. There are no known historic or archaeological resources in the Planning Area that pre-date this period. Based on currently available information, there are no indications the Planning Area contains any specific identified tribal cultural resources and there is no landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k). None of the 6th cycle housing inventory sites identified by the City contains known resources of historic importance. However, given the long period of inhabitation of Native American Tribes in the area prior to European settlement, future development in the Planning Area, especially on vacant land, has a high probability of uncovering Native American historic and/or archaeological resources.

In accordance with the requirements of SB 18, the City invited consultation with local Native American Tribal representatives regarding future development potential under the proposed HEU to determine if any tribal cultural resources exist in the area and/or if any such resources could be impacted by development under the proposed HEU. In response to the request from the responsive tribe, the Confederated Villages of Lisjan Nation, the City provided direction to the webpage where the draft Housing Element and its related documents had been posted. The City

did not receive any other or subsequent requests for information or consultation within the 90 days following the April 20, 2022 invitation to consult.

The General Plan Community Design Element contains goals, objectives and policies that support maintaining the rural and historical character of Clayton's neighborhoods and protecting historical structures and sites of historical significance. The City's existing Municipal Code also contains Historic Preservation Guidelines in Chapter 15.10 that facilitate implementation of these goals and policies. These goals and their attendant objectives and policies will help protect existing historical resources within Clayton as well as investigate potential new resources that should be classified as historical.

Neither the General Plan nor the Municipal Code contain any goals, objectives, policies or regulations specifically pertaining to archaeological/Native American resources. However, the City's established development review procedures require an assessment of archaeological resources for new development, especially in previously undisturbed areas. The development review process also often requires compliance with the established Native American consultation procedures of SB 18 and/or AB 52 prior to approval of a CEQA document. In addition, Section 7050.5 of the California Health and Safety Code requires that, if human remains are discovered during grading or earthmoving, work must be halted and the coroner contacted to determine the Most Likely Descendant (MLD). If the MLD is Native American, tribal representatives will be contacted to consult on the appropriate disposition of the remains.

CEQA requires the City and any project developer, including the City if it is a public works project, to comply with state law if human remains are found during excavation. The presence of human remains of Native American origin on a particular development site may, but does not automatically, indicate the presence of important tribal resources. Mitigation Measures CUL-1 and CUL-2 (see Chapter 4.5: Cultural Resources) would impose requirements to halt work upon discovery of cultural resources or human remains and to retain a qualified archaeologist and/or qualified tribal monitor to evaluate the find. Compliance with state law regarding historic and archaeological resources, and implementation of Mitigation Measures, would ensure that the proposed HEU would not cause a substantial adverse change in the significance of a tribal cultural resource, as defined in PRC Section 21074.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measures CUL-1 and CUL-2.

Level of Significance After Mitigation

Less than significant.

Resource Impacts

Impact TRC-2 – Would the HEU cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Analysis of Impacts

The nearby Julpun saw Mt. Diablo as the birthplace of the world, the Northern Miwok tribe saw it as a supernatural being, and the Central Miwok tribe included the mountain in their renewal ceremonies. According to Mission records, the Volvon tribe lived on the peak of Mt. Diablo, and held territory to the east along Marsh Creek, and in what is now the City of Clayton. The Chupcan tribe also held areas to the north of Mt. Diablo, where Clayton is today. Mt. Diablo and the surrounding area is also known to contain artifacts from the local Native American tribes, including mortar scars and obsidian arrows. The Planning Area is likely to contain artifacts from the Chupcan Tribe, and possibly other local tribes as well, particularly in the southern portion of the Planning Area closer to Mt. Diablo. Therefore, future development in the Planning Area, especially on vacant land, has a high probability of uncovering prehistoric (archaeological) resources.

Subdivision (c) of Public Resources Code Section 5024.1 states that “a resource may be listed as an historical resource in the California Register if it meets any of the following National Register of Historic Places 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.
- 4) Has yielded, or may be likely to yield, information important in prehistory or history.”

If cultural resources are found on a development site, they must be evaluated by a qualified archaeologist according to these criteria. If a resource is found to be significant under these criteria, including a tribal cultural resource, the City as the lead agency under CEQA must demonstrate it has taken appropriate steps to protect such resources in cooperation with the private property owner, if applicable. These protective efforts must be documented in the project-level CEQA process.

Under the requirements of SB 18, the City is in consultation with local Tribal representatives regarding future development potential under the proposed HEU to determine if any tribal cultural resources exist in the area and/or if any such resources could be impacted by future development under the HEU. In addition, future development under the HEU would be subject to Native American Consultation requirements under SB 18 and/or AB 52 as appropriate (depending on the nature of the project).

Neither the General Plan nor the Municipal Code contain any goals, objectives, policies or regulations specifically pertaining to archaeological/Native American resources. However, the

City's established development review procedures requires an assessment of archaeological resources for new development, especially in previously undisturbed sites. The development review process also requires compliance with the established Native American consultation procedures of SB 18 and AB 52 prior to approval of a CEQA document.

In addition, HSC Section 7050.5 requires that, if human remains are discovered during grading or earthmoving, work must be halted and the coroner contacted to determine the Most Likely Descendant (MLD). If the MLD is Native American, tribal representatives will be contacted to consult on the appropriate disposition of the remains. CEQA requires the City and any project developer, including the City if it is a public works project, to comply with state law if human remains are found during excavation. The presence of human remains of Native American origin on a particular development site may, but does not automatically, indicate the presence of important tribal resources.

Additionally, Mitigation Measures CUL-1 and CUL-2 would ensure proper handling and removal of any potential buried Native American cultural resources or human remains that could be uncovered as a result of development under the proposed HEU. Compliance with state law regarding human remains, Native American consultation processes, as well as adherence to incorporated Mitigation Measures, would ensure that potential impacts related to tribal cultural resources would be less than significant.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measures CUL-1 and CUL-2.

Level of Significance After Mitigation

Less than significant.

Cumulative Impacts

Impact TRC-3 – Would the HEU cause substantial adverse cumulative impacts with respect to tribal cultural resources?

Analysis of Impacts

The Planning Area and surrounding areas have been occupied by Native Americans for thousands of years, and the region has been inhabited by European settlers since the mid 1800's. Therefore, it is possible that earthwork within the City or surrounding jurisdictions may disturb Native American tribal cultural or archaeological resources. State law requires local jurisdictions, including the City, to consult with local Native American tribal representatives when development or public works projects may affect tribal cultural resources (i.e., SB 18 and AB 52). This government-to-government consultation process is critical to identifying actions that could have significant impacts on tribal cultural resources before any ground disturbance occurs in the surrounding region. While the General Plan does not contain any goals or policies directly related to tribal cultural resources, compliance with state law regarding human remains, the Native American consultation processes described above, and adherence to recommended Mitigation Measures CUL-1 and CUL-2, would ensure that potentially significant impacts related to buried human remains and tribal cultural resources would be less than significant.

In these ways, potential cumulative impacts to Tribal Cultural Resources would be minimized, and future development in the City of Clayton under the HEU will not make a significant contribution to any cumulative regional impacts on Tribal Cultural Resources.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measures CUL-1 and CUL-2.

Level of Significance After Mitigation

Less than significant.

4.18.5 References

- ¹ Museum of the San Ramon Valley. *The Bay Miwok Language and Land*. (2021). <https://museumsrv.org/the-bay-miwok-language-and-land/>.
- ² Museum of the San Ramon Valley. *The Bay Miwok Language and Land*. (2021). <https://museumsrv.org/the-bay-miwok-language-and-land/>.
- ³ Museum of the San Ramon Valley. *The Bay Miwok Language and Land*. (2021). <https://museumsrv.org/the-bay-miwok-language-and-land/>.
- ⁴ East Bay Hill People. *Volvon Mystery*. (2020). <https://eastbayhillpeople.com/volvon-mystery/>.
- ⁵ California Public Resources Code Section 5097. (1977). <https://nahc.ca.gov/codes/california-public-resources-code-5097-9/>.
- ⁶ California Code of Regulations, Part 8, Title 24, State of California Historic Building Code. (2020). <https://up.codes/viewer/california/ca-historic-building-code-2016/chapter/8-1/administration#8-1>.
- ⁷ California Health and Safety Code, Section 7050.5. (1939). https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC§ionNum=7050.5.
- ⁸ Clayton 2000 General Plan Revision and EIR. *Section II, Land Use Element*. (2017). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-II-land-use-element-051617.pdf>.
- ⁹ Clayton 2000 General Plan Revision and EIR. *Section V, Community Design Element*. (2008). <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-v-community-design-element.pdf>.

4.19 – UTILITIES AND SERVICE SYSTEMS

This EIR chapter addresses utilities and service systems impacts associated with the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”). Issues of interest are utilities and service systems impacts identified by the CEQA Guidelines: whether the HEU would require or result in the relocation or construction of new or expanded water, wastewater treatment, or other facilities; whether the HEU would have sufficient water supplies; whether the HEU would result in a determination by the wastewater treatment provider that it has adequate capacity to serve the Project’s demand in addition to existing commitments; whether the HEU would generate solid waste in excess of standards; and whether the HEU would comply with regulations related to solid waste.

4.19.1 *Environmental Setting*

Water Service

As shown in Exhibit 4.19-1, the Contra Costa County Water District (CCWD) provides treated water services to the City of Clayton. The CCWD provides water services to a majority of central and northeastern Contra Costa County, encompassing an area of 140,000 acres. The CCWD is a special district, a local government body with a Board of Directors whose members are elected by community-members to 4-year terms.¹

Every 5 years, the CCWD completes an Urban Water Management Plan (UWMP), with the 2020 UWMP being the most current version of the document, providing long-range planning information on the district’s water supply as well as forecasting future demand. Clayton is within the CCWD’s Treated Water Service Area (TWSA). The TWSA in 2020 had a water demand of 32,600 acre-feet per year (AFY), with that demand projected to increase to 37,400 AFY in 2030.²

Water in the service area is primarily drawn from the Sacramento-San Joaquin Delta, which originates in the Sierra Nevada mountains and flows through the Sacramento and San Joaquin rivers into the delta. Water is diverted from four intakes on the delta: the Rock Slough, Mallard Slough, and the Old and Middle Rivers.³ Diverted water is transported through the 48-mile Contra Costa Canal and deposited at treatment plants and reservoirs. CCWD uses three water treatment plants within the county: the Ralph D. Bollman Treatment Plant in Concord, the CCWD/Brentwood Plant, and the Randall-Bold Plant jointly owned with the Diablo Water District. These treatment plants have a combined daily water capacity of 141.5 million gallons of water.⁴ There are four reservoirs available to the CCWD: Contra Loma, Los Vaqueros, Mallard, or the Martinez Reservoir. The water district provides treated water to Clayton and other cities in their jurisdiction, and sell untreated water to neighboring water districts, in total servicing some 500,000 customers in the central and east county.⁵

Wastewater

The City of Clayton’s wastewater collection services are provided by neighboring Concord through an agreement established December 18, 1991.⁶ The City Engineer for Clayton is responsible for capital extensions and any replacement of collection systems, and they are responsible for notifying the City of Concord of improvements being made. The City of Clayton has direct

ownership over their sewer collection system lines; however, the lines are maintained by the City of Concord. Further, the City of Concord owns the sewer trunk line in Clayton. Any proposed sewer main laterals, improvements, or additional connections by Concord must be approved by the City of Clayton.⁷ Residents no longer using septic tanks in unincorporated areas adjacent to Concord and that are close enough to connect to the collection lines, are required to join the Contractual Sewer Service Agreement and be annexed by Concord with rates and fees equivalent for residents of Clayton and Concord.

There are 44.43 miles of pipelines operating underneath Clayton that are maintained by the City of Concord.⁸ Approximately 60 percent of pipes in Clayton are 6- or 8-inches diameter; in accordance with current service area standards, all new pipelines must be at least 8 inches in diameter.⁹

Wastewater collected by Concord is sent to the Central Contra Costa County Sanitation District (CCCSD) wastewater treatment plant located northwest of Clayton, in unincorporated area near the City of Martinez. The CCCSD is a special district that provides wastewater treatment and hazardous waste disposal services to multiple communities including Clayton and Concord, encompassing a 30 square-mile area.¹⁰ CCCSD also provides recycled water irrigation services to cities for approved areas such as playgrounds, schools, parks, and other landscaped areas. The district operates a residential recycled water station out of the Household Hazardous Waste Collection Facility in Martinez. Community-members in the service area can retrieve up to 300 gallons of recycled water per trip for personal landscape irrigation uses.¹¹

Stormwater

The City of Clayton is responsible for stormwater drainage and for implementing programs to minimize accumulation of pollutants that can collect into waterways and thereafter deposit into the San Francisco Bay and Sacramento-San Joaquin Delta. Pollutants include but are not limited to, petroleum, medical equipment, solid waste, agricultural waste, sediments, chemical and biological materials.¹² To keep waterways clean, Clayton is regulated under the San Francisco Regional Water Quality Control Board (Region 2), and is a member of the Contra Costa Clean Water Program (CCCWP). Through the CCCWP, Clayton is a permittee in the Municipal Regional Stormwater Permit (MRP) through the National Pollution Discharge Elimination System (NPDES).¹³ All stormwater management facilities are maintained according to standards as part of the NPDES. New developments in Clayton are required to minimize the area of new roofs and paving to reduce runoff, and where feasible, build pervious surfaces instead of pavement so runoff can infiltrate the soil. Persons that own or are operating premises that may release pollutants into the local stormwater system are required to undertake best management practices to reduce pollution to the most extent possible. Possible best management practices are described by the City of Clayton as measures, facilities, or practices meant to protect, reduce, or prevent pollutants entering the waters of the United States.¹⁴

The city is located in the Mt. Diablo Creek Watershed, where the Mt. Diablo Creek flows off the north slope of the mountain for approximately 17 miles until discharging into the Suisun Bay. Its major tributaries--Back Creek, Donner Creek, and Mitchell Creek--all flow out of Mt. Diablo State Park.¹⁵ The City of Clayton is overseen by the Contra Costa County Flood Control and Water Conservation District, a branch of the Contra Costa County Public Works agency, which maintains regional flood control facilities throughout the entire county. The county is divided into Flood Control (FC) Zones, where flood control projects are built in conjunction with federal or state agencies funded through property taxes. Clayton is located in the Mt. Diablo Creek FC Zone, which as of 2021 has no active flood control improvement projects.¹⁶

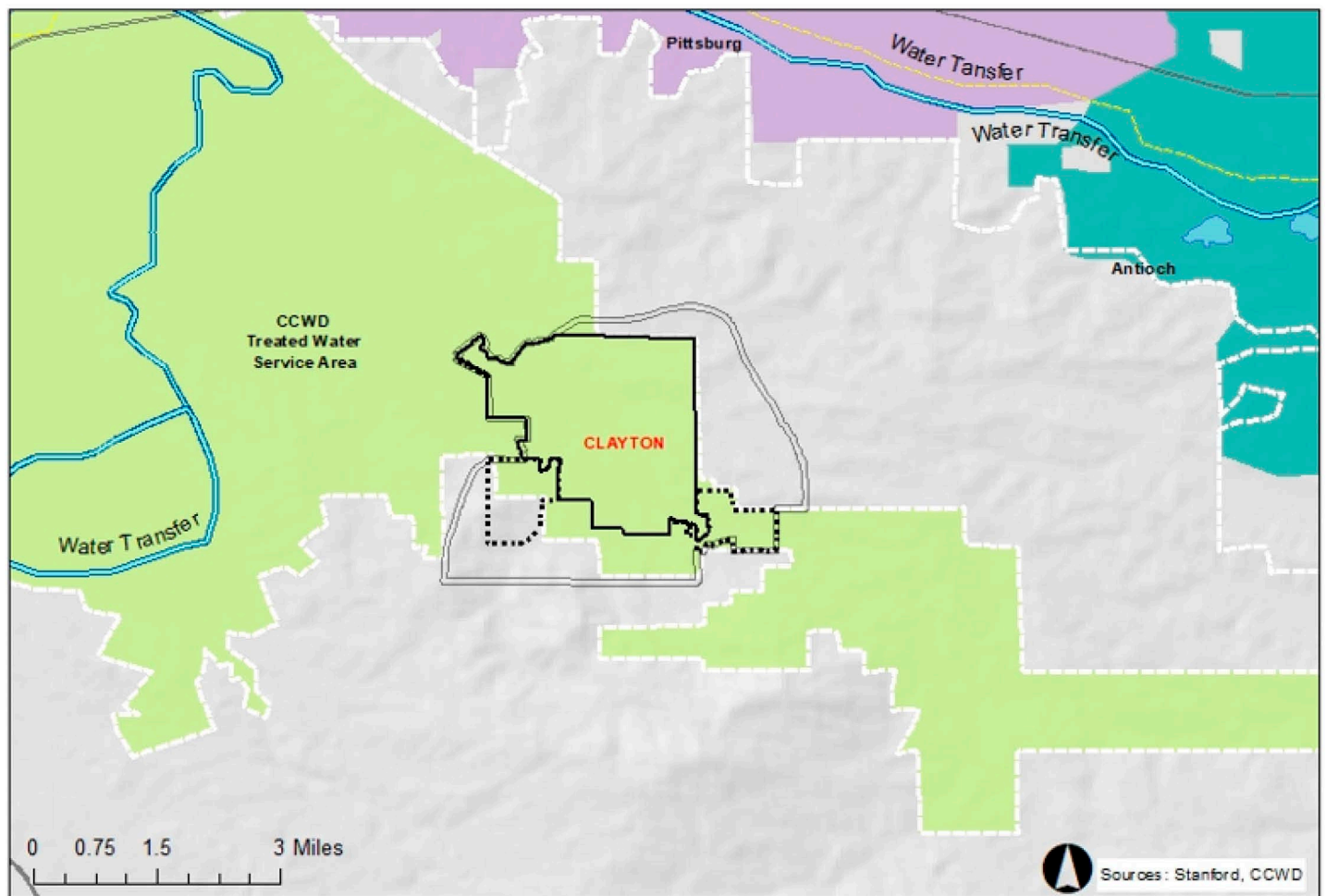
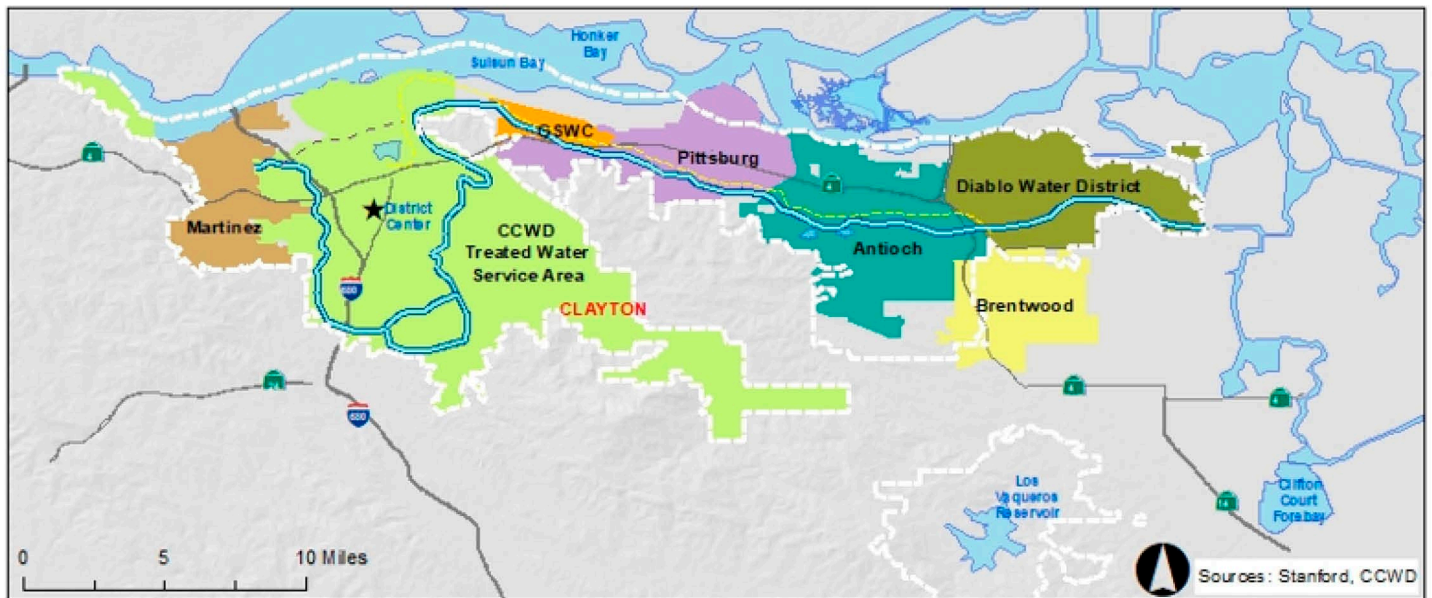


Exhibit 4.19-1 Contra Costa County Water District (CCWD)
Service Area

This Page Intentionally Left Blank.

Solid Waste and Recycling Services

Solid waste collection services in Clayton involving household garbage, recyclables, and yard waste are provided by Republic Services. Republic Services operates the Keller Canyon Landfill outside of the Planning Area in unincorporated Contra Costa County near the City of Pittsburg. The Contra Costa County Department of Conservation and Development is responsible for the landfill's land use permit. The Keller Canyon Landfill is active with a current maximum daily tonnage limit for disposal of 3,500 tons per day.¹⁷ The landfill has a maximum capacity of 75,018,280 tons and has a remaining capacity of 63,408,410 tons.¹⁸ The landfill has a disposal acreage of 244 acres with the total facilities taking up 1,399 acres.¹⁹

Energy Services

Electrical and gas services to the Planning Area are provided by Pacific Gas and Electric (PG&E). Electric power distribution is served to the city by two substations: Clayton Substation and Tidewater Substation. Clayton Substation is located on Pine Hollow Road in neighboring Concord, and Tidewater Substation is on Monsanto Way in Martinez.²⁰

Telecommunication Services

Telecommunication services in the Planning Area can be provided by AT&T and Comcast, and cable service providers include DirectTV and Dish.

4.19.2 – REGULATORY FRAMEWORK

Federal

Clean Water Act (CWA)

The CWA is the cornerstone of surface water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) are responsible for ensuring implementation and compliance with the provisions of the federal CWA.

National Pollution Discharge Elimination System (NPDES)

This is a program created for consistency with the Clean Water Act. The Act prohibits discharging "pollutants" through a "point source" into a "water of the United States" unless the discharger has an NPDES permit. The permit contains limits on what can be discharged, creates monitoring and reporting requirements, and includes other provisions to ensure the discharge does not diminish water quality and/or people's health.

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) is responsible for developing and enforcing regulations that implement environmental laws enacted by Congress. EPA is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits, monitoring, and enforcing compliance.

The EPA Office of Wastewater Management (OWM) supports the Federal Water Pollution Control Act (Clean Water Act) by promoting effective and responsible water use, treatment, disposal, and management, and by encouraging the protection and restoration of watersheds. The OWM is

responsible for directing the NPDES permit, pretreatment, and municipal bio-solids management (including beneficial use) programs under the CWA. The OWM is also home to the Clean Water State Revolving Fund, the largest water quality funding source, focused on funding wastewater treatment systems, non-point source projects, and estuary protection.

Title 40 of the Code of Federal Regulations

Title 40 of the Code of Federal Regulations (CFR), Part 258 (Resource Conservation and Recovery Act RCRA, Subtitle D) 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.

State

California Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), administered by EPA in coordination with the California Department of Public Health (CDPH), is the main federal law that ensures the quality of drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards.

State Water Resources Control Board

The SWRCB, in coordination with nine RWQCBs, performs functions related to water quality, including issuance and oversight of wastewater discharge permits (e.g., NPDES), other programs regulating stormwater runoff, and underground and above-ground storage tanks.

The RWQCB requires all wastewater collection and disposal providers to prepare both a Long-Term Wastewater Management Plan (LTWMP) according to wastewater requirements, and a Sewer System Management Plan (SSMP) according to the Statewide General Order Waste Discharge Requirements for Sanitary Sewer Systems.

California Department of Water Resources

The California Department of Water Resources is responsible for preparing and updating the California Water Plan, which is a policy document that guides the development and management of California's water resources.

California Water Code

The California Water Code, a section of the California Code of Regulations, is the governing law for all aspects of water management in California.

Title 22 of California Code of Regulations

Title 22 regulates the use of reclaimed wastewater. In most cases, only disinfected tertiary water may be used on food crops where the recycled water would come into contact with the edible portion of the crop. Standards are also prescribed for the use of treated wastewater for irrigation of parks, playgrounds, landscaping, and other non-agricultural irrigation. Regulation of reclaimed water is governed by the nine RWQCBs and the CDPH.

Cortese-Knox-Hertzberg Governmental Reorganization Act of 2000

The Cortese-Knox-Hertzberg Governmental Reorganization Act of 2000 requires each California local agency formation commission (LAFCO) to conduct municipal service reviews for specified public agencies under their jurisdiction. One aspect of municipal service review is to evaluate an

agency's ability to provide public services within its ultimate service area. A municipal service review is required before an agency can update its sphere of influence.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Section 10610–10656). The Act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet (AF) annually, should make every effort to ensure the appropriate level of reliability in its water service is sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Act requires that urban water suppliers adopt an urban water management plan at least once every 5 years and submit it to the Department of Water Resources. Noncompliant urban water suppliers are ineligible to receive funding pursuant to Division 24 or Division 26 of the California Water Code, or receive drought assistance from the State, until the urban water management plan (UWMP) is submitted and deemed complete pursuant to the Urban Water Management Planning Act.

Senate Bills 610 and 221, Water Supply Assessment and Verification

Senate Bills (SB) 610 and 221 amended State law to improve the link between the information on water supply availability and certain land use decisions made by cities and counties. Both statutes require detailed information regarding water availability (water supply assessment or WSA) to be provided to city and county decision-makers prior to approval of specified large (greater than 500 dwelling units) development projects. Both statutes require this detailed information to be included in the administrative record. Under SB 610, WSAs must be furnished to local governments for inclusion in any environmental document for certain projects as defined in Water Code Section 10912 subject to the California Environmental Quality Act (CEQA). Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. General plans, such as the City of Clayton General Plan, do not require their own WSAs, but individual future projects under the General Plan subject to SB 610 and SB 221 will require WSAs.

California Department of Public Health

A major component of the CDPH, Division of Drinking Water and Environmental Management, is the Drinking Water Program (DWP), which regulates public water systems. Regulatory responsibilities include enforcement of the federal and State Safe Drinking Water acts, regulatory oversight of approximately 8,700 public water systems, oversight of water recycling projects, issuance of water treatment permits, and certification of drinking water treatment and distribution operators.

Statewide Water Conservation Act of 2009 (Senate Bill X7-7)

In November 2009, the California State legislature passed, and the Governor approved, a comprehensive package of water legislation, including Senate Bill (SB) X7-7 addressing water conservation. In general, SB X7-7 requires a 20 percent reduction in per capita urban water use by 2020, with an interim 10 percent target in 2015. The legislation requires urban water users to develop consistent water use targets and to use those targets in their Urban Water Management Plans (UWMPs). SB X7-7 also requires certain agricultural water supplies to implement a variety of water conservation and management practices and to submit Agricultural Water Management Plans.

California Department of Resources, Recycling, and Recovery (CalRecycle)

CalRecycle oversees, manages, and monitors waste generated in California. It provides limited grants and loans to help California cities, counties, businesses, and organizations meet the State

waste reduction, reuse, and recycling goals. It also provides funds to clean up solid waste disposal sites and co-disposal sites, including facilities that accept hazardous waste substances and non-hazardous waste. CalRecycle develops, manages, and enforces waste disposal and recycling regulations, including AB 939 and SB 1016 (see below).

Assembly Bill 939 (AB 939) (Public Resources Code 41780)

The California Integrated Waste Management Act requires cities and counties to prepare integrated waste management plans (IWMPs) and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements (SRRE) as part of the IWMP. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

Senate Bill (SB) 1016

This bill requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 changed the CalRecycle review process for each municipality's IWMP. The CalRecycle Board reviews a jurisdiction's diversion rate compliance in accordance with a specified schedule. Beginning January 1, 2018, the Board is required to review a jurisdiction's source reduction and recycling element and hazardous waste element every 2 years.

Assembly Bill 341

AB 341, enacted in 2011, replaced the Integrated Waste Management Act (AB 939) to establish new diversion and recycling goals. While AB 939 had a diversion goal of 50 percent by the year 2000, AB 341 established a goal of 75 percent by 2020. Diversion includes waste prevention, reuse, and recycling. Unincorporated Contra Costa County has disposal rate targets of 3.9 pounds per resident per day and 20.1 pounds per employee per day. In 2019, the County had an annual per capita residential disposal rate of 2.4 pounds per day and 10.7 annual per capital employee disposal rate, thereby meeting waste diversion goals for 2010.

California Building Code

The 2019 California Green Building Standards (CALGreen) Code provides a single set of construction waste management requirements that apply to development projects in the state. The 2019 Code requires that at least 50 percent by weight of job site debris generated by most types of building project types be recycled, reused, or otherwise diverted from landfill disposal. This requirement applies to demolition projects and most new construction, as well as the majority of building additions or alterations.. CalGreen requires submission of plans and reports with verifiable post-project documentation to demonstrate that at least 50 percent of the nonhazardous construction and demolition debris generated on the job site are salvaged for reuse, recycled or otherwise diverted.

Regional

Basin Plan

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the RWQCB's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan has been adopted and approved by the State Water Resources Control Board, U.S. EPA, and the Office of Administrative Law where required. The Basin Plan has been updated to reflect the Basin Plan amendments adopted up through May 4, 2017.

Municipal Separate Storm Sewer System (MS4) Permit

The federal CWA was amended in 1987 to address urban stormwater runoff pollution of the nation's waters. In 1990, the U.S. EPA promulgated rules establishing Phase 1 of the 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 SWRCB 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 SWRCB re-issued these county-wide municipal stormwater permits as one Municipal Regional Stormwater NPDES Permit to regulate stormwater discharges from municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara counties, and the cities of Fairfield, Suisun City, and Vallejo. The most recent MS4 Permit for the San Francisco Bay Area is Municipal Regional Stormwater Permit, Order No. R2-2015-0049, as amended by Order No. R2-2019-0004, adopted November 18, 2015.

Contra Costa Countywide Integrated Waste Management Plan

As required by the California Integrated Waste Management Act, Contra Costa County adopted a Countywide Integrated Waste Management Plan and Source Reduction and Recycling Element. The Integrated Waste Management Act establishes waste management goals, objectives, and policies related to solid waste disposal; facilities siting; household hazardous waste collection and disposal; and implementing programs to achieve plan goals. The Countywide Integrated Waste Management Plan and Source Reduction and Recycling Element establishes policies and goals related to source reduction, recycling, composting, special waste, and public information and education, and programs designed to achieve its Source Reduction and Recycling Element goals.

Local

The existing General Plan contains the following goals, objectives, and policies relative to utility systems and services:

Community Facilities Element²¹

Goal 1. To provide for an efficient infrastructure and facility plan and program for improvement of existing infrastructure.

Objective 1. To establish a series of facility plans to identify existing conditions and to identify a program to fulfill current and future needs.

Policy 1a. Establish a sewer plan and program for providing sewage to non-sewered areas of Clayton.

Policy 1b. Establish a drainage plan that indicates areas subject to flooding and city drainage needs.

Policy 1c. Establish a water plan that includes water origin, storage, main lines and branch lines, and identify system needs.

Policy 1d. Identify private utility plans including program for undergrounding.

Policy 1h. Establish a street grade and street setback plan.

Objective 2. To identify the potential for a utility corridor for Clayton.

Policy 2a. Combine system maps to indicate location of corridor alignments.

Policy 2b. Identify corridor compatibility among systems.

Policy 2c. New major utility lines, communication lines, private pipelines and other linear uses shall be located within designated utility corridors.

Safety Element²²

Goal 1. To reduce potential risk to new development by proper planning and to minimize existing risk through coordinated City-County actions.

Objective 3. To reduce the potential for manmade hazards to interact with natural geologic hazards.

Policy 3b. Provide adequate protection to utility lines and pipelines placed in areas of geologic hazard.

Policy 3c. Review placement of structures and facilities in areas of geologic hazard and the effects of construction and operation of those facilities.

Growth Management Element²³

Goal 4. Provide for an efficient sanitary sewer collection system and for an efficient water distribution system to serve existing development (allowing for the eventual connection of non-sewer areas) and in the planning for new development.

Goal 6. Assure that new residential, business, and commercial growth pays for the facilities required to meet the demands resulting from that growth.

Performance Standard 4 for Sanitary Sewer: All development shall comply with the standards of the Central Contra Costa Sanitary District and the City of Concord for sanitary sewer treatment and collection, respectively. Septic systems shall be allowed in transitional areas on large lots subject to the approval of Contra Costa County Health Services Department.

Performance Standard 5 for Water: All development shall comply with the standards of the Contra Costa Water District.

Objective 1. Development Mitigation: The City shall adopt and maintain a development mitigation program to ensure that new growth pays its fair share of the costs associated with that growth.

Policy 1a. The City will continue to implement its adopted development fees to require developers to pay the costs necessary to mitigate the impacts of development on public facilities and services.

Policy 1b. The City will review the existing adopted development fees and adopt additional development fees, as necessary, to ensure that new growth is paying its fair share of the costs associated with the provision of facilities for police, parks, fire protection, sanitary sewer, water and flood control.

Policy 1c. All new development shall contribute to or participate in the improvement of the police, parks, fire protection, sanitary sewer, water and flood control systems in proportion to the demand generated by the project occupants and users.

Objective 2. Achieving Performance Standards: The City shall maintain the public facilities and services performance standards.

Policy 2a. Clayton will approve development projects only after making findings that: (1) after participation in the adopted development mitigation programs, performance standards will be maintained; or (2) project-specific mitigation measures will be required of the project to insure maintenance of standards.

Policy 2b. Capital projects necessary to maintain and improve public facilities and services to comply with the performance standards will be included in Clayton's 5-year CIP.

Policy 2c. Clayton will monitor and periodically review the adopted performance standards to determine if they accurately reflect the desires of the City.

City Municipal Code

CMC Title 13, Water and Sewers, outlines system requirements and water quality practices to implement to protect local and regional water quality.²⁴

4.19.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the HEU would have a significant impact related to utilities and service systems if it would:

- a) 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;
- b) Have insufficient water supplies available to serve the Planning Area and reasonably foreseeable future development during normal, dry, and multiple dry years;
- c) Result in a determination by the wastewater treatment provider which serves or may serve the Planning Area that it has inadequate capacity to serve the projected demand in addition to the provider's existing commitments;
- d) 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
- e) Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.19.4 Impacts and Mitigation Measures

This section describes potential impacts related to wastewater treatment requirements, water and wastewater treatment facilities, stormwater drainage facilities, water supplies, wastewater treatment capacity, landfill capacity, and solid waste; which could result from the implementation of the HEU. This section recommends mitigation measures as needed to reduce significant impacts.

IMPACT UTS-1 – Would the HEU 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?

Analysis of Impacts – Water

The HEU identifies how the City plans to accommodate its regional housing needs allocation (RHNA) of at least 570 units. In Section 3, Project Description, Table 3-3 indicates the HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area, which represents a 21 percent increase over existing (2020) conditions. This increase in housing would result in a population increase of an estimated 2,364 additional persons who would increase demand for water in the future. The Contra Costa County Water District (CCWD) provides treated water services to the majority of central and northeastern Contra Costa County, including the City of Clayton. Water in the service area is primarily drawn from the Sacramento-San Joaquin Delta, which originates in the Sierra Nevada mountains and flows through the Sacramento and San Joaquin rivers into the Sacramento Delta. Table 4.19-1 from the CCWD's most current (2020) Urban Water Management Plan (UWMP) estimates the City's population will rise from 11,340 persons in 2020 up to 12,050 persons in 2040 or an overall increase of 6.3 percent. The UWMP's population estimates are slightly higher than those in ABAG's 2020 Plan Bay Area with a difference of 795 persons or 6.6 percent by 2040. It should be noted that Clayton is within the CCWD's Treated Water Service Area (TWSA). In 2020, the TWSA had a district-wide water demand of 32,600 AFY while its 2030 demand was projected to increase to 37,400 AFY (an increase of 14.7 percent over 10 years).

**Table 4.19-1
Population Data (CCWD UWMP v. ABAG Plan Bay Area)**

Population by Source and Area	Existing		Projected					Difference 2020-2040
	2015	2020	2025	2030	2035	2040	2045	
2020 UWMP City of Clayton	11,290	11,340	11,650	11,850	11,930	12,050	12,180	+6.3%
ABAG 2020 Plan Bay Area	10,420	10,630	10,880	11,070	11,140	11,255	NA	+5.9%
Difference (UWMP v. PBA)	+870	710	770	780	790	795	NA	--
2020 UWMP – CCWD Total Service Area	522,900	552,530	591,500	640,290	710,060	752,170	788,640	+43.8%
UWMP - Clayton compared to CCWD Total	2.2%	2.1%	1.8%	1.9%	1.7%	1.7%	1.5%	--
2020 UWMP - Treated Water Service Area	199,680	205,410	219,480	236,140	251,350	266,270	273,790	+3.7%
UWMP - Clayton compared to Treated Water Area	5.7%	5.5%	5.4%	5.0%	4.7%	4.5%	4.4%	--

Sources: Tables 1-1 and 1-2, 2020 UWMP by CCWD, Projections 2040, Plan Bay Area (PBA) 2040 by ABAG

NA = Not Applicable

**Table 4.19-2
CCWD Projected Water Supply/Demand (AFY)**

Year	Average Year	Single Dry Year	Multi-Dry Year 5	MDY5 Surplus or Deficit (AF)¹
2025 – Supply	216,640	174,020	189,100	Surplus
2025 – Demand	147,300	147,300	147,300	(+17,000 AF)
2030 – Supply	235,470	189,100	142,520	Deficit
2030 – Demand	157,300	157,300	157,300	(-14,800 AF)
2035 – Supply	240,620	193,070	145,790	Deficit
2035 – Demand	165,000	165,000	165,000	(-19,200 AF)
2040 – Supply	242,200	194,350	147,170	Deficit
2040 – Demand	171,300	171,300	171,300	(-24,400 AF)
2045 – Supply	243,010	194,860	149,510	Deficit
2045 – Demand	175,900	175,900	175,900	(-26,400 AF)

Source: Tables 1-4 and 1-5, 2020 UWMP by CCWD AFY = Acre-Feet Per Year

¹ Deficits in Years 2030 to 2045 are cumulative over the multi-dry year 5 period

The HEU would result in an estimated population increase of up to 2,364 persons in the Planning Area. Assuming an average future consumption of 150 gallons of water per person per day, from the UWMP, the HEU would generate a need for an additional 354,600 gallons of water per day or 397 acre-feet per year (AFY)ⁱ.

Table 4.19-2 demonstrates that the projected water supplies of the CCWD under normal or average non-drought conditions, or even during one year of drought, will be sufficient to serve the City's projected population (i.e., surplus of water supply over demand). However, worst case conditions (i.e., multiple drought conditions for up to 5 years) would result in a cumulative deficit of water supplies to demand starting sometime after 2025 but definitely projected by 2030. According to ABAG²⁵, the City and Bay Area, along with the entire state, have already experienced 5 years of drought conditions (since 2017) which are expected to continue in the near future.

The Community Facilities Element of the existing General Plan contains Goal 1 which requires the City to provide efficient plans to maintain and expand existing utility infrastructure as needed. To implement that, Policy 1c requires the City to "establish a water plan that includes water origin, storage, main lines and branch lines, and identify system needs". In addition, Goals 4 and 6 require the City to adequately plan for water service for new development. Performance Standard 5 for Water in the Growth Management Element of the existing General Plan requires all new development comply with CCWD requirements for water service. In addition, Objective 1 and Policies 1a and 1b require new development to pay appropriate impact fees to assure adequate water service. In these ways, the existing General Plan assures that new development would have adequate water supplies and service from the CCWD as outlined in their UWMP. The proposed HEU deals exclusively with housing but does contain Goal 6 to incorporate sustainability practices into housing, and Policy 6.3 (Energy Efficient Retrofits) promotes home retrofits that reduce consumption of water resources.

ⁱ 2,364 persons X 150 gpd = 354,600 gallons X 365 days = 129.4 million gpd / 326,000 gal/AF = 397 AF

The projected population increase estimated in the CCWD UWMP is only 530 persons from 2025 to 2045, so it does not account for the 2,364 persons estimated to be added to the population by the HEU for the same period. In addition, the UWMP shows a cumulative deficit of water demand over supply after 2030 under the multi-dry year 5 conditions. Since the Bay Area is already experiencing that level of drought, this analysis will err on the side of caution and conclude water supply impacts of the HEU are potentially significant if “multiple dry year” conditions continue beyond 2030. Therefore, Mitigation Measure UTL-1 is recommended to help assure that potential impacts related to water service in the future (i.e., beyond 2030) are reduced to less than significant levels. With mitigation, no significant short- or long-term impacts regarding water service are expected that would result in the relocation or construction of new or expanded water facilities over the life of the HEU (2031), the construction or relocation of which could cause significant environmental effects.

Analysis of Impacts – Wastewater

The updated Housing Element identifies how the City plans to accommodate its RHNA of at least 570 units. In Section 3, Project Description, Table 3-3 of this Draft EIR indicates the HEU has the potential to result in development of up to 868 additional dwelling units within the Planning Area, which represents a 21 percent increase over existing (2020) conditions. This increase in housing would result in a population increase of up to 2,364 additional persons who would generate an increased quantity of wastewater in the future. Wastewater generated by land uses within Central Contra Costa County is conveyed by the City (under contract to the City of Concord) via existing infrastructure to the CCCSD Treatment Plant for treatment and then discharged to surface waters or reused as recycled water. The CCCSD²⁶ collects and treats an average of approximately 34 million gallons of wastewater per day and up to 230 million gallons per day during extreme storm events. The CCCSD published a Comprehensive Waste Master Plan in June 2017. The CCCSD owns and operates the CCCSD Treatment Plant, located near Martinez, California. The CCCSD Treatment Plant has a treatment capacity of approximately 54 million gallons per day (mgd) and approximately 270 mgd of wet-weather flow. The CCCSD Treatment Plant currently treats an average daily dry-weather flow of 34 mgd and is projected to treat 41 mgd average daily dry-weather flow by 2035. The majority of wastewater is treated to a secondary level (disinfected by ultraviolet light) then discharged into Suisun Bay. Approximately 600 million gallons per year are treated to a tertiary level through additional filtration and disinfection before being distributed as recycled water for landscape irrigation, industrial processes, and plant operations.

The Community Facilities Element of the existing General Plan contains Goal 1 which requires the City to provide efficient plans to maintain and expand existing utility infrastructure as needed. To implement that goal, Policies 1a and 1c require the City to establish a sewer plan and program for providing sewage to non-sewered areas of the City. In addition, Goals 4 and 6 require the City to adequately plan for wastewater service for new development. Performance Standard 4 for Wastewater in the Growth Management Element of the existing General Plan requires all new development comply with Central Contra Costa Sanitary District requirements for sanitary sewer treatment and collection. In addition, septic systems could be allowed in transitional areas on large lots subject to the approval of Environmental Health Division of the Contra Costa County Health Services Department. In addition, Objective 1 and Policy 1c require new development to pay appropriate impact fees to assure adequate wastewater service. In these ways, the existing General Plan assures that new development would have adequate wastewater service from the CCCSD as outlined in their Waste Master Plan (WMP). The proposed HEU deals exclusively with housing but does contain Goal 6 to incorporate sustainability practices into housing, and Policy 6.3 (Energy Efficient Retrofits) promotes home retrofits that reduce consumption of water resources. The proposed HEU deals exclusively with housing and not other environmental issues, so it has no goals or policies that deal with wastewater or sewer service.

The HEU would result in an estimated population increase of up to 2,364 persons in the Planning Area. Assuming an average future generation of 100 gallons of wastewater per person per day (from the WMP), the HEU would generate an additional 236,400 gallons of wastewater per day, or 0.24 mgd per day. This represents 0.4 percent of the estimated 54 mgd dry weather flow capacity of the Treatment Plant. The projected population increase estimated in the CCCSD Waste Master Plan is similar to those of ABAG in their 2020 Plan Bay Area. Although those projections do not specifically take into account the population increase of 2,364 persons estimated by the HEU for 2022-2030, it is unlikely the sewage demands of future development under the HEU would exceed the capacity of the CCCSD treatment plant. Therefore, no significant short- or long-term impacts regarding wastewater service are expected that would result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects.

Analysis of Impacts-Stormwater Drainage

The Contra Costa County Flood Control and Water Conservation District (CCCFCWCD or District) manages regional drainage plans throughout incorporated and unincorporated County areas. All stormwater drains into the San Francisco Bay via stormwater drainage systems and regional creeks and streams. The Contra Costa County Watershed Program is responsible for ensuring that the County complies with its municipal stormwater NPDES permit requirements for water quality. Flood control for the City of Clayton is managed by the District, which is a branch of the Contra Costa Public Works Department. The County is divided into Flood Control (FC) Zones, where flood control projects are built in conjunction with federal or state agencies funded through property taxes. Clayton is located in the Mt. Diablo Creek FC Zone, which has no active flood control improvement projects as of 2021.

The San Francisco Bay is impaired by pollutants including toxic metals carried by stormwater mainly from industrial uses but also by runoff from roads and parking lots. The City is as a co-permittee in Contra Costa County's NPDES MS4 Permit. The District's master planning for runoff management and storm drainage control is generally based on land use and growth projections for the areas within the County. The level of development within the County determines the amount of impervious surfaces that can contribute runoff to the bay, and increases in runoff could result from increases in the amount of impermeable surfaces in the County, including the City of Clayton. The growth projections of the proposed HEU include development of currently vacant sites, which could incrementally increase the amount of impervious surfaces in the City. However, it is overly speculative at this time to predict specifically how the increases in projected housing and population and the changes in non-residential development would affect area runoff and the County's storm drain system.

The Community Facilities Element of the existing General Plan contains Goal 1 which requires the City to establish a drainage plan that indicates areas subject to flooding and city drainage needs. In response, the City has established the Clayton Sewer System Management Plan. Policy 1b requires the establishment of a drainage plan that indicates areas subject to flooding and City drainage needs. In addition, Objective 1 requires new development to pay appropriate impact fees to ensure adequate drainage facilities are in place. In these ways, the existing General Plan assures that new development would have adequate drainage and flood control facilities from the District. The proposed HEU deals exclusively with housing and not other environmental issues, so it has no goals or policies that deal with drainage or flood control.

The County manages regional stormwater facilities, and its planning is based in part on regional population projections as well as the general plans of its served agencies including the City of Clayton. Based on the County's master planning and the City's proposed policies to reduce future

offsite runoff, potential impacts related to stormwater conveyance would be less than significant. Therefore, the HEU would not have significant short- or long-term impacts regarding stormwater collection and disposal service and with payment of fees to the local drainage district, and would not result in the relocation or construction of new or expanded drainage facilities, the construction or relocation of which could cause significant environmental effects.

Analysis of Impacts-Energy and Telecommunications

Electrical and gas services to the Planning Area are provided by Pacific Gas and Electric (PG&E) while telecommunication services are provided by AT&T, Comcast, and cable service providers including DirectTV and Dish. Each of these companies has its own master planning process in terms of regional and local electrical lines, gas pipelines, and telecommunications cables or towers. The various companies that provide energy and telecommunication services to the City regularly review and update their service networks based on population and land use changes. The growth projections of the proposed HEU are similar to those of the adopted 2020 Plan Bay Area by ABAG so the City growth would have only incremental impacts on electrical, natural gas, or telecommunications services in the Planning Area. The Community Facilities Element of the existing General Plan contains Goal 1 which requires the City to provide efficient plans to maintain and expand existing utility infrastructure as needed. The proposed HEU deals exclusively with housing but does contain Goal 6 to incorporate sustainability practices into housing, and Policy 6.3 (Energy Efficient Retrofits) promotes home retrofits that reduce consumption of energy resources. There are no other goals or policies that deal with energy or telecommunications systems. These various goals and policies would help maintain and enhance energy and communications systems services to the City in the future. Therefore, the proposed HEU would have less than significant impacts in regard to those services.

Impact Summary

Based on the above analysis, the proposed HEU may have potentially significant impacts on water supply and sewer/wastewater treatment in the future within the Planning Area. In contrast, impacts related to storm drainage and other utility services in the Planning Area are expected to be less than significant. Mitigation Measure UTL-1 is proposed to reduce potential impacts to future water supplies. With mitigation, the HEU would not in and of itself 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. However, future development projects would have to assess potential impacts of specific developments proposed on specific sites through future analyses under CEQA.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

MM UTL-1 Water Demand Management. Prior to receiving entitlements for new residential development under the Housing Element Update, project applicants must contact the CCCWD and obtain confirmation that adequate water service can be provided and adequate water supplies are available consistent with their latest Urban Water Management Plan. If the CCCWD indicates it cannot guarantee water supplies for the new development, or the project involves an increase over planned development (i.e., General Plan Amendment or Rezoning) to a use or uses that would consume more water than under the current General Plan and zoning, then

the development must implement one or more of the following water conservation measures to the degree necessary to achieve the level of water use that would have occurred under the current General Plan and/or zoning designation(s):

- Install appliances and plumbing that exceed current State Green Building Code water conservation requirements (i.e., those “current” at the time of application). Examples include but are not limited to low or dual flush toilets, composting toilets, high efficiency washing machines, shower timers, low-flow faucet and shower aerators, insulate water pipes, etc.;
- Prohibit installation of a swimming pool or allow only a spa;
- Prohibit installation of water-consuming landscape features (fountains, ponds, etc.);
- Prohibit installation of turf and promote individual gardens;
- Install all hardscape or all xeriscape (drought-tolerant) plants;
- Install only highly efficient drip irrigation systems - do not allow installation of any overhead sprayers or aerial sprinkler systems;
- Install rain barrels or other rain storage systems to reduce demand on domestic water needed for landscaping;
- Evaluate feasibility of installing grey water collection and recycling system, and install the system if feasible; and
- For a General Plan Amendment or Rezoning, the project must demonstrate that it would exceed state and/or regional water conservation requirements sufficient to achieve water use that would have occurred under the existing land use and zoning designations.

Projects are not limited to this list but can recommend additional improvements or systems as appropriate to maximize water conservation. A project must identify the water conservation measures to be implemented with the project prior to entitlement and must demonstrate full compliance with this measure, including installation of specified improvements, prior to receiving a certificate of occupancy. This measure shall be implemented to the satisfaction of the City Planning Department.

Level of Significance After Mitigation

Less than significant.

Water Supply

IMPACT UTS-2 – Would the HEU have insufficient water supplies available to serve the HEU and reasonably foreseeable future development during normal, dry, & multiple dry years?

Analysis of Impacts

The previous Section IMPACT UTS-1 analyzed potential impacts related to water supplies for the Planning Area, which is served by the Contra Costa County Water District (CCWD). The updated Housing Element would result in a population increase of up to 2,364 additional persons who

would increase demand for water in the future. Table 4.19-1 from the CCWD's most current (2020) Urban Water Management Plan (UWMP) estimates the City's population will rise from 11,340 persons in 2020 up to 12,050 persons in 2040, or an overall increase of 6.3 percent. The UWMP's population estimates are slightly higher than those in ABAG's 2020 Plan Bay Area, but the two projections are essentially equivalent for water planning purposes, with a difference of only 795 person or 6.6 percent by 2040. The HEU would result in an estimated population increase of up to 2,364 persons in the Planning Area. Assuming an average future consumption of 150 gallons of water per person per day (from the UWMP), the HEU would generate a need for an additional 354,600 gallons of water per day, or 397 acre-feet per year (AFY). Table 4.19-2 demonstrates that the projected water supplies of the CCWD under normal or average non-drought conditions, or even during one year of drought, will be sufficient to serve the City's projected population (i.e., surplus of water supply over demand). However, worst case conditions (i.e., multiple drought conditions for up to 5 years) would result in a cumulative deficit of water supplies to demand starting in 2030. According to ABAG²⁷, the City and Bay Area, along with the entire state, have already experienced 5 years of drought conditions (since 2017) which are expected to continue in the near future.

The Community Facilities Element of the existing General Plan contains Goal 1 which requires the City to provide efficient plans to maintain and expand existing utility infrastructure as needed. To implement that, Policy 1c requires the City to "establish a water plan that includes water origin, storage, main lines and branch lines, and identify system needs". In addition, Goals 4 and 6 require the City to adequately plan for water service for new development. Performance Standard 5 for Water in the Growth Management Element of the existing General Plan requires all new development to comply with CCWD requirements for water service. In addition, Objective 1 and Policies 1a and 1b require new development to pay appropriate impact fees to assure adequate water service. In these ways, the existing General Plan assures that new development would have adequate water supplies and service from the CCWD as outlined in their UWMP. The proposed HEU deals exclusively with housing but does contain Goal 6 to incorporate sustainability practices into housing and Policy 6.3 (Energy Efficient Retrofits) promotes home retrofits that reduce consumption of water resources.

The projected population increase estimated in the CCWD UWMP is only 530 persons from 2025 to 2045, so it does not account for the projected population increase of 2,364 persons with implementation of the HEU for the same period. In addition, the UWMP shows a cumulative deficit of water demand over supply after 2030 under the multi-dry year 5 conditions. Since the Bay Area is already experiencing that level of drought, this analysis will err on the side of caution and conclude water supply impacts of the HEU are potentially significant. Therefore, Mitigation Measure UTL-1 is recommended to help assure that potential impacts related to water service in the future are reduced to less than significant levels. With mitigation, there would be sufficient water supplies available to serve the HEU and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, impacts would be reduced to less than significant levels with mitigation.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measure UTL-1 under IMPACT UTS-1 above.

Level of Significance After Mitigation

Less than significant.

Wastewater Treatment Capacity

IMPACT UTS-3 – Would the HEU result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Analysis of Impacts

The previous Section IMPACT UTS-1 analyzed potential impacts related to wastewater services for the Planning Area. The HEU would result in a population increase of up to 2,364 additional persons in the City, and these additional residents would generate an increased need for wastewater treatment in the future. Wastewater generated by land uses within Central Contra Costa County is conveyed via existing infrastructure by the City of Concord to the CCCSD Treatment Plant for treatment and then discharged to surface waters or reused as recycled water. The CCCSD Treatment Plant has a treatment capacity of approximately 54 million gallons per day (mgd) and approximately 270 mgd of wet-weather flow. The CCCSD Treatment Plant currently treats an average daily dry-weather flow of 34 mgd and projected to treat 41 mgd average daily dry-weather flow by 2035.

The Community Facilities Element of the existing General Plan contains Goal 1 which requires the City to provide efficient plans to maintain and expand existing utility infrastructure as needed. To implement that goal, Policies 1a and 1c require the City to establish a sewer plan and program for providing sewage to non-sewered areas of the City. In addition, Goals 4 and 6 require the City to adequately plan for wastewater service for new development.

Performance Standard 4 for Wastewater in the Growth Management Element of the existing General Plan requires all new development to comply with CCCSD requirements for sanitary sewer treatment and collection. In addition, septic systems could be allowed in transitional areas on large lots and subject to the approval of the Environmental Health Division of the Contra Costa County Health Services Department. In addition, Objective 1 and Policy 1c require new development to pay appropriate impact fees to assure adequate wastewater service. In these ways, the existing General Plan assures that new development would have adequate wastewater service from the CCCSD as outlined in their Waste Master Plan (WMP). The proposed HEU deals exclusively with housing and not other environmental issues, so it has no goals or policies that deal with wastewater or sewer service.

The HEU would result in an estimated population increase of up to 2,364 persons in the Planning Area. Assuming an average future generation of 100 gallons of water per person per day (from the WMP), the HEU would generate an additional 236,400 gallons of wastewater per day or 0.24 mgd per day. This represents 0.4 percent of the estimated 54 mgd dry weather flow capacity of the Treatment Plant. The projected population increase estimated in the CCCSD Waste Master Plan is similar to those of ABAG in their 2020 Plan Bay Area. Although those projections do not specifically take into account the 2,364 persons estimated to be added to the Clayton population with implementation of the HEU for years 2025-2045, it is unlikely the sewer demands of future development under the HEU would exceed the capacity of the CCCSD treatment plant. Therefore, the HEU would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Landfill Capacity

IMPACT UTS-4 – Would the HEU 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?

Analysis of Impacts

Central Contra Costa County Solid Waste Authority (dba RecycleSmart) provides solid waste and residential recycling services for areas within Contra Costa County. RecycleSmart holds franchise agreements with waste franchises that provide solid waste collection and disposal of residential and commercial solid waste. According to CalRecycle, Contra Costa County generates 807,550 tons annually of solid waste.

The County's Keller Canyon Landfill is active with a current maximum daily tonnage limit for disposal of 3,500 tons per day. The landfill has a maximum capacity of 75,018,280 tons and has a remaining capacity of 63,408,410 tons²⁸. Based on its maximum daily limit, the landfill currently has a remaining lifetime of approximately 50 yearsⁱⁱ.

The HEU would result in a population increase of up to 2,364 additional persons who would generate solid waste and an increased need for solid waste disposal services in the future. Assuming 3.5 pounds of wasteⁱⁱⁱ generated per person per day²⁹, the additional population added under the HEU would generate a total of 8,274 pounds or 4.1 tons per day of additional solid waste. This represents 0.1 percent of the daily maximum total disposal limit for the landfill.

The Community Facilities Element of the existing General Plan contains Goal 1 which requires the City to provide efficient plans to maintain and expand existing utility infrastructure as needed (which applies to solid waste services as well). In addition, Objective 1 in the Growth Management Element of the existing General Plan requires all new development to pay appropriate impact fees to assure adequate utility service (which includes solid waste). The proposed HEU deals exclusively with housing and not other environmental issues, so it has no goals or policies that deal with solid waste disposal.

In these ways, the existing General Plan assures that new development would have adequate solid waste service in the future. As outlined above, the HEU would not generate solid waste in excess of State or local standards, or in excess of the capacity of local (landfill) infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

ⁱⁱ 63,408,410 tons remaining capacity / 3500 tons daily limit = 18,117 days or 49.6 years

ⁱⁱⁱ 10 pounds per unit per day divided by 2.85 persons per unit equals 3.5 pounds per person per day

Solid Waste Regulations

IMPACT UTS-5 – Would the HEU comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Analysis of Impacts

The City currently complies with the waste reduction requirements of AB 341. The growth projections of the proposed HEU are different than those of the existing General Plan or ABAG 2020 Plan Bay Area which do not take into account recent and current RHNA allocations for additional housing to meet state goals. However, residents of the added housing units and employees of future non-residential development would comply with established solid waste reduction programs. In addition, the City is required by comply with state laws regarding source reduction and recycling. The proposed HEU deals exclusively with housing and not other environmental issues, so it has no goals or policies that deal with solid waste regulations. The City is required to comply with established laws and regulations regarding solid waste minimization and recycling. Therefore, the proposed HEU would not interfere with the City's compliance with federal, state, and local management and reduction statutes and regulations related to solid waste.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

IMPACT UTS-6 – Would the HEU cause substantial adverse cumulative impacts with respect to Utilities and Service Systems?

Analysis of Impacts

Based on the analysis in IMPACT UTS-1 through UTS-5, the proposed HEU may have potentially significant impacts on water consumption and sewer/wastewater treatment in the future within the Planning Area. The analysis also demonstrates that impacts related to storm drainage and other utility services in the Planning Area are expected to be less than significant. However, these impacts may have wider implications for utilities in a more regional sense. Therefore, the “universe” for consideration of cumulative utility-related impacts for the HEU is Contra Costa County as well as this eastern portion of the San Francisco Bay Area. The Community Facilities and Growth Management Elements of the existing General Plan address potential impacts to utility systems that could result as growth occurs in the City. The City maintains its own Development Impact Fees similar to those of surrounding jurisdictions as well. Within the City, Mitigation Measures UTL-1 is proposed to reduce potential impacts to future water supplies. With mitigation, the HEU would not in and of itself 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. However, future development projects implemented under the HEU would have to assess potential impacts of specific developments proposed on specific sites through future analyses under CEQA. The proposed HEU deals exclusively with housing and not other environmental issues, so it has no goals or policies that deal specifically with cumulative utility-related impacts.

Regional water, sewer, wastewater, and storm drain system operators maintain their own long-range master plans for these services. Energy services in this region are provided by both public agencies and private companies, while telecommunications services are provided by a large number of private companies of various sizes. Solid waste disposal is managed on a regional scale by the County and collection services from dozens of material recycling facilities (MRFs) spread throughout the region. Most utility master plans are based on the general plans of the cities within their particular service area like the City of Clayton. The growth projections of the proposed HEU are different than those of the existing General Plan but are generally consistent with the ABAG 2020 Plan Bay Area estimates except they do not take into account the City's current RHNA allocation. It is possible the increases in projected housing, population, and non-residential development may have adverse impacts on water demand but are not expected to have significant impacts on sewer/wastewater, storm drainage, energy, telecommunications, or solid waste infrastructure and service providers in the region. All of the local jurisdictions within the surrounding region have policies, similar to the City of Clayton's, that require the capacity of existing infrastructure and the potential demand for public services be considered in future planning and review of new development.

Once the HEU is adopted, its growth projections would be incorporated as appropriate into the various master plans of the agencies and companies providing utility services to the City. In addition, Mitigation Measure UTL-1 is identified to help limit future water demand. Therefore, the proposed HEU is not expected to have cumulative impacts on regional utility services.

Level of Significance Before Mitigation

Impacts to wastewater treatment, stormwater drainage, energy, and telecommunication systems will be less than significant. Impacts related to future water supplies are potentially significant.

Mitigation Measures

See MM UTL-1 relative to future water supply.

Level of Significance After Mitigation

Less than significant.

4.19.5 References

- 1 Contra Costa County Water District. *Special District*. (2022).
<https://www.ccwater.com/290/Special-District>. [Accessed June 2022].
- 2 Contra Costa Water District. *Urban Water Management Plan*. (2020).
<https://www.ccwater.com/1053/Urban-Water-Management-Plan>. [Accessed June 2022].
- 3 Contra Costa Water District. *The Source of Your Water* (2021).
<https://www.ccwater.com/365/The-Source-of-Your-Water>. [Accessed June 2022].
- 4 Contra Costa Water District. *District Profile*. (2022). <https://www.ccwater.com/280/District-Profile>. [Accessed June 2022].
- 5 Contra Costa Water District. *The Source of Your Water*. (2022).
<https://www.ccwater.com/365/The-Source-of-Your-Water>. [Accessed June 2022].
- 6 City of Clayton. *Sewer System Management Plan*. (2019).
https://claytonca.gov/fc/engineering/Clayton_SSMP-Packet-10-15-2019.pdf. [Accessed June 2022].
- 7 City of Concord. *Sanitary Sewer Information*. (2014).
<https://www.cityofconcord.org/460/Sanitary-Sewer-Information>. [Accessed June 2022].
- 8 City of Clayton. *Sewer System Management Plan*. (2019).
https://claytonca.gov/fc/engineering/Clayton_SSMP-Packet-10-15-2019.pdf. [Accessed June 2022].
- 9 City of Clayton. *Sewer System Management Plan*. (2019).
https://claytonca.gov/fc/engineering/Clayton_SSMP-Packet-10-15-2019.pdf. [Accessed June 2022].
- 10 Central Contra Costa County Sanitary District. *Service Area and Statistics*. (2022).
<https://www.centralsan.org/post/service-area-statistics>. [Accessed June 2022].
- 11 Central Contra Costa County Sanitary District. *Residential Recycled Water Fill Station*. (2022). <https://www.centralsan.org/post/residential-recycled-water-fill-station>. [Accessed June 2022].
- 12 City of Clayton, *Municipal Code. Title 13, Water and Sewers*. March 2022.
<https://library.municode.com/ca/clayton/codes/municipal%20code>. [Accessed June 2022].
- 13 City of Clayton, *Municipal Code. Title 13, Water and Sewers*. March 2022.
<https://library.municode.com/ca/clayton/codes/municipal%20code>. [Accessed June 2022].
- 14 City of Clayton, *Municipal Code. Title 13, Water and Sewers*. March 2022.
<https://library.municode.com/ca/clayton/codes/municipal%20code>. [Accessed June 2022].
- 15 Contra Costa County Clean Water Program. *Watershed Atlas*. (2004).
<https://www.cccleanwater.org/community/watersheds>. [Accessed June 2022].
- 16 Contra Costa Public Works. *Flood Control Zones*. (2021).
<https://www.contracosta.ca.gov/8475/Flood-Control-Zones>. [Accessed June 2022].
<https://www.contracosta.ca.gov/DocumentCenter/View/73557/FC-Zones-Summary>. [Accessed June 2022].
- 17 CalRecycle. *SWIS Facility/Site Activity Details*. (2019).
<https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228>. [Accessed June 2022].
- 18 CalRecycle. *SWIS Facility/Site Activity Details*. (2019).
<https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228>. [Accessed June 2022].
- 19 CalRecycle. *SWIS Facility/Site Activity Details*. (2019).
<https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228>. [Accessed June 2022].

-
- ²⁰ Pacific Gas & Electric. *Local Capacity Area Substation List*. (2021).
https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/energy-supply/standard-contracts-for-multiple-facilities-pursuant-to-ab-1613/lcr-substation-list.pdf. [Accessed June 2022].
- ²¹ City of Clayton. *General Plan Section IX, Community Facilities Element*. March 2000.
<https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-IX-community-facilities-element.pdf>. [Accessed June 2022].
- ²² City of Clayton. *General Plan Section VII, Safety Element*. March 2000.
<https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-VII-safety-element.pdf>. [Accessed June 2022].
- ²³ City of Clayton. *General Plan Section XI, Growth Management Element*. March 2001.
<https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-xi-growth-management-element-12apr2011.pdf>. [Accessed June 2022].
- ²⁴ City of Clayton. *Municipal Code. Title 13, Water and Sewers*. March 2022.
<https://library.municode.com/ca/clayton/codes/municipal%20code>. [Accessed June 2022].
- ²⁵ ABAG Website, “Drought” tab/page, website accessed in June 2022
<https://abag.ca.gov/our-work/resilience/data-research/drought>. [Accessed June 2022].
- ²⁶ Central Contra Costa Sanitary District (CCCSD). *Comprehensive Wastewater Master Plan*. 2017. <https://www.centalsan.org/post/comprehensive-wastewater-master-plan>. [Accessed June 2022].
- ²⁷ ABAG Website, “Drought” tab/page, website accessed in June 2022
<https://abag.ca.gov/our-work/resilience/data-research/drought>. [Accessed June 2022].
- ²⁸ California Department of Resources Recycling and Recovery (CalRecycle). 2022. Residential Waste Stream by Material Type. Website accessed: June 6, 2022:
<https://www2.calrecycle.ca.gov/WasteCharacterization/ResidentialStreams>. [Accessed June 2022].
- ²⁹ California Department of Resources Recycling and Recovery (CalRecycle). 2022. Estimated Solid Waste Generation. Website accessed June 6, 2022:
<https://www2.calrecycle.ca.gov/wastecharacterization/general/rates>. [Accessed June 2022].

4.20 – WILDFIRE

This section describes the potential for wildfire on lands located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones by the California Department of Forestry and Fire Protection (CAL FIRE). In addition, it discusses potential impacts of the proposed City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments (“HEU” or “project”) on wildfire hazards, including potential impacts on emergency response or emergency evacuation plans, exacerbation of wildfire risks and exposure to pollutants, and impacts to people or structures as a result of runoff, post-fire slope instability, or drainage changes.

4.20.1 *Environmental Setting*

Climate

The Planning Area is located in north central Contra Costa County at the northern foot of Mt. Diablo. The region has a Mediterranean climate, characterized by cool, wet winters, and hot, dry summers; but weather is dependent on the surrounding topography, San Francisco Bay, and the Pacific Ocean. The inland Contra Costa County climate is affected by the Berkeley or East Bay Hills to the west. The hills create a fog shadow, depriving the areas to their east of fog, low clouds, and cooler temperatures that come from the marine layer in the summer. This shadow leaves the inland East Bay noticeably warmer and more arid than coastal areas.¹ The hills have a similar effect on rainfall, when southwestern winds bring precipitation, and air rises against the hills, condensing the moisture and increasing rainfall on the western side, leaving the east drier. Contra Costa County weather is also affected by hot dry winds that come from the Sierra Nevada Mountains, colloquially called Diablo Winds.² Additionally, weather and rainfall in the region can be affected by periodic El Niño and La Niña events that occur in the equatorial Pacific, depending on their intensity.

Average temperatures in Clayton range from a low of 35 F° in January to an average high of 90.6 F° in July.³ Average annual precipitation is approximately 18.12 inches, with the most rainfall occurring between December and February.⁴

Wind Patterns

The Diablo Winds get their name from Mt. Diablo, which they pass headed towards the greater Bay Area. The Diablo Winds are a phenomenon of hot, dry winds that originate inland past the Sierra Nevada mountain-range. High pressure winds build up and fall over the mountains, compressing and losing humidity. They then meet warm air in the Central Valley, further compressing and becoming hotter.⁵ These winds then continue to move offshore going over various peaks in the Bay Area, reaching speeds over 40 miles per hour. Typically occurring in the spring and fall, these winds represent a health hazard to Bay Area residents; more so in the fall when vegetation is at its driest.⁶

State Responsibility Areas and Fire Hazards Severity Zones

State Responsibility Areas (SRA) designate those areas where CAL FIRE has responsibility for wildland fire protection. SRAs do not include lands that are within city boundaries or within

federally owned lands. Local Responsibility Areas (LRA) designate areas where local city governments exercise responsibility for wildland fire protection. Except for the City of Concord to the Northwest, all areas surrounding the City of Clayton are designated SRAs. Mt. Diablo and Black Diamonds Mine Regional Preserve offer scenic vistas for Clayton community members, but the large open spaces also pose a potentially significant fire hazard. Wildfires in the hills are of continuous concern and can be fueled by dry vegetation, occasional Diablo winds, and hot temperatures. Many notable fires have happened around the Planning Area. In 2013, the Morgan Fire burned 3,111 acres on Mt. Diablo, and in 2018, the Marsh Fire incident burned 247 acres; both incidents occurred southeast of Clayton.⁷ CAL FIRE prepares maps that identify Fire Hazard Severity Zones (FHSZs). Exhibit 4.20-1 shows SRAs and LRAs surrounding Clayton and the varying levels of potential fire severity. Exhibit 4.20-2 shows the 6th cycle housing inventory sites in relation to the SRAs and LRAs surrounding the City.

4.20.2 Regulatory Framework

Federal

California Emergency Management Agency (CAL EMA)

CAL EMA serves as the lead State agency for emergency management in California. CAL EMA coordinates the State response to major emergencies in support of local government. It is also responsible for collecting, verifying, and evaluating information about the emergency, facilitating communication with local government, and providing affected jurisdictions with additional resources when necessary. CAL EMA may task State agencies to perform work outside their day-to-day and statutory responsibilities. Local jurisdictions first use their own resources and, as they are exhausted, obtain more from neighboring cities and special districts, the county in which they are located, and other counties throughout the state through the Statewide Mutual Aid System.

Federal Emergency Management Agency

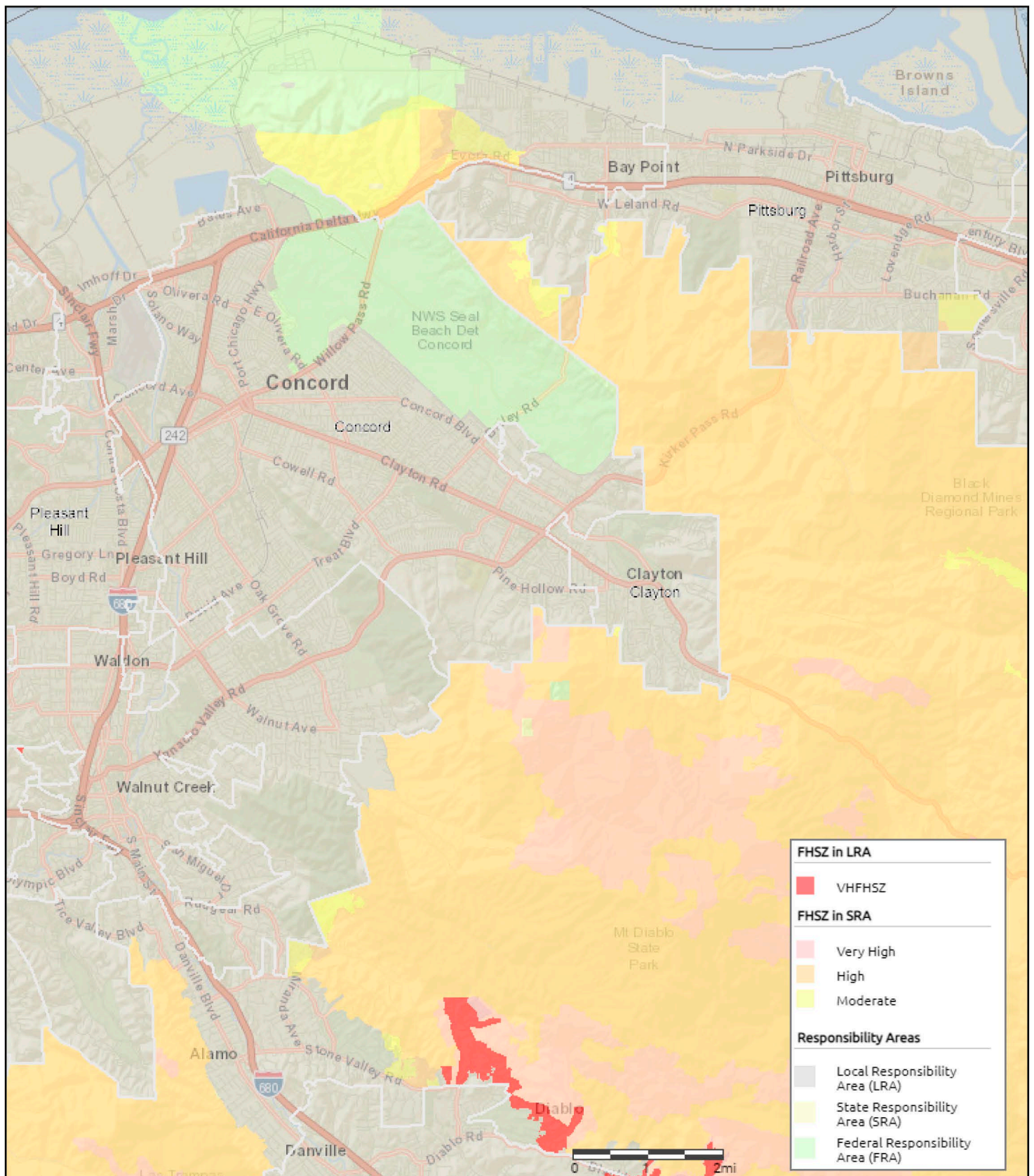
In March 2003, the Federal Emergency Management Agency (FEMA) became part of the U.S. Department of Homeland Security. FEMA's continuing mission within the department is to lead the effort to prepare the nation for all hazards and effectively manage federal response and recovery efforts following any national incident. FEMA also initiates proactive mitigation activities, trains first responders, and manages the National Flood Insurance Program and the U.S. Fire Administration.

Disaster Mitigation Act of 2000

This legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide. The act is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities.

Uniform Fire Code

The Uniform Fire Code (UFC) contains federal regulations relating to construction and maintenance of buildings and the use of premises, including specialized technical regulations related to fire and life safety. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and premises.



Source: Google Maps

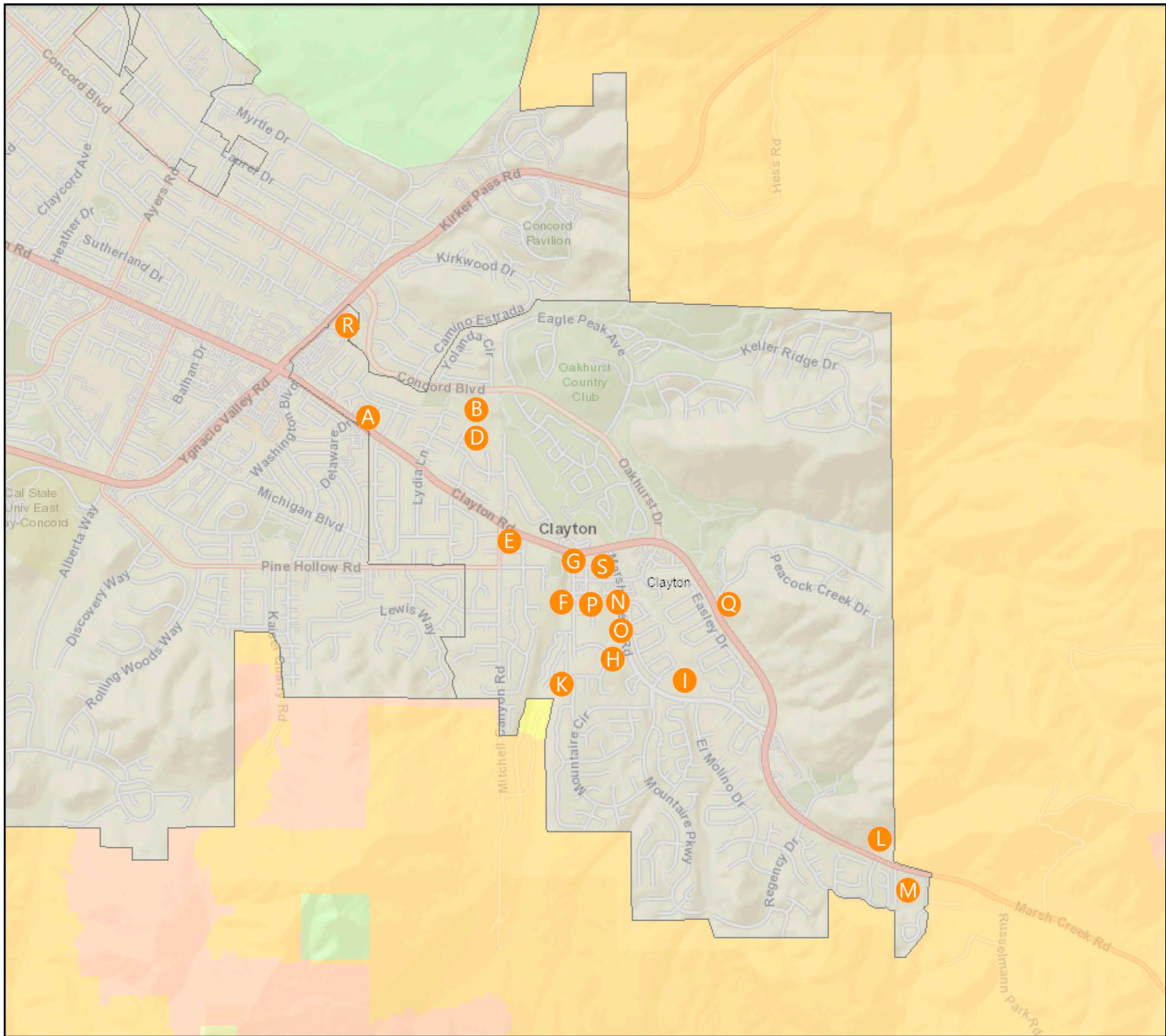
<http://www.migcom.com> • 951-787-9222

Exhibit 4.20-1 High Fire Hazard Severity Zones



Clayton Housing Element Update
Clayton, California

This Page Intentionally Left Blank.



Source: CalFire

Preliminary 6th Cycle Sites (868 Units)

- | | |
|-------------------------------|-------------------------------|
| A 39 Units (30 du/ac) | K 2 Units (3 du/ac) |
| B 32 Units (5 du/ac) | L 7 Units (1 du/ac) |
| D 8 Units (3 du/ac) | M 238 Units (30 du/ac) |
| E 32 Units (30 du/ac) | N 29 Units (30 du/ac) |
| F 22 Units (30 du/ac) | O 81 Units (20 du/ac) |
| G 49 Units (30 du/ac) | P 13 Units (30 du/ac) |
| H 33 Units (30 du/ac) | Q 76 Units (30 du/ac) |
| I 128 Units (10 du/ac) | R 41 Units (30 du/ac) |
| J 21 Units (5 du/ac) | S 17 Units (30 du/ac) |

* Site C omitted from list

City Boundaries

- ☐ Incorporated Area

County Boundaries

- ☐

FHSZ in LRA

- ☐ VHFHSZ

FHSZ in SRA

- ☐ Very High
☐ High
☐ Moderate

Responsibility Areas

- ☐ Local Responsibility Area (LRA)
☐ State Responsibility Area (SRA)
☐ Federal Responsibility Area (FRA)

<http://www.migcom.com> • 951-787-9222

Exhibit 4.20-2 Preliminary 6th Cycle Sites Wildfire Overlay

Clayton Housing Element Update
 Clayton, California



This Page Intentionally Left Blank.

Standardized Emergency Management System and National Incident Management System (SEMS)

According to the State's SEMS, local agencies have primary authority regarding rescue and treatment of casualties and making decisions regarding protective actions for the community. When a major incident occurs, the first few moments are critical in terms of reducing loss of life and property. First responders must be sufficiently trained to understand the nature and the gravity of the event to minimize the confusion that inevitably follows catastrophic situations. This on-scene authority rests with the local emergency services organization and the incident commander.

State

California Department of Forestry and Fire Protection (CALFIRE), Office of the State Fire Marshal (CAL FIRE-OSFM)

The Office of the State Fire Marshal evaluates and provides technical assistance for the Hazardous Material Management Plan (HMMP), the Hazardous Materials Inventory Statement (HMIS) and the Aboveground Petroleum Storage Act (APSA) Programs.

California Fire Code (Title 24, Part 9, California Code of Regulations)

The California Fire Code incorporates the Uniform Fire Code with necessary California amendments. This code prescribes regulations consistent with nationally recognized good practices for the safeguarding, to a reasonable degree, of life and property from the hazards of fire explosion. It also addresses dangerous conditions arising from the storage, handling, and use of hazardous materials and devices; conditions hazardous to life or property in the use or occupancy of buildings or premises; and provisions to assist emergency response personnel. Section 701A.3.2 of the California Building Code (CBC) requires that new buildings located in any Fire Hazard Severity Zone within SRAs, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted, comply with all sections of the chapter.

California Public Resources Code 4291 (PRC 4291)

PRC 4291 requires homeowners to address wildland fire hazards through creation of defensible space and other building construction mitigation measures.

California Senate Bill 99 (SB 99)

SB 99 requires the legislative body of a city or county to adopt a comprehensive, long-term general plan that includes various elements, including a housing element and a safety element for the protection of the community from unreasonable risks associated with the effects of various geologic and seismic hazards, flooding, and wildfires. SB 99 requires the 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.

California Assembly Bill 747 (AB 747)

AB 747 requires the legislative body of each county and city to adopt a comprehensive, long-term general plan for the physical development of the county or city and of any land outside its boundaries that bears relation to its planning. AB 747 requires the general plan to include certain mandatory elements, including a safety element for the protection of the community from unreasonable risks associated with the effects of various geologic hazards, flooding, wildland and urban fires, and climate adaptation and resilience strategies. AB 747 requires the safety element to address, among other things, evacuation routes related to identified fire and geologic hazards.

If a local jurisdiction has not adopted a local hazard mitigation plan, AB 747 requires the safety element to be reviewed and updated as necessary to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. AB 747 authorizes the 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.

Local

City General Plan

The 2000 City General Plan includes goals, objectives, and policies to minimize potential damage and hazards from wildfires:

Safety Element⁸

Goal 1. To reduce potential risk to new development by proper planning and to minimize existing risk through coordinated City-County actions.

Fire Protection

Objective 10. To incorporate measures for fire protection into development proposals and city plans.

Policy 10a. Identify high fire hazard areas on a development constraints map.

Policy 10b. Submit all new developments for review by the Fire District so that fire-fighting needs can be estimated, and services be adequately provided.

Policy 10c. Require development proposals to meet standards for adequate fire flows appropriate to fire risk created.

Policy 10d. Designate locations in the community disaster plan to be used in case of a large fire or disaster. The elementary school has been used in the past for assembly, and City Hall can be used for communications.

Policy 10e. Establish fees and assessments to support enhancement of fire protection services in cooperation with Consolidated Fire District Planning and Budgeting.

Objective 11. To reduce fire risk by promoting fire safe residences in high risk areas.

Policy 11a. Construct homes located in high fire hazard areas with fire-resistant materials and landscape the surroundings with fire resistant vegetation. Attention should be given to treatment of shake roofs or alternative roofing and requirement of spark arrestors.

Policy 11b. Reduce fire risk through adequate fire break, control burning and fuel removal.

Emergency Preparedness

Objective 13. To evaluate the potential for disaster and to continue planning for mitigation and response to emergency.

Policy 13a. Keep major arterials free for evacuation in case of a major emergency.

Policy 13b. Improve circulation to and from the Town Center.

Policy 13c. Support community disaster planning as an ongoing effort.

Policy 13d. Develop and improve emergency communication network planning.

Implementation Measure 4. Prepare fire hazard maps and alert residents to danger.

Implementation Measure 5. Construct roads and turn-arounds to provide enough clearance to accommodate firefighting equipment.

Implementation Measure 6. Provide yearly update to community disaster plans for all feasible emergencies including locations for relief, decision making and other aspects of thoughtful preparation. Include a review of primary exit routes.

Growth Management Element⁹

Public Facilities and Services

Goal 3. Incorporate fire safety precautions in existing developed areas and in planning for new development.

Goal 6. Assure that new residential, business, and commercial growth pays for the facilities required to meet the demands resulting from that growth.

Objective 1. Development Mitigation: The City shall adopt and maintain a development mitigation program to ensure that new growth pays its fair share of the costs associated with that growth.

Policies/Implementation Measures

Policy 1a. The City will continue to implement its adopted development fees to require developers to pay the costs necessary to mitigate the impacts of development on public facilities and services.

Policy 1b. The City will review the existing adopted development fees and adopt additional development fees, as necessary, to ensure that new growth is paying its fair share of the costs associated with the provision of facilities for police, parks, fire protection, sanitary sewer, water, and flood control.

Policy 1c. All new development shall contribute to or participate in the improvement of the police, parks, fire protection, sanitary sewer, water, and flood control systems in proportion to the demand generated by the project occupants and users.

City Municipal Code (CMC)

The CMC contains no titles or chapters that specifically address wildland fire risks or emergency response plans. However, CMC Chapter 12.04 (Street Encroachments) prohibits encroachments upon public ways and requires encroachment permits for work within public rights-of-way within the City to ensure continued access through or around a work area during construction.

4.20.3 Significance Thresholds

Pursuant to the CEQA Guidelines, implementation of the project would have a significant impact related to wildfire if the project is located in or near state responsibility areas or lands classified as very high hazard severity zones and would:

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan,
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- c) 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; or
- d) 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.

4.20.4 Impacts and Mitigation Measures

This section describes potential impacts related to wildfires that could result from the implementation of the project.

Emergency Response Plans

Impact WIL-1 – Would the HEU substantially impair an adopted emergency response plan or emergency evacuation plan?

Analysis of Impacts

Fire services in the Planning Area are provided by the Contra Costa County Fire Protection District. Fire Station 11 is located at the intersection of Clayton Road and Center Street near Clayton's Town Center. As described in section 4.20-1 above, except for the City of Concord to the northwest, all areas surrounding the City of Clayton are designated SRAs. The large open spaces surrounding the Planning Area pose a potentially significant fire hazard. Slopes, high winds, and difficulty in access also increase the potential hazards. Wildfires in the hills are of continuous concern, and can be fueled by dry vegetation, occasional Diablo winds, and hot temperatures. Traffic congestion in the case of fire can hinder firefighting. Isolated homes set in wooded canyons or on ridge tops with only one narrow, winding, or steep road are subject to a high fire hazard. In any disaster warranting evacuation, the exact emergency routes used would depend on a number of variables, including the type, scope, and location of the incident.

According to the General Plan Safety Element, primary exit routes out of Clayton to the north are Pine Hollow Road, Clayton Road, and Concord Boulevard (east of the Clayton municipal boundary, Concord Boulevard becomes Oakhurst Drive). To the south, the primary route is Marsh Creek Road. As described in EIR Section 4.17, Clayton Road, Marsh Creek Road and Concord Boulevard/Oakhurst Drive are arterial streets that carry traffic into, out of and through Clayton. Pine Hollow Road is one of the City's collector streets, which is a classification of roadways that provide connections to and from arterial streets to neighborhood streets and destination points. All of the arterial streets provide two travel lanes in each direction; Marsh Creek Road varies between one to two lanes in each direction, and Pine Hollow Road has one travel lane in each direction in Clayton and widens to two lanes in each direction in the City of Concord. According

to the Clayton General Plan Safety Element, two-lane roads such as Pine Hollow Road can carry as many as 1,000 vehicles per hour, while wider four-lane roads such as Concord Boulevard can carry as many as 3,000 vehicles per hour.

These principal access ways are all well-maintained and would function as evacuation routes under the HEU. Implementation of the HEU could result in work off-site of future development areas and in public rights-of-way for purposes of installation of utility lines or connections to new residences, or to install circulation improvements such as sidewalks or bicycle lanes. Prior to conducting any work in a public right-of-way, developers of future development projects would be required to obtain an encroachment permit in accordance with CMC Chapter 12.04. The request for encroachment permit is subject to approval by the City Engineer, who can impose limitations on work hours and/or require that work in a roadway maintain at least one unobstructed travel lane in each direction at all times during construction, as appropriate for the type of work being performed. Such limitations and requirements would be consistent with standard traffic engineering practice and the temporary traffic control plan measures and guidance in the California Department of Transportation's *California Manual on Uniform Traffic Control Devices*.¹⁰

The General Plan Safety Element contains goals, objectives, and policies to reduce potential risk to new development through proper planning and to minimize existing risk through coordinated City-County actions. Safety Element Objective 12 requires the City to employ planning measures to promote public safety. Policy 12a encourages the use of citizen action programs such as Neighborhood Alert and Operation Identification to reduce crime risk. Policy 12c encourages communication among the public protection agencies on matters of mutual concern. Safety Element Objective 13 requires the evaluation of potential for disaster and continuous planning for mitigation and response to emergencies. Policy 13a requires major arterials to be kept free for evacuation in case of a major emergency and is consistent with the requirement for an encroachment permit that is codified in CMC Chapter 12.04. Policy 13b encourages improvements in circulation to and from the Town Center. Policy 13c supports community disaster planning as an ongoing effort. Policy 13d requires the City to develop and improve emergency communication network planning.

While it is possible that there may be limited circulation changes that may be required during discrete periods of time associated with specific construction projects, these changes would be temporary and would be subject to encroachment permit requirements that would facilitate unobstructed evacuation routes in the event of an emergency. General Plan goals, objectives, and policies ensure that adequate peak load water supply exists for firefighting, all-weather roads are constructed and maintained for firefighting equipment, and future development pursuant to the HEU would be constructed according to proper code standards. In addition, since permanent closure of any existing public right-of-way would not be necessary for development on any of the 6th cycle housing inventory sites, existing emergency access routes would be maintained to all properties within the Planning Area and the surrounding vicinity during construction activities and once potential residential development is occupied. Potential adverse impacts on emergency access would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Slope, Prevailing Winds, and Other Factors

Impact WIL-2 – Would the HEU result in impacts due to slope, prevailing winds, and other factors, exacerbating wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Analysis of Impacts

The greatest potential for wildfire hazards occurs in areas adjacent to abundant natural vegetation. As previously stated, Clayton is served by the Contra Costa County Fire Protection District. The Fire District collects fees when development occurs and obtains land when development of new stations is necessary. The Fire District also has requirements and recommendations for new development, including installation and maintenance of water supply systems for fire protection with flows equal or greater than those required by Fire District standards and guidelines (California Fire Code 2019; CCCFPD Ordinance No. 2019-37, Section 105.7). Determination of actual requirements depends upon specific information regarding building size, construction type, spacing, and occupancy. Hydrant spacing is required in accordance with Fire District standards and guidelines. Every new building in Clayton must be accessible to fire apparatus by means of streets or roads meeting or exceeding Fire District standards and guidelines related to driving surface widths, curve radii, grade changes, load support, and turnarounds. Access gates and fire roads must be provided for fire apparatus to reach open space area at locations specified by the Fire District. The City provides perpetual easements for such access as required by the Fire District. A plan to be approved by the Fire District for the perpetual control and abatement of hazardous weeds, grass, and brush in all open space areas must be submitted by project applicants, and may include disked firebreaks, cattle grazing, and/or fire-resistant planting. Travel time and distance demands for responding fire companies cannot be completely resolved by station establishment or relocations. Accordingly, District fire flow delivery capabilities are limited to less than standard. To compensate for these limitations, the following additional mitigations are required pursuant to the Fire Code: all buildings in an area requiring a minimum fire flow in excess of 1,000 gallons per minute (gpm), or located in an area requiring a minimum fire flow in excess of 1,000 gpm, shall have a fire retardant roof covering as specified by the Fire District; and all buildings requiring a minimum fire flow in excess of 1,500 gpm shall have automatic fire extinguishing systems specified and approved by the Fire District. Finally, the District requires plans showing compliance with all the above measures to be submitted and approved by the Fire District prior to the commencement of any construction.

The General Plan Safety Element contains goals, objectives, and policies related to fire protection. Safety Element Objective 10 and its attendant policies requires incorporation of measures for fire protection into development proposal and city plans. Safety Element Policy 10b requires all new development be submitted for review by the Fire District so that firefighting needs can be estimated, and services be adequately provided. Safety Element Policy 10c requires development proposals to meet standards for adequate fire flows appropriate to fire risk created. Safety Element Policy 10e establishes fees and assessment to support enhancement of fire protection services in cooperation with Consolidated Fire District Planning and Budgeting. Safety Element Objective 11 and its attendant policies aim to reduce fire risk by promoting fire safe residences in substantial risk areas. Policy 11a requires the construction of homes in high fire hazard areas to include fire-resistant materials and fire-resistant vegetation, and Policy 11b requires adequate fire breaks, controlled burns, and fuel removal. Compliance with these goals and policies, and the City's inclusion of the Fire District in the development review process for new development, will help minimize the potential for impacts related to wildfires and subsequent downhill or downstream impacts, including exposure to air pollutants.

The proposed Housing Element Update would not directly approve any development projects within any fire hazard severity zone. However, as shown in Exhibit 4.20-2 (Preliminary 6th Cycle Sites Wildfire Overlay), preliminary 6th cycle Sites L and M are located in close proximity to high fire hazard severity zones within State Responsibility Areas. Housing that could be built in the City under the HEU may be subject to significant wildfire risks especially if those areas have inadequate evacuation routes. This is considered a potentially significant impact. Therefore, Mitigation Measure HAZ-1 is recommended to help reduce potential impacts to less than significant levels. Mitigation Measure HAZ-1 requires the City to determine whether it will prepare an update to its Local Hazard Mitigation Plan (LHMP) or cooperate with Contra Costa County in an update to its Emergency Operations Plan (EOP). HAZ-1 requires this update to address the evacuation planning and coordination directives outlined in SB 99 and AB 747 as they apply to the City. The selected update is required to address areas of the City or its Planning Area that have high fire risks and identify adequate evacuation routes with ongoing maintenance needs and operational and public education needs to support use of these routes during emergency conditions. HAZ-1 requires the City to decide which document update is most appropriate for the City within 90 days of adoption of the HEU. Mitigation Measure HAZ-1, compliance with Contra Costa County Fire Protection District's development review process for new development, and continued implementation of General Plan goals, objectives, and policies would help minimize wildfire risks. Therefore, the HEU would result in less than significant impacts related to exposure of persons to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be less than significant.

Level of Significance Before Mitigation

Potentially significant.

Mitigation Measures

See Mitigation Measure HAZ-1 from Impact HAZ-2.

Level of Significance After Mitigation

Less than significant.

Maintenance of Infrastructure

Impact WIL-3 – Would the HEU require the installation or maintenance of associated infrastructure such as roads, fuel breaks, emergency water resources, powerlines, or other utilities that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Analysis of Impacts

As previously described, except for the City of Concord to the northwest, all areas surrounding the City of Clayton are designated SRAs. The large open spaces surrounding the Planning Area pose a potentially significant fire hazard. The proposed HEU would not permit development of housing in any open space area. Moreover, the potential 6th cycle housing inventory sites shown in Exhibit 3-4 are all located in the developed portions of the City of Clayton, away from the urban-wildlife interface and the high fire hazard severity zones to the south and east. As discussed in Impact WIL-2 above, all new development that occurs pursuant to the proposed HEU would be required to be constructed in compliance with the Fire District's requirements and recommendations for new development pursuant to the California Fire Code 2019 and CCCFPD Ordinance No. 2019-37, Section 105.7. Future housing development would be located on existing roadways, would connect to existing utilities, and would not require such things as fire breaks or emergency water resources. Therefore, the HEU would not require the installation or maintenance

of associated infrastructure such as roads, fuel breaks, emergency water resources, powerlines, or other utilities that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Expose People or Structures to Risk

Impact WIL-4 – Would the HEU 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?

Analysis of Impacts

As previously described, none of the potential 6th cycle housing inventory sites shown in Exhibit 3-4 are located in any of the hillside portions of the City or Planning Area. Future development that occurs pursuant to the proposed HEU would occur in the mostly developed, and relatively flat areas located within the City's corporate boundaries. Development within designated open spaces, hillsides, and foothills would not occur as a result of the proposed HEU. Therefore, development would not occur within any high fire hazard severity zone. In addition, Safety Element goals and policies require existing and new development to be adequately protected from potential flooding or landslides and to not cause such hazards through careful site planning and construction. Therefore, 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.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

Cumulative Impacts

Impact WIL-5 - Would the HEU cause substantial adverse cumulative impacts with respect to wildfires?

Analysis of Impacts

The HEU along with other projects in the region represent an incremental increase in potential fire service demand or subsequent impacts after wildfires. The potential cumulative impacts from multiple projects in a specific area can also cause fire response service decline. Despite the low expected increase in number of calls per year anticipated from the HEU, it could contribute to cumulative impacts on fire services, when considered with other anticipated projects in the study area. The cumulative impact could result in a situation where response capabilities erode, and service levels may slowly decline over time without adequate funding. To ensure adequate funding for firefighting and emergency medical resources for new development, new development projects are required to contribute fair-share funding toward fire services. Funding provided by projects results in capital that can be used toward firefighting and emergency response

improvements so that the County's firefighting agencies are able to perform their mission into the future at levels consistent with the General Plan. In addition, the General Plan Safety Element contains Objectives 10, 11, 12, and 13 and attendant policies that would help protect residents and structures from wildfires. These goals and policies promote public education and awareness prior to fires; require safe design and construction of buildings within high fire zones; encourage cooperation and coordination with regional and other local agencies to monitor the City before, and protect/defend hillside areas during wildfires; and help protect downstream or downhill properties from potential landslides, runoff, or pollution associated with wildfires. It is assumed other surrounding jurisdictions have similar General Plan goals and policies, as they generally reflect compliance with state laws regarding wildfires and hazards related to wildfires. This would help minimize the incremental decline of fire response services. Finally, Mitigation Measure HAZ-1 requires the City to update its Local Hazard Mitigation Plan (LHMP) or cooperate with Contra Costa County in an update to its Emergency Operations Plan (EOP) in order to address the evacuation planning and coordination directives outlined in SB 99 and AB 747 as they apply to the City. HAZ-1 requires the City to decide which document update is most appropriate for the City within 90 days of adoption of the HEU. With continued adherence to General Plan goals, objectives, and policies, implementation of Mitigation Measure HAZ-1, and continued payment of fair-share funding towards fire services, cumulative wildfire impacts of the HEU in combination with other projects in the area would be less than significant.

Level of Significance Before Mitigation

Less than significant.

Mitigation Measures

None required.

4.20.5 References

- ¹ John Muir Health. *Living in the East Bay or Contra Costa County*. (2022). Web: <https://www.johnmuirhealth.com/get-involved/careers/living-east-bay-contra-costa-county.html>. [Accessed June 2022].
- ² Fire Safe Marin. *Diablo Winds*. (2022). Web: <https://firesafemarin.org/prepare-yourself/red-flag-warnings/diablo-winds/>. [Accessed June 2022].
- ³ Western Regional Climate Center. *Concord 1991 -2016*. Web: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca1967>. [Accessed June 2022].
- ⁴ Climate Prison Group. *Time Series Values for Individual Locations*. (2022). Web: <https://prism.oregonstate.edu/explorer/map.php>. [Accessed June 2022].
- ⁵ Fire Safe Marin. *Diablo Winds*. (2022). Web: <https://firesafemarin.org/prepare-yourself/red-flag-warnings/diablo-winds/>.
- ⁶ Fire Safe Marin. *Diablo Winds*. (2022). Web: <https://firesafemarin.org/prepare-yourself/red-flag-warnings/diablo-winds/>.
- ⁷ Cal Fire. *Marsh Fire Incident. Morgan Fire Incident*. (2022). Web: <https://www.fire.ca.gov/incidents/2018/7/25/marsh-fire/> <https://www.fire.ca.gov/incidents/2013/9/8/morgan-fire/>. [Accessed June 2022].
- ⁸ City of Clayton. *General Plan Section VII, Safety Element*. March 2000. Web: <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-VII-safety-element.pdf>. [Accessed June 2022].
- ⁹ City of Clayton. *General Plan Section XI, Growth Management Element*. March 2001. Web: <https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-xi-growth-management-element-12apr2011.pdf>. [Accessed June 2022].
- ¹⁰ California Department of Transportation. *California Manual on Uniform Traffic Control Devices*. Web: <https://dot.ca.gov/programs/safety-programs/camutcd>. [Accessed June 2022].

5 – ALTERNATIVES TO THE PROPOSED PROJECT

Section 15126.6 of the CEQA Guidelines requires an EIR to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." The section also states that the discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if those alternatives would impede to some degree the attainment of the basic project objectives, or would be costlier.

Pursuant to Section 15126.6, this chapter describes four alternatives to the City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments ("HEU" or "project") and compares their impacts to those of the proposed HEU. Pursuant to the CEQA Guidelines, the ability of the alternatives to meet a project's guiding principles is also described, and the "environmentally superior" alternative among the four is identified. Some significant unavoidable impacts of the proposed HEU have been identified and are listed in Chapter 6. Pursuant to the CEQA Guidelines, the alternatives in this chapter focus on avoiding or substantially reducing these unavoidable significant impacts and lessening other impacts.

5.1 Housing Element Update Objectives

The project guiding principles and, for the purpose of CEQA, project objectives are:

1. Maintain and enhance existing housing and neighborhoods.
2. Ensure adequate sites are available to accommodate moderate housing and population growth and achievement of the City's regional housing needs allocation.
3. Update City policies and regulations to allow for a greater number and diversity of housing units.
4. Diversify the housing stock to increase housing opportunities at all income ranges and for both renters and homeowners.
5. Minimize governmental constraints to housing production.
6. Ensure fair housing practices.
7. Preserve and improve existing affordable housing stock.

5.2 Alternatives Considered But Rejected

Section 15126.6(a) of the CEQA Guidelines states, "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects of the project[.]" Further, Section 15126.6(c) explains, "Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental effects." To help clarify the meaning of "feasibility," CEQA Guidelines Section 15126.6(f)(1) (Rule of Reason/Feasibility) states:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries... and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site... No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In accordance with CEQA Guidelines Section 15126.6(a), this EIR does not evaluate every conceivable alternative. A feasible range of alternatives that will allow decision-makers to make a reasoned choice and that meet most of the project's guiding principles has been evaluated.

CEQA Guidelines Section 15126.6(c) explains that alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the basic project objectives, are infeasible, or do not avoid any significant environmental effects. CEQA Guidelines Section 15126.6(f) indicates that the Lead Agency should consider site suitability, economic viability, availability of infrastructure, general plan consistency, other regulatory limitation, jurisdictional boundaries, and the proponent's control over alternative sites in determining the range of alternatives to be evaluated in an EIR. With respect to alternative locations, CEQA Guidelines Section 15126.6(f) indicates that alternative locations need not be evaluated in every case. The key question in determining whether to evaluate alternative locations is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any significant effects need be evaluated in the EIR. CEQA Guidelines Section 15126(f)(2) indicates that alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered.

The following alternatives were considered for evaluation but were rejected due to infeasibility:

Reduced Non-Residential Development Capacity. An alternative that included reductions in the potential non-residential development capacity of the proposed HEU but not in residential development capacity would not be feasible. The proposed HEU would only increase the non-residential development capacity by approximately 13,000 square feet over the existing Housing Element. CEQA Guidelines provide that the alternatives evaluated in an EIR should be selected based on their ability to avoid or substantially lessen the significant Impacts of the proposed project. This EIR identifies significant unavoidable impacts related to Greenhouse Gas Emissions and Transportation (Vehicle Miles Traveled). Based on the EIR analyses, these impacts cannot be avoided or substantially reduced by additional, feasible mitigation measures. Because the proposed increase in non-residential floor area is so small, reducing the proposed HEU's non-residential development capacity would not substantially lessen the significant impacts of the project. Because this alternative would not achieve the project's guiding principles, and would not necessarily avoid or lessen the significant impacts of the project, an alternative that would involve a reduction in non-residential development capacity was eliminated from further detailed consideration. Therefore, no further evaluation of this alternative is required under CEQA.

Reduced (>40%) Residential Development Capacity. An alternative that included reductions in the potential residential development capacity of the proposed HEU greater than 40 percent would not be meet any project objectives. The proposed HEU would increase the residential development capacity by approximately 868 units, an increase of 727 units over the existing Housing Element's regional housing need allocation of 141 units. This EIR identifies significant unavoidable impacts related to Greenhouse Gas Emissions and Transportation (Vehicle Miles Traveled). Based on the EIR analyses, these impacts cannot be avoided or substantially

reduced by additional, feasible mitigation measures. While an alternative that includes a reduction in residential development capacity greater than 40 percent could potentially lessen any of the significant impacts, it would result in the City not meeting its 6th Cycle Regional Housing Needs Allocation (RHNA) of at least 570 dwelling units. Because this alternative would not achieve the project's guiding principles, and would result in the City not meeting its RHNA commitments, an alternative that would involve a reduction in residential development capacity greater than 40 percent was eliminated from further detailed consideration. Therefore, no further evaluation of this alternative is required under CEQA.

Alternative Location. An alternative location for the proposed Housing Element Update would not be feasible. Implementation of the proposed Housing Element Update in an alternative location would result in a new development in another place and would not address Clayton's RHNA. None of the proposed Housing Element goals, policies, and implementation programs related to the existing Planning Area environment would be attained. This EIR identifies significant unavoidable impacts related to Greenhouse Gases and Transportation (Vehicle Miles Traveled). Based on the EIR analyses, these impacts cannot be avoided or substantially reduced by additional, feasible mitigation measures. Transferring these impacts to an alternative location would still substantially impact the environment, possibly worse than in Clayton where coordinated services, infrastructure, plans, and regulations are already in place to help mitigate potential environmental impacts. Because an alternative project location would be infeasible, would not achieve the project's guiding principles, and would not necessarily avoid or lessen the significant impacts of the project and might result in new significant impacts, an alternative that would involve a different project location was eliminated from further detailed consideration. No further evaluation of alternative project locations is required under CEQA.

5.3 Alternatives Selected

The following alternatives have been evaluated in comparison to the proposed HEU:

- Alternative 1: No Project/Existing Housing Element
- Alternative 2: Reduced Residential Development Capacity at Site M (3 du/ac) and Town Center Sites (20 du/ac)
- Alternative 3: Reduced Residential Development at Site M and Town Center and Addition of Sites U and V to the Housing Site Inventory

Alternative 1 would result in the housing development capacity under the existing Housing Element.

Alternative 2 would reduce residential development capacity on housing inventory Site M from 30 dwelling units per acre (du/ac) to 3 du/ac and at the Town Center Sites from 30 du/ac to 20 du/ac, resulting in a decrease in potential residential development capacity from 868 dwelling units to 704 dwelling units.

Alternative 3 would include the reduced densities encompassed in Alternative 2, with addition of new Sites U and V to the housing inventory. Additional Site U is located on a portion of the existing driving range at the Oakhurst Golf Club at 1001 Peacock Creek Drive, and additional Site V is located at 1970 Eagle Peak Avenue. The respective owners of Sites U and V have expressed interest in developing their properties with townhouses at an estimated density of 20 du/ac. The reduction of densities on Site M and the Town Center, with inclusion of Sites U and

V into the housing inventory would result in an increase in potential residential development capacity from 868 dwelling units to 966 dwelling units.

In accordance with CEQA Guidelines Section 15126.6(d), this discussion of impacts of the alternatives is less detailed than the evaluation included in Sections 4.1 through 4.20 of the impacts associated with implementation of the HEU. Table 5-1 (Alternatives' Impacts Compared to Project Impacts) shows how impacts associated with the implementation of the alternatives compare to the impacts associated with implementation of the project; the reader is advised to refer to the accompanying text for a fuller explanation.

**Table 5-1:
Alternatives' Impacts Compared to Project Impacts**

Impact/Resource	1. No Project-- Existing Housing Element Development Capacity	2. Reduced Development Capacity at Site M and Town Center Sites	3. Reduced Residential Development at Site M and Town Center/ Addition of Sites U and V to Housing Inventory
Aesthetics	Reduced LTS	Reduced LTS	Similar LTS
Agriculture and Forestry Resources	Similar No Impact	Similar No Impact	Similar No Impact
Air Quality	Reduced LTS	Reduced LTS	Similar LTS
Biological Resources	Similar LTS	Similar LTS	Similar LTS
Cultural Resources	Similar LTS	Similar LTS	Similar LTS
Energy	Reduced LTS	Reduced LTS	Similar LTS
Geology and Soils	Similar LTS	Similar LTS	Similar LTS
Greenhouse Gas Emissions	Reduced SU	Reduced SU	Similar SU
Hazards and Hazardous Materials	Similar LTS	Similar LTS	Similar LTS
Hydrology and Water Quality	Similar LTS	Similar LTS	Similar LTS
Land Use	Similar LTS	Similar LTS	Similar LTS
Mineral Resources	Similar No Impact	Similar No Impact	Similar No Impact
Noise	Similar LTS	Similar LTS	Similar LTS
Population and Housing	Reduced LTS	Reduced LTS	Similar LTS
Public Services	Reduced LTS	Reduced LTS	Similar LTS
Recreation	Reduced LTS	Reduced LTS	Similar LTS
Transportation	Reduced SU	Reduced SU	Similar SU
Tribal Cultural Resources	Similar LTS	Similar LTS	Similar LTS
Utilities and Service Systems	Reduced LTS	Reduced LTS	Similar LTS
Wildfire	Similar LTS	Similar LTS	Similar LTS
Source: MIG, 2022 LTS= Less-than-Significant Impacts SU= Significant and Unavoidable Impacts			

5.4 Alternative 1: No Project/Existing Housing Element

The No Project/Existing Housing Element Alternative (No Project Alternative) assumes that development would occur within the Planning Area, but only in the locations and at the densities allowed or anticipated under the 2014 Housing Element. More, specifically, of the sites identified in the HEU, Sites A, B, E, F, G, J, K, N and O are also identified as housing sites in the inventory of the existing Housing Element, and maximum density for any site did not exceed 20 units per acre. Table 5-1 shows how impacts associated with the implementation of this alternative compares to the impacts associated with implementation of the Project. The potential impacts associated with the No Project Alternative are described below.

a. Aesthetics. The No Project Alternative assumes the amount of development would be reduced compared to the project. As with the project, aesthetic impacts are anticipated to be less-than-significant under the No Project Alternative. Project-specific impacts with respect to scenic vistas were determined to be less than significant. Buildout of proposed housing sites under the Housing Element Update would occur at locations in the City of Clayton that are either already developed or in vacant properties in developed areas. There are no proposed housing sites in undeveloped portions of the Planning Area, and as such, this alternative would not result in cumulative impacts with respect to scenic vistas. Outdoor lighting is regulated by Section 15.03.612 (Public Nuisance Lighting) of the City's Municipal Code. Any new development under the No Project Alternative would be required to undergo design review, which would ensure compliance with regulations and review for potential light and glare. This alternative would result in a reduced less-than-significant impact, when compared to the project, given the reduction in development associated with it.

b. Agriculture and Forestry Resources. There is no land in the Planning Area considered Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, nor Farmlands of Local Importance. There are no areas within the corporate City boundaries zoned for forestry use, and none of the 5th cycle housing inventory sites identified by the City in its existing Housing Element are zoned for agricultural use. This alternative would have no impact on agriculture or forestry resources.

c. Air Quality. As described in Section 4.3, the project would result in a less than significant construction-related air quality impact with mitigation incorporated. Given the reduction in residential units associated with this alternative, air emissions associated with the alternative would be reduced compared to the project. However, it is likely that air quality mitigation measures for construction activities needed for the project would also be required for the No Project alternative. As such, the No Project alternative would result in similar less than significant impacts as the proposed HEU with mitigation incorporated.

d. Biological Resources. Approximately 33 special status species were determined to "May be Present" within the Planning Area, with potential to occur on at least some of the housing inventory sites. Many of the housing inventory sites are located within or adjacent to streams, riparian woodlands, and/or other suitable habitats that could potentially support these sensitive species, including Sites B, D, F, G, I, J, L, M, Q and R. While field surveys are required to confirm for compliance with the East Contra Costa County (ECCC) Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), housing inventory sites located in urban and developed areas that are significantly less likely to support most of these species include Sites A, E, H, K, N, O, P, S. As listed above, many of the sites in the HEU were also identified as potential housing sites in the existing Housing Element inventory. While the amount

of development under this alternative would be reduced, all future projects would be required to adhere to existing regulations regarding nesting birds. Similar to the project, the No Project Alternative would have a similar less-than-significant impact on biological resources.

e. Cultural Resources. As with the project, development under the No Project Alternative could still uncover previously unknown cultural resources or destroy/change structures that could be considered historic. Therefore, future development under the No Project Alternative could have the potential to disturb or destroy sensitive cultural resources. Similar to the project, development projects under the No Project Alternative are required to implement cultural resources mitigation for cultural resource monitoring during all ground-disturbing activities. Therefore, similar to the project, this alternative would have a less-than-significant impact on cultural resources with incorporation of mitigation.

f. Energy. As with the project, development associated with the No Project Alternative would require the consumption of electricity, natural gas, and vehicle fuel resources to accommodate growth. However, development under this alternative would have reduced energy consumption compared to the project. Given the reduced level of development, this alternative would have a reduced less-than-significant energy impact compared to the project.

g. Geology and Soils. The No Project Alternative would result in geology and soils impacts similar to those associated with the project as both the alternative and the project would be exposed to the same existing geologic conditions within the City. As with the project, existing building requirements would be applicable under this alternative. Additionally, all future projects would be required to be designed and constructed in compliance with all applicable City and state codes and requirements. Finally, as with the project, the No Project Alternative would still require development projects to implement mitigation measures in order to reduce potential impacts to paleontological resources to less than significant. As such, the No Project Alternative would have a similar less-than-significant geology impact as the proposed project.

h. Greenhouse Gas Emissions. The project would result in a significant unavoidable greenhouse gas (GHG) emissions impact. Overall GHG emissions associated with the No Project Alternative would be reduced due to the decrease in development; however, it is likely that buildout under the existing Housing Element would also result in significant and unavoidable impacts. As such, while GHG emissions associated with this alternative would be reduced compared to the project, GHG emissions impacts from this alternative would still be considered significant and unavoidable.

i. Hazards and Hazardous Materials. Hazardous materials would be present during construction and operation of development associated with the No Project Alternative. The amount and use of these chemicals present during construction would be limited, would be in compliance with existing government regulations, and would not be considered a significant hazard. As with the project, any future development under this alternative would be subject to the City's standard environmental review as well as hazardous materials policies included in the existing General Plan. This alternative would have a less-than-significant hazards and hazardous materials impact and would be considered similar to the project.

j. Hydrology and Water Quality. Development associated with implementation of the No Project Alternative would be subject to all existing water quality regulations and programs. This alternative assumes a population and development increase that would be less than the project. Similar to the project, the No Project Alternative would have a less-than-significant hydrology and water quality impact.

k. Land Use Planning. As with the project, the No Project Alternative would not physically divide an established community. Development would be consistent with the existing General Plan, and would not conflict with regulations adopted to avoid environmental effects. Similar to the project, this alternative would have a less-than-significant land use impact.

l. Mineral Resources. Similar to the proposed HEU, no development would take place in any location with known mineral resources or at any known mineral resources extraction site under the No Project Alternative. As with the project, this alternative would have no impact on mineral resources.

m. Noise. The project would result in less than significant construction noise impacts with mitigation incorporated and less than significant operational noise impacts. The No Project Alternative would result in less development than the project. Under this alternative, mitigation measures would still be required to ensure that construction noise is mitigated for projects located near sensitive receptors. Due to the reduction in development, the traffic noise impact would be reduced when compared to the project and would still be less than significant. Therefore, this alternative would have a similar less than significant impact to the project.

n. Population and Housing. The No Project Alternative would result in a reduced amount of residential development and population growth compared to the project. Given the reduction in population and housing, this alternative would result in a reduced less-than-significant impact related to population and housing.

o. Public Services. The No Project Alternative would result in a reduced amount of development and related population and employment growth, which would result in less demand for public services relative to the project. Given the reduction in population and housing, this alternative would result in a reduced less-than-significant public services impact when compared to the project.

p. Recreation. The No Project Alternative would result in a reduced amount of development and associated population growth, which would result in less demand for recreational facilities relative to the project. Therefore, this alternative would result in a reduced less-than-significant recreation impact when compared to the project.

q. Transportation. The proposed project would result in significant and unavoidable vehicle miles traveled (VMT) impacts. The No Project Alternative would result in less development than would occur with implementation of the project. Given the reduction in development associated with this alternative, it is possible that VMT impacts under this alternative would also be reduced. However, similar to the project, significant and unavoidable VMT impacts would likely occur under the No Project Alternative on a cumulative basis: impacts for individual development projects that would occur over time may be either significant or less than significant depending on the type and scale of development. Therefore, while the transportation impacts associated with this alternative would be reduced when compared to the project, transportation impacts would still be significant and unavoidable.

r. Tribal Cultural Resources. As with the project, development under the No Project Alternative could uncover previously unknown Tribal Cultural Resources. Compliance with existing regulations regarding burial grounds and consultation with Native American tribes, in addition to mitigation measures requiring cultural resource monitors during all ground-disturbing activities, would ensure that potential impacts would be reduced to less than significant. Similar

to the project, this alternative would have a less-than-significant impact on cultural resources with adherence to existing regulations and implementation of mitigation.

s. Utilities and Service Systems. The No Project Alternative would result in a reduced amount of development and associated population and employment growth, which would result in less demand for utilities services relative to the project. Therefore, this alternative would have a reduced less-than-significant utilities and service systems impact when compared to the project.

t. Wildfire. Very high fire severity zones are present to the southwest, south, and southeast of the Planning Area. The existing General Plan policies, including identifying special on-site fire protection measures during development application review, would be applicable. Similar to the project, this alternative would result in a less-than-significant wildfire impact.

Attainment of Project Objectives

The No Project Alternative assumes a continuation of the existing 2014 Housing Element and would not meet the City's 6th Cycle RHNA of at least 570 new homes. As this alternative would result in a reduction in the amount of development compared to the project, and would not include any of the updated goals and policies included in the HEU, it would generally not meet the project objectives.

5.5 Alternative 2: Reduced Residential Development Capacity at Site M (3 du/ac) and Town Center Sites (20 du/ac)

This Alternative assumes that overall residential development associated with the HEU would be reduced from 868 dwelling units to 704 dwelling units, a reduction in development capacity of approximately 19 percent when compared to the proposed project. This alternative assumes that policies and goals associated with the Housing Element Update would be applicable to development under this alternative. Table 5-1 shows how impacts associated with the implementation of this alternative compares to the impacts associated with implementation of the project. The potential impacts associated with the Reduced Residential Development Capacity at Site M (3 du/ac) and Town Center Sites (20 du/ac) Alternative are described below.

a. Aesthetics. The Reduced Residential Development Capacity at Site M and Town Center Sites Alternative assumes the amount of development would be reduced compared to the project. As with the project, aesthetic impacts are anticipated to be less-than-significant under the Reduced Residential Development Capacity at Site M and Town Center Sites Alternative. Project-specific impacts with respect to scenic vistas were determined to be less than significant. Buildout of proposed housing sites under the Housing Element Update would occur at locations in the City of Clayton that are either already developed or in vacant properties in developed areas. There are no proposed housing sites in undeveloped portions of the Planning Area (except undeveloped infill sites), and as such, the project would not result in cumulative impacts with respect to scenic vistas. Outdoor lighting is regulated by Section 15.03.612 (Public Nuisance Lighting) of the City's Municipal Code. Any new development under the Reduced Residential Development Capacity at Site M and Town Center Sites Alternative would be required to undergo design review, which would ensure compliance with regulations and review for potential light and glare. This alternative would result in a reduced less-than-significant impact, when compared to the project, given the reduction in development associated with this alternative.

b. Agriculture and Forestry Resources. There is no land in the Planning Area considered Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, nor Farmlands of Local Importance. There are no areas within the corporate City boundaries zoned for forestry use, and none of the 6th cycle RHNA sites identified by the City are zoned for agricultural use except for Site I. However, Site I is no longer used for farming or grazing activities and, therefore, the project would not result in the conversion of agricultural uses to non-agricultural uses. Similar to the project, this alternative would have no impact on agriculture or forestry resources.

c. Air Quality. As described in Section 4.3, the project would result in a less than significant construction-related air quality impact with mitigation incorporated. Given the reduction in residential units associated with this alternative, air emissions associated with the Reduced Residential Development Capacity at Site M and Town Center Sites Alternative would be reduced compared to the project. However, it is likely that air quality mitigation measures for construction activities needed for the project would also be required for the Reduced Residential Development Capacity at Site M and Town Center Sites Alternative. As such, the Reduced Residential Development Capacity at Site M and Town Center Sites Alternative would result in similar less than significant impacts as the proposed HEU with mitigation incorporated.

d. Biological Resources. Approximately 33 special status species were determined to “May be Present” within the Planning Area, with potential to occur on at least some of the housing inventory. Many of the housing inventory sites are located within or adjacent to streams, riparian woodlands, and/or other suitable habitats that could potentially support these sensitive species, including Sites B, D, F, G, I, J, L, M, Q and R. While field surveys are required to confirm for compliance with the ECCC HCP/NCCP, housing inventory sites located in urban and well-developed areas that are significantly less likely to support most of these species include Sites A, E, H, K, N, O, P, S. While the amount of development under this alternative would be decreased, all future projects would be required to adhere to existing regulations regarding nesting birds. Similar to the project, the Reduced Development Capacity at Site M and Town Center Sites Alternative would have a similar less-than-significant impact on biological resources.

e. Cultural Resources. As with the project, development under the Reduced Development Capacity at Site M and Town Center Sites Alternative could still uncover previously unknown cultural resources or destroy/change structures that could be considered historic. Therefore, future development under the Reduced Development Capacity at Site M and Town Center Sites Alternative could have the potential to disturb or destroy sensitive cultural resources. Similar to the project, development projects under the Reduced Development Capacity at Site M and Town Center Sites Alternative are required to implement cultural resources mitigation for cultural resource monitoring during all ground-disturbing activities. Therefore, similar to the project, this alternative would have a less-than-significant impact on cultural resources with incorporation of mitigation.

f. Energy. As with the project, development associated with the Reduced Development Capacity at Site M and Town Center Sites Alternative would require the consumption of electricity, natural gas, and vehicle fuel resources to accommodate growth. However, development under this alternative would have reduced energy consumption compared to the project. Given the reduced level of development, this alternative would have a reduced less-than-significant energy impact compared to the project.

g. Geology and Soils. The Reduced Development Capacity at Site M and Town Center Sites Alternative would result in geology and soils impacts similar to those associated with the project, as both the alternative and the project would be exposed to the same existing geologic conditions within the City. As with the Project, existing building requirements would be applicable under this alternative. Additionally, all future development proposals would be required to be designed and constructed in compliance with all applicable City and state codes and requirements. Finally, as with the project, the Reduced Development Capacity at Site M and Town Center Sites Alternative would still require development projects to implement mitigation measures in order to reduce potential impacts to paleontological resources to less than significant. As such, the Reduced Development Capacity at Site M and Town Center Sites Alternative would have a similar less-than-significant geology impact as the proposed project.

h. Greenhouse Gas Emissions. The project would result in a significant unavoidable GHG emissions impact. Overall GHG emissions associated with the Reduced Development Capacity on Site M and Town Center Sites Alternative would be reduced due to the decrease in development; however, it is likely that buildout under this alternative would also result in significant and unavoidable impacts. As such, while GHG emissions associated with this alternative would be reduced compared to the project, GHG emissions impacts from this alternative would still be considered significant and unavoidable.

i. Hazards and Hazardous Materials. Hazardous materials would be present during construction and operation of development associated with the Reduced Development Capacity at Site M and Town Center Sites Alternative. The amount and use of these chemicals present during construction would be limited, would be in compliance with existing government regulations, and would not be considered a significant hazard. As with the project, any future development under this alternative would be subject to the City's standard environmental review as well as hazardous materials policies included in the existing General Plan. This alternative would have a less-than-significant hazards and hazardous materials impact and would be considered similar to the project.

j. Hydrology and Water Quality. Development associated with implementation of the Reduced Development Capacity at Site M and Town Center Sites Alternative would be subject to all existing water quality regulations and programs. This alternative assumes a population and development increase that would be less than the project. Similar to the project, this alternative would have a less-than-significant hydrology and water quality impact.

k. Land Use Planning. As with the project, the Reduced Development Capacity at Site M and Town Center Sites Alternative would not physically divide an established community. The overall pattern of predominantly residential development in the City would be consistent with the existing General Plan's lower densities in the Town Center and on Site M, and this alternative would not conflict with regulations adopted to avoid environmental effects. Similar to the project, this alternative would have a less-than-significant land use impact.

l. Mineral Resources. Similar to the proposed HEU, no development would take place in any location with known mineral resources or at any known mineral resources extraction site under the Reduced Development Capacity at Site M and Town Center Sites Alternative. As with the project, this alternative would have no impact on mineral resources.

m. Noise. The project would result in less than significant construction noise impacts with mitigation incorporated and less than significant operational noise impacts. The Reduced Development Capacity at Site M and Town Center Sites Alternative would result in less

development than the project. Under this alternative, mitigation measures would still be required to ensure that construction noise is mitigated for projects located near sensitive receptors. Due to the reduction in development, the traffic noise impact would be reduced when compared to the project and would still be less than significant. Therefore, this alternative would have a similar less than significant impact to the project.

n. Population and Housing. The Reduced Development Capacity at Site M and Town Center Sites Alternative would result in a reduced amount of residential development and population growth relative to the project. Given the reduction in population and housing, this alternative would result in a reduced less-than-significant impact related to population and housing when compared to the project.

o. Public Services. The Reduced Development Capacity at Site M and Town Center Sites Alternative would result in a reduced amount of development and related population and employment growth, which would result in less demand for public services relative to the project. Given the reduction in population and housing, this alternative would result in a reduced less-than-significant public services impact when compared to the project.

p. Recreation. The Reduced Development Capacity at Site M and Town Center Sites Alternative would result in a reduced amount of development and associated population growth, which would result in less demand for recreational facilities relative to the project. Therefore, this alternative would result in a reduced less-than-significant recreation impact when compared to the project.

q. Transportation. The proposed project would result in significant and unavoidable VMT impacts. The Reduced Development Capacity at Site M and Town Center Sites Alternative would result in less development than would occur with implementation of the project. Given the reduction in development associated with this alternative, it is possible that VMT impacts under this alternative would also be reduced. However, similar to the project, significant and unavoidable VMT impacts would likely occur under the Reduced Development Capacity at Site M and Town Center Sites Alternative. Therefore, while the transportation impacts associated with this alternative would be reduced when compared to the project, transportation impacts would still be significant and unavoidable.

r. Tribal Cultural Resources. As with the project, development under the Reduced Development Capacity at Site M and Town Center Sites Alternative could uncover previously unknown Tribal Cultural Resources. Compliance with existing regulations regarding burial grounds and consultation with Native American tribes, in addition to mitigation measures requiring cultural resource monitors during all ground-disturbing activities, would ensure that potential impacts would be reduced to less than significant. Similar to the project, this alternative would have a less-than-significant impact on cultural resources with adherence to existing regulations and implementation of mitigation.

s. Utilities and Service Systems. The Reduced Development Capacity at Site M and Town Center Sites Alternative would result in a reduced amount of development and associated population and employment growth, which would result in less demand for utilities services relative to the project. Therefore, this alternative would have a reduced less-than-significant utilities and service systems impact when compared to the project.

t. Wildfire. Very high fire severity zones are present to the southwest, south, and southeast of the Planning Area. The existing General Plan policies, including identifying special on-site fire

protection measures during project review, would be applicable. Similar to the project, this alternative would result in a less-than-significant wildfire impact.

Attainment of Project Objectives

This Alternative assumes a 17 percent reduction of development within the Planning Area when compared to the project. Additionally, goals and policies within the HEU would be applicable to this alternative. While this alternative would result in a decrease in development potential, this alternative would generally still meet the following project objectives, similar to the project:

1. Maintain and enhance existing housing and neighborhoods.
2. Ensure adequate sites are available to accommodate moderate housing and population growth and achievement of the City's regional housing needs allocation.
3. Update City policies and regulations to allow for a greater number and diversity of housing units.
4. Diversify the housing stock to increase housing opportunities at all income ranges and for both renters and homeowners.
5. Minimize governmental constraints to housing production.
6. Ensure fair housing practices.
7. Preserve and improve existing affordable housing stock.

5.6 Alternative 3: Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory

This Alternative assumes that overall residential development associated with the HEU would be increased from 868 dwelling units to 966 dwelling units, an increase in development capacity of approximately 11 percent when compared to the proposed project. This alternative assumes that policies and goals associated with the Housing Element Update would be applicable to development under this alternative. Table 5-1 shows how impacts associated with the implementation of this alternative compared to the impacts associated with implementation of the Reduced Residential Development at Site M and Town Center and Addition of Sites U and V to the Housing Inventory Alternative. The potential impacts associated with the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative are described below.

a. Aesthetics. The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative assumes the amount of development would be increased compared to the project. As with the project, aesthetic impacts are anticipated to be less-than-significant under the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative. Project-specific impacts with respect to scenic vistas were determined to be less than significant. Buildout of proposed housing sites under the Housing Element Update would occur at locations in the City of Clayton that are either already developed or in vacant properties in developed areas. There are no proposed housing sites in undeveloped portions of the Planning Area, and as such, the project would not result in cumulative impacts with respect to scenic

vistas. Outdoor lighting is regulated by 15.03.612 (Public Nuisance Lighting) of the City's Municipal Code. Any new development under this Alternative would be required to undergo design review, which would ensure compliance with regulations and review for potential light and glare. This alternative would result in a similar less-than-significant impact, when compared to the project, despite the increase in development associated with this alternative.

b. Agriculture and Forestry Resources. There is no land in the Planning Area considered Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, nor Farmlands of Local Importance. There are no areas within the corporate City boundaries zoned for forestry or timberland use, and none of the 6th cycle RHNA sites identified by the City are zoned for agricultural use except for Site I. However, Site I is no longer used for farming or grazing activities and, therefore, the project would not result in the conversion of agricultural uses to non-agricultural uses. Similar to the project, this alternative would have no impact on agriculture or forestry resources.

c. Air Quality. As described in Section 4.3, the project would result in a less than significant construction-related air quality impact with mitigation incorporated. Because the identified potentially significant air quality impacts of the project are related to site-specific construction activities, similar potentially significant construction impacts from increased development potential under this Alternative would be less than significant with incorporation of mitigation measures. As such, the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative would result in similar less than significant impacts with mitigation incorporated as the proposed project.

d. Biological Resources. Approximately 33 special status species were determined to “May be Present” within the Planning Area, with potential to occur on at least some of the housing inventory sites. Many of the housing inventory sites are located within or adjacent to streams, riparian woodlands, and/or other suitable habitats that could potentially support these sensitive species, including Sites B, D, F, G, I, J, L, M, Q, R, U, and V. While field surveys are required to confirm for compliance with the ECCC HCP/NCCP, housing inventory sites located in urban and well-developed areas that are significantly less likely to support most of these species include Sites A, E, H, K, N, O, P, S. While the amount of development under this alternative would be increased, all future projects would be required to adhere to existing regulations regarding nesting birds. Similar to the project, the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative would have a similar less-than-significant impact on biological resources.

e. Cultural Resources. As with the project, development under the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative could still uncover previously unknown cultural resources or destroy/change structures that could be considered historic. Therefore, future development under this alternative could have the potential to disturb or destroy sensitive cultural resources. Similar to the project, development projects under this alternative are required to implement cultural resources mitigation for cultural resource monitoring during all ground-disturbing activities. Therefore, similar to the project, this alternative would have a less-than-significant impact on cultural resources with incorporation of mitigation.

f. Energy. As with the project, development associated with the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative would require the consumption of electricity, natural gas, and vehicle fuel resources to accommodate growth. Development under this alternative would result in

increased energy consumption compared to the project; however, it is not likely that the increase would result in the wasteful use of energy or require mitigation to reduce impacts to less than significant. Therefore, this alternative would have a similar less-than-significant energy impact compared to the project.

g. Geology and Soils. The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative would result in geology and soils impacts similar to those associated with the project, as both the alternative and the project would be exposed to the same existing geologic conditions within the City. As with the project, existing building requirements would be applicable under this alternative. Additionally, all future projects would be required to be designed and constructed in compliance with all applicable City and state codes and requirements. Finally, as with the project, the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative would still require future development to implement mitigation measures in order to reduce potential impacts to paleontological resources to less than significant. As such, the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative would have a similar less-than-significant geology impact as the proposed project.

h. Greenhouse Gas Emissions. The project would result in a significant unavoidable GHG emissions impact. The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative would result in an increase in development potential when compared to the project. Given this alternative would result in increased development potential, this alternative would have a greater significant and unavoidable impact as the project.

i. Hazards and Hazardous Materials. Hazardous materials would be present during construction and operation of development associated with the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative. The amount and use of these chemicals present during construction would be limited, would be in compliance with existing government regulations, and would not be considered a significant hazard. As with the project, any future development under this alternative would be subject to the City's standard environmental review as well as hazardous materials policies included in the existing General Plan. This alternative would have a less-than-significant hazards and hazardous materials impact and would be considered similar to the project.

j. Hydrology and Water Quality. Development associated with implementation of the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative would be subject to all existing water quality regulations and programs. This alternative assumes a population and development increase that would be less than the project. Similar to the project, this alternative would have a less-than-significant hydrology and water quality impact.

k. Land Use Planning. As with the project, the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the Housing Inventory Alternative would not physically divide an established community. Development would be consistent with the existing General Plan policies, and would not conflict with regulations adopted to avoid environmental effects. Similar to the project, this alternative would have a less-than-significant land use impact.

l. Mineral Resources. Similar to the proposed HEU, no development would take place in any location with known mineral resources or at any known mineral resources extraction site under the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the RHNA Inventory Alternative. As with the project, this alternative would have no impact on mineral resources.

m. Noise. The project would result in less than significant construction noise impacts with mitigation incorporated and less than significant operational noise impacts. The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the RHNA Inventory Alternative would result in greater potential development when compared to the project. Similar to the project, mitigation measures would be required to ensure that construction noise is mitigated for projects located near sensitive receptors. Due to the increase in development the traffic noise impact would be increased when compared to the project; however, the potential increase in development capacity from this individual site would not be great enough to require mitigation and would still be less than significant. Therefore, this alternative would have a similar less than significant impact to the project.

n. Population and Housing. The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the RHNA Inventory Alternative would result in increased residential development and population growth relative to the project. However, it would not induce substantial unplanned growth nor would it displace substantial numbers of persons or housing compared to the project. Therefore, this alternative would result in a similar less-than-significant impact related to population and housing when compared to the project.

o. Public Services. The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the RHNA Alternative would result in an increased amount of development and related population and employment growth, which would result in greater demand for public services relative to the project. However, with continued payment of development impact fees to offset incremental growth, this alternative would result in a similar less-than-significant public services impact when compared to the project.

p. Recreation. The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the RHNA Inventory Alternative would result in an increased amount of development and associated population growth, which would result in greater demand for recreational facilities relative to the project. However, with continued payment of development impact fees to offset incremental growth, this alternative would result in a similar less-than-significant recreation impact when compared to the project.

q. Transportation. The proposed project would result in significant and unavoidable VMT impacts. The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the RHNA Inventory Alternative would result in an increase in residential development and associated VMT relative to the project. Given the increase in residential development associated with this alternative, significant and unavoidable transportation impacts of a greater magnitude compared to the project would likely occur under this alternative.

r. Tribal Cultural Resources. As with the project, development under the Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the RHNA Inventory Alternative could uncover previously unknown Tribal Cultural Resources. Compliance with existing regulations regarding burial grounds and consultation with Native American tribes, in addition to mitigation measures requiring cultural resource monitors during all ground-disturbing activities, would ensure that potential impacts would be reduced to less

than significant. Similar to the project, this alternative would have a less-than-significant impact on cultural resources with adherence to existing regulations and implementation of mitigation.

s. Utilities and Service Systems. The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the RHNA Inventory Alternative would result in an increased amount of development and associated population and employment growth, which would result in greater demand for utilities services compared to the project. However, with continued adherence to existing regulations and implementation of mitigation for water service impacts, this alternative would have a greater but still less-than-significant utilities and service system impact when compared to the project.

t. Wildfire. Very high fire severity zones are present to the southwest, south, and southeast of the Planning Area. The existing General Plan policies, including identifying special on-site fire protection measures during project review, would be applicable. Similar to the project, this alternative would result in a less-than-significant wildfire impact.

Attainment of Project Objectives

The Reduced Residential Development at Site M and Town Center Sites and Addition of Sites U and V to the RHNA Inventory Alternative assumes an 11 percent increase in residential development population growth within the Planning Area, but a similar level of non-residential growth as associated with the project. This alternative assumes HEU goals and policies would be applicable. It would generally meet the following project objectives, similar to the project:

1. Maintain and enhance existing housing and neighborhoods.
2. Ensure adequate sites are available to accommodate moderate housing and population growth and achievement of the City's regional housing needs allocation.
3. Update City policies and regulations to allow for a greater number and diversity of housing units.
4. Diversify the housing stock to increase housing opportunities at all income ranges and for both renters and homeowners.
5. Minimize governmental constraints to housing production.
6. Ensure fair housing practices.
7. Preserve and improve existing affordable housing stock.

5.7 Environmentally Superior Alternative

The CEQA Guidelines (section 15126[e][2]) stipulate, “If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” Alternative 3 would result in similar or greater environmental impacts as compared to the proposed project because Alternative 3 would result in greater development potential than the project. Other than Alternative 1 (No Project—Existing Housing Element), Alternative 2, Reduced Development Capacity at Site M and Town Center Sites, would result in the least adverse environmental impacts and would therefore be the “environmentally superior alternative.” However, Alternative 2 would not meet the project objectives to the same degree as the proposed project and would not help the City achieve its RHNA housing allocation to the same degree as the proposed project. This conclusion is based on the comparative impact conclusions in Table 5-1 and the analysis within this section.

6.0 – MANDATED CEQA SECTIONS

6.1 *Growth-Inducing Effects*

CEQA Guidelines Section 15126.2(d) requires that the EIR discuss "...the 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."

The City of Clayton 6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments ("HEU" or "project") would result in an allowable increase of up to 868 additional dwelling units, 13,000 square feet of non-residential space, 2,364 residents, and 71 jobs for the 2040 horizon year. However, no substantial, detrimental, growth-inducing effect is expected.

The goals, policies and implementing actions, contained in the existing General Plan and the proposed HEU address the potentially negative aspects of growth, and have been designed to facilitate development efficiently and effectively in an area where roads and infrastructure already exist. The more compact urban form with increased residential densities envisioned by the HEU is expected to improve the livability of Clayton by enhancing housing opportunities in the City, improving walking and bicycling opportunities, increasing economic vitality and job opportunities, and reducing vehicle-miles-travelled (VMT). The potential growth-related impacts associated with the HEU have also been evaluated in the topical Chapters of this EIR (Aesthetics, Biological Resources, etc.) and, as appropriate, mitigation measures have been applied to address such impacts. In addition, implementation of the proposed HEU would not involve the extension of roads, major sewer or water lines, or the construction of other major infrastructure facilities beyond City limits so as to induce growth in areas adjoining Clayton.

6.2 *Significant Unavoidable Impacts*

CEQA Guidelines Section 15126.2(b) requires that the EIR discuss "significant environmental effects which cannot be avoided if the proposed project is implemented." The impacts listed below are identified as significant and unavoidable for one of four reasons: 1) no potentially feasible mitigation has been identified; 2) potential mitigation has been identified but may be found by the Lead Agency to be infeasible; 3) with implementation of feasible mitigation, the impact still would not, or might not, be reduced to a less-than-significant level; or 4) implementation of the mitigation measure would require approval of another jurisdictional agency, whose approval will be pursued by the Lead Agency but cannot be guaranteed as of the publication of this EIR. Because these significant unavoidable impacts "cannot be alleviated without imposing an alternative design" (CEQA Guidelines Section 15126.2[b]), Chapter 5.0 (Alternatives to the Proposed Housing Element Update) of this EIR evaluates a range of feasible alternatives that could lessen the identified significant unavoidable impacts, and evaluates the alternatives' ability to meet the project objectives.

The following impacts have been identified in this EIR as significant and unavoidable:

- Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or otherwise conflict with an applicable plan, policy, or

regulation adopted for the purpose of reducing GHG emissions.

- Impact GHG-2: Cause a substantial adverse cumulative impact with respect to greenhouse gas emissions (Cumulative Impact).
- Impact TRANS-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), related to Vehicle Miles Travelled (VMT).
- Impact TRANS-5: Cause substantial adverse cumulative impacts with respect to transportation and traffic.

The implications of each significant unavoidable impact identified above are described in the particular EIR chapter referenced with the impact. The HEU is being proposed, notwithstanding these effects, to fully achieve the project objectives described in Chapter 3.0 of this EIR. If the City adopts the HEU (or an alternative to the proposed HEU) that would result in significant unavoidable impacts, the City must adopt a “Statement of Overriding Considerations” in accordance with CEQA Guidelines Section 15093 describing why the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of the approved Plan outweigh its significant unavoidable impacts.

6.3 Significant Irreversible Environmental Changes

CEQA Guidelines Section 15126.2(c) requires that the EIR discuss "significant irreversible environmental changes which would be caused by the proposed project should it be implemented." Because nearly all of the preliminary 6th cycle housing inventory sites identified by the City are either developed or are designated for development in the City's Zoning Code, and because the project would not significantly change the circulation pattern nor make other major changes to backbone infrastructure facilities, there would not be any significant irreversible physical changes caused by the HEU. The proposed HEU would result in an irreversible commitment of energy resources, primarily in the form of fossil fuels, including fuel oil, natural gas, and gasoline or diesel fuel for construction equipment and vehicles, as well as the use of these same resources during long-term operation of individual projects facilitated by the HEU. However, because development facilitated by the proposed HEU would be required by law to comply with California Code of Regulations Title 24 (including updates over time) and adopted City energy conservation ordinances and regulations, implementation of the HEU would not be expected to use energy in a wasteful, inefficient, or unnecessary manner.

The consumption or destruction of other non-renewable or slowly renewable resources would also result during construction, occupancy, and use of individual development sites under the proposed HEU. These resources would include, but would not be limited to, lumber, concrete, sand, gravel, asphalt, masonry, metals, and water. HEU implementation would also irreversibly use water and solid waste landfill resources. However, development under the proposed HEU would not involve a large commitment of those resources relative to supply, nor would it consume any of those resources wastefully, inefficiently, or unnecessarily, especially considering ongoing City conservation and recycling programs.