

City of Hercules Housing Element Update

Initial Study and Negative Declaration

January 16, 2015

Prepared for:

City of Hercules
111 Civic Drive
Hercules, California 94547

Prepared by:

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Table of Contents

SECTION 1: PURPOSE AND AUTHORITY OF INITIAL STUDY.....	1
SECTION 2: PROJECT DESCRIPTION.....	5
SECTION 3: DETERMINATION (NEGATIVE DECLARATION).....	17
SECTION 4: EVALUATION OF ENVIRONMENTAL IMPACTS	
4.1 Aesthetics.....	21
4.2 Agricultural and Forestry Resources	27
4.3 Air Quality.....	29
4.4 Biological Resources	37
4.5 Cultural Resources	44
4.6 Geology and Soils	48
4.7 Greenhouse Gas Emissions.....	53
4.8 Hazards and Hazardous Materials	56
4.9 Hydrology and Water Quality	61
4.10 Land Use and Planning	68
4.11 Mineral Resources	70
4.12 Noise	71
4.13 Population and Housing	77
4.14 Public Services.....	79
4.15 Recreation.....	82
4.16 Traffic and Transportation.....	84
4.17 Utilities and Service Systems	88
4.18 Mandatory Findings of Significance.....	91
SECTION 5: REFERENCES.....	93
List of Tables	
Table 1. General Plan Residential Land Uses	6
Table 2. Residential Zoning Districts.....	7
Table 3. Regional Housing Needs Assessment	8
Table 4. Major Criteria Pollutants	32
Table 5. Federal and State Ambient Air Quality Standards	33
Table 6. Summary of Air Quality Data for San Pablo and Vallejo	33
List of Exhibits	
Exhibit 1. Regional Context	13
Exhibit 2. Local Context	14
Exhibit 3. Housing Opportunity Sites	15

SECTION 1: PURPOSE AND AUTHORITY OF INITIAL STUDY

1.1 Purpose and Authority

The purpose of this Initial Study is to identify and assess the significance of the environmental impacts that could result from any potential future physical change in the environment resulting from the adoption and implementation of the City of Hercules General Plan 2015-2023 Housing Element.

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) Statutes and Guidelines and the City of Hercules's local rules and regulations. The proposed project requires discretionary approval from the City of Hercules and review by the California Department of Housing and Community Development (HCD). As the project initiator and because of the legislative approvals involved, the City is the Lead Agency with respect to this Initial Study pursuant to §15367 of the CEQA Guidelines. Specifically, this project requires City approval of a General Plan Amendment. No other governmental agencies have discretionary permitting authority with respect to approval of the proposed project, and there are no Trustee Agencies, as defined in §21070 of the CEQA Statutes.

Pursuant to §15074 of the CEQA Guidelines, prior to approving this project, the City is obligated to consider the findings of this Initial Study and to either adopt a Negative Declaration (ND), a Mitigated Negative Declaration (MND), or to determine that an Environmental Impact Report (EIR) is required. The findings of this Initial Study support adoption of a ND, as discussed in Section 4. This means that the long-term plan for development of housing pursuant to the proposed Housing Element, in accordance with the governing land use planning policies and zoning standards, would be less than significant.

The environmental determination that is ultimately adopted or certified by the City is part of the discretionary review process with respect to evaluating the merits and disadvantages of the proposed General Plan Amendment. The findings and determination of impact significance presented herein neither presuppose nor mandate any actions by the City concerning future decisions on the proposed General Plan Amendment.

1.2 Contents

This report has been prepared to comply with Section 15063 of the State CEQA Guidelines, which sets forth in the required contents of an Initial Study. These include:

- A description of the project, including the location of the project (see Section 2)
- Identification of the environmental setting (see Section 2.11)
- Identification of environmental effects by use of a checklist, matrix, or other methods, provided that entries on the checklist or other form are briefly explained to indicate that there is some evidence to support the entries (see Section 3)
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls (see Sections 2.6 and 2.7)

The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study (see Section 5.1)

1.3 Tiering

Section 15152 et al of the CEQA Guidelines describes "tiering" as a streamlining tool as follows:

(a) "Tiering" refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.

(b) Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects including general plans, zoning changes, and development projects. This approach can eliminate repetitive discussions of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy, or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration. Tiering does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration. However, the level of detail contained in a first tier EIR need not be greater than that of the program, plan, policy, or ordinance being analyzed.

(c) Where a lead agency is using the tiering process in connection with an EIR for a large-scale planning approval, such as a general plan or component thereof (e.g., an area plan or community plan), the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepares a future environmental document in connection with a project of a more limited geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand.

(d) Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program, plan, policy, or ordinance should limit the EIR or negative declaration on the later project to affects which:

(1) Were not examined as significant effects on the environment in the prior EIR; or

(2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means.

(e) Tiering under this section shall be limited to situations where the project is consistent with the general plan and zoning of the city or county in which the project is located, except that a project requiring a rezone to achieve or maintain conformity with a general plan may be subject to tiering.

(f) A later EIR shall be required when the initial study or other analysis finds that the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR. A negative declaration shall be required when the provisions of Section 15070 are met.

(1) Where a lead agency determines that a cumulative effect has been adequately addressed in the prior EIR that effect is not treated as significant for purposes of the later EIR or negative declaration, and need not be discussed in detail.

(2) When assessing whether there is a new significant cumulative effect, the lead agency shall consider whether the incremental effects of the project would be considerable when viewed in the context of past, present, and probable future projects. At this point, the question is not whether there is a significant cumulative impact, but whether the effects of the project are cumulatively considerable. For a discussion on how to assess whether project impacts are cumulatively considerable, see Section 15064(i).

(3) Significant environmental effects have been "adequately addressed" if the lead agency determines that:

(A) they have been mitigated or avoided as a result of the prior environmental impact report and findings adopted in connection with that prior environmental report; or

(B) they have been examined at a sufficient level of detail in the prior environmental impact report to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.

(g) When tiering is used, the later EIRs or negative declarations shall refer to the prior EIR and state where a copy of the prior EIR may be examined. The later EIR or negative declaration should state that the lead agency is using the tiering concept and that it is being tiered with the earlier EIR.

(h) There are various types of EIRs that may be used in a tiering situation. These include, but are not limited to, the following:

(1) General Plan EIR (Section 15166).

(2) Staged EIR (Section 15167).

(3) Program EIR (Section 15168).

(4) Master EIR (Section 15175).

(5) Multiple-family residential development / residential and commercial or retail mixed-use development (Section 15179.5).

(6) Redevelopment project (Section 15180).

(7) Projects consistent with community plan, general plan, or zoning (Section 15183).

1.4 Approach

The environmental analysis contained in this Initial Study is based on the following assumptions:

General Plan Consistency: As the General Plan is updated and/or amended, the City will ensure that such updates and amendments do not prevent implementation of the policies contained in the General Plan Amendment.

Project Specific Environmental Review: In the City of Hercules, all development proposals are subject to an environmental review process to determine if CEQA review is required and if so, to identify potential impacts and impose appropriate mitigation measures, if needed, to avoid significant impacts. This includes both discretionary projects, subject to the requirements of CEQA, and smaller-scale ministerial projects that require issuance of building permits.

Purpose of Environmental Review: This project does not authorize any plan for construction of new homes or other uses or redevelopment of any properties. No direct environmental impacts, therefore, would occur. This Initial Study addresses the assessment of potential environmental impacts resulting from the long-term effects of potential development facilitated by the General Plan Amendment in accordance with the City's existing land use policies. No changes to land use policy related to density or intensity are proposed. The purpose of the environmental assessment is to determine whether there are any peculiar types of impacts that could occur as an indirect result of the proposed General Plan Amendment strategies that were not examined in the General Plan EIR (2005) or if there could be impacts that are more severe than those anticipated in the EIR.

1.5 Availability

This Initial Study for the Hercules 2015-2023 Housing Element is available for public review at:

City of Hercules
Planning Department
111 Civic Drive
Hercules, California 94547
(510) 254-6531

SECTION 2: PROJECT DESCRIPTION

2.1 Project Title

City of Hercules 2015-2023 Housing Element

2.2 Lead Agency Name and Address

City of Hercules
Planning Department
111 Civic Drive
Hercules, California 94547

2.3 Contact Person and Phone Number

Holly Smyth, Planning Director
(510) 245-6531

2.4 Project Location

The City of Hercules 2015-2023 Housing Element applies to all proposed and existing residential and mixed-use zoning districts, as well as to General Plan land use designations that allow residential or mixed-use development within the municipal boundaries of the City of Hercules.

Hercules is located within the West County portion of Contra Costa County, which includes the urbanized shoreline of San Francisco and San Pablo Bays. The city is separated from the remainder of Contra Costa County by the Briones Hills and open space lands. The incorporated City of Pinole is located south of Hercules and the unincorporated community of Rodeo is located north of Hercules.

Major roads and highways that traverse Hercules include portions of Interstate 80 (I-80), State Route 4 [also known as John Muir Parkway (SR 4)], and San Pablo Avenue.

In addition to San Francisco and San Pablo Bays, the other regionally significant natural feature in Hercules is Refugio Creek, which flows from the eastern edge of the city, through the central portion of Hercules, and into San Pablo Bay north of Hercules Point.

Most of the City's land area is located east of the I-80 corridor, which runs in a north-south direction through the community. Hercules is predominantly a residential community, with traditional single-family detached dwellings located both east and west of the I-80 corridor.

Commercial and retail areas are generally located along Sycamore and Willow Avenues near the eastbound I-80 off-ramp. Industrial and R&D/office uses are concentrated in the northwest portion of Hercules, with light industrial uses dispersed to the east of I-80 along SR 4 and Willow Avenue.

The City maintains a number of local parks distributed throughout the community. These include Refugio Valley Park, Ohlone Park, Woodfield Park, Foxboro Park, Frog Pad Park, Duck Pond Park, and Railroad Park. A private golf course, Franklin Canyon Golf Course, provides additional recreational opportunities

in the eastern portion of Hercules.

Exhibit 1 (Regional Context) shows the location of Hercules in relation to the East Bay region. Exhibit 2 (Local Context) depicts Hercules in the context of surrounding communities and other major features.

2.5 Project Sponsor’s Name and Address

City of Hercules
 Planning Department
 111 Civic Drive
 Hercules, California 94547
 (510) 245-6531

2.6 General Plan Designations

Existing residential and mixed-use land use designations that support housing development within the City of Hercules include those listed below in Table 1 (General Plan Residential Land Uses):¹

Table 1
General Plan Residential Land Uses

<i>Land Use Designation</i>	<i>Intended Use</i>	<i>Maximum Density</i>
Single Family – Estate	Single-Family detached in an estate setting	1-2 du/ac
Single Family – Low Density	Single-family units on smaller lots as part of larger planned subdivision	2-7 du/ac
Multi Family – Low Density	Multi-family units such as townhouses, condominiums and apartments as well as single-family housing	Up to 12 du/ac
Multi Family – Medium Density	Townhouses, condominiums and apartments at medium density	12 - 30 du/ac
Multi Family – High Density	High density, multi-family housing, typically near public transit centers, adequate streets, shopping centers and other high activity areas	30-35 du/ac or 12 du/ac
Mobile Home Park	Appropriately located mobile home parks with densities consistent with sound standards for public health and safety	7 du/ac
Industrial Residential (Mixed Use)	Integrated mixture of residential space and workspaces in the same structure, with residential spaces generally located above the workspace such as a loft, and is to provide living area for persons employed within	25 du/ac (live-work units)
Planned Commercial Residential	Accommodates both residential and commercial uses in a well planned, mixed-use development	40 du/ac

2.7 Zoning Districts

Existing zoning districts that support residential development in Hercules are listed below in Table 2 (Residential Zoning Districts) along with the applicable development standards.²

Table 2

¹ City of San Hercules General Plan. Land Use Element Part 2. 1998.

² City of Hercules. Zoning Ordinance. 2014.

Residential Zoning Districts

District	Zoning District	Maximum Density (dwelling units/acre)
Single Family – Estate	RS-E	1-2 du/ac
Single Family – Low Density	RS-L	2-7 du/ac
Multi Family – Low Density	RM-L	Up to 12 du/ac
Multi Family – Medium Density	RM-M	12 - 30 du/ac
Multi Family – High Density	RM-H	30-35 du/ac or 12 du/ac
Mobile Home Park	P-M-H	7 du/ac
Industrial Residential (Mixed Use)	I-R	25 du/ac (live-work units)
Planned Commercial Residential	PC-R	40 du/ac

2.8 Project Description

The proposed Project includes the adoption of the 2015–2023 Housing Element of the Hercules General Plan and implementation of identified programs and polices set forth in the draft Housing Element. Additional General Plan amendments are proposed to the Safety and Open Space/Conservation Elements related to two laws that are triggered by the adoption of a Housing Element; AB 162 and SB 1241. The State of California has mandated that all local jurisdictions within the Bay Area have approved updated Housing Elements to reflect current “fair share” housing allocations for each City and County. The State Housing and Community Development Department (HCD) reviews all Housing Elements to determine compliance with State Law governing the content of these Elements.

Housing Element

The Housing Element is one of seven required elements of the General Plan. It addresses existing and future housing needs of persons in all economic segment groups and serves as a tool for decision-makers and the public in understanding and meeting housing needs in Hercules. While the law does not require local governments to actually construct housing to meet identified needs, it does require that the community address housing needs in its discretionary planning actions by creating opportunities for housing in the land use plan and facilitating housing development through policy.

Housing Elements are legal documents, included within a community's General Plan, that identify housing related conditions, provide an assessment of housing needs for the next five-year period of time, identify housing resources, identify housing opportunities and constraints, and establish policies, programs, and quantified housing objectives to achieve City housing needs.

Statutory Requirements

State law requires that all housing elements address four key topics: 1) housing needs, 2) constraints to housing development, 3) housing resources, and 4) a housing plan. Analysis of these topics provides the foundation for the preparation of a housing element. Article 10.6, Section 65580 – 65589.8, Chapter 3 of Division 1 of Title 7 of the Government Code sets forth the legal requirements for a housing element and encourages the provision of affordable and decent housing in suitable living environments for all communities to meet statewide goals. This 2015-2023 Housing Element update is a policy document of the City of Hercules regarding current and projected future housing needs, and the City's goals, policies, and programs to address those identified needs, and represents a focused update to the City's adopted

2008-2014 Housing Element, which was found to be fully in compliance with State law by the California Department of Housing and Community Development (HCD).

Housing Needs

Several factors influence the demand for housing in Hercules. The four major needs categories considered in the Housing Element include: 1) housing needs resulting from population growth, both in the City and the surrounding region; 2) housing needs resulting from overcrowding of units; 3) housing needs that result when households are paying more than they can afford for housing; and 4) housing needs of "special needs groups" such as the elderly, large families, female-headed households, households with a physically or developmentally disabled person, farm workers, and the homeless.

The City of Hercules 2015-2023 Housing Element profiles key community demographics and examines the related housing needs of various groups, including owners versus renters, lower-income households, overcrowded households, elderly households, special needs groups, and homeless persons. This information is detailed in the Housing Element.

California housing element law requires that each city and county develop local housing programs designed to meet their "fair share" of housing needs for all income groups, based on projected population growth. The HCD Housing Policy Division develops Regional Housing Needs Assessments (RHNA) for each region of the State represented by councils of governments. The Association of Bay Area Governments (ABAG) determines the housing allocation for each city and county within its six-county jurisdiction. ABAG has assigned Hercules a housing allocation of 682 units for the 2015-2023 planning period. Table 3 (Regional Housing Needs Assessment) identifies the total projected housing needs for the 2015-2023 Housing Element.

**Table 3
Regional Housing Needs Assessment**

Income Category	% of County AMI	2014-2021 RHNA Allocation Number of Units	Percentage of Units
Extremely Low	0-50%	0	0%
Very Low	30-50%	220	32%
Low	51-80%	118	17%
Moderate	81-120%	100	15%
Above Moderate	120% +	244	36%
Total		682	100%

Source: ABAG 2013

Opportunity Areas

The proposed Housing Element identifies housing opportunity sites to accommodate the City's fair share of regional housing needs for the 2015-2023 planning period to help meet the RHNA. These sites are depicted on Exhibit 3 (Housing Opportunity Sites). The City of Hercules has already met about 35 percent of its total RHNA goal with its units constructed or in the pipeline. The Hercules 2015-2023 Housing Element provides an inventory of vacant properties within the City, most of which are located within various Specific Plan areas such as Central Hercules Plan and the Waterfront District Master Plan. The properties were all previously approved for high-density or mixed-used residential development or with pending projects. However, due to economic downturn, approval for these projects

has already expired and therefore the sites remain available for future development. All of the housing sites are either approved by the City of Hercules or are currently being considered for approval, generally within large residential or mixed-use districts or specific plan areas. No rezoning or amendments to any applicable Specific Plan are proposed as part of this project.

Individual development projects that would contribute to meeting the City's RHNA targets are described below.

- 1) *Refugio Senior Housing Site.* This 1.3-acre parcel is located off of Redwood Road southeast of the terminus of Lavender Road. Under the current zoning for the property (Residential Multi-Family Low-Density), up to 12 units per acre can be developed, for a maximum of 15 residential units.
- 2) *Bayfront Project.* The Hercules Bayfront project has been proposed as a mixed-use, transit-oriented development centered on a multi-modal transit station located along San Pablo Bay and northwest of Railroad Avenue and Bayfront Boulevard. The development site contains approximately 42 acres of land. For housing purposes, the draft Housing Element identifies two subareas within this larger project. The Bayfront portion of the Waterfront district is approved to allow up to 1,392 dwellings.

Development that would be allowed by approval of the Bayfront project would be generally consistent with the current Hercules General Plan in terms of location of residential development, overall densities, and number of dwelling units.

- 3) *Hilltown Project.* Located between San Pablo Avenue and the I-80 freeway north of John Muir Parkway, the Hilltown project is a 44.25-acre parcel of land zoned as Planned Commercial-Residential, which would theoretically permit up to 1,770 residential units at 40 units per acre.

The proposed Housing Element anticipates development that could occur under the General Plan, as may be amended to accommodate the above individual development projects, but neither proposes or approves individual development projects. Implementation of future housing development will continue upon application to the City for approval to construct site-specific projects that could be facilitated by the 2015–2023 Housing Element policies and programs as well as other City regulations and incentives. All future development may require the issuance of additional permits from the City of Hercules, including but not limited to Planned Development Plans, Design Review approvals, subdivision maps, and other approvals.

As in the current Housing Element, the 2015–2023 Housing Element continues to provide a policy and program framework that is receptive to future residential development proposals. The proposed Element also continues to take advantage of currently planned higher densities for transit-oriented development.

The Draft Housing Element identifies a number of programs and incentives that would assist in meeting the City's quantified housing objectives. These include but are not limited to:

- Use of density bonuses for development of affordable housing.
- Use of secondary dwelling units ("granny flats").

- Financial resources, including Community Development Block Grants, Section 8 assistance California Housing Finance Agency funding, and other sources.

Housing Plan

For the City of Hercules, the objective is to facilitate and encourage housing that fulfills the diverse needs of the community. To achieve this goal, the Housing Plan identifies long-term housing goals and supporting policies to address housing needs. The goals and policies are then implemented through a series of housing programs. Programs identify specific actions the City plans to undertake toward achieving each goal and policy. The goals identified in the Housing Element are listed below.

- Goal 1** **Assist in the provision of housing that meets the needs of all socioeconomic segments of the community.**

- Goal 2:** **Conserve and improve the condition of the existing housing stock, especially affordable housing.**

- Goal 3:** **Provide suitable sites for housing development which can accommodate a range of housing by type, size, location, price and tenure.**

- Goal 4** **Mitigate any potential governmental constraints to housing production and affordability.**

- Goal 5** **Continue to promote equal housing opportunity in the City’s housing market regardless of age, race, color, national origin, ancestry, sex, disability, marital status, familial status, source of income, sexual orientation, and any other arbitrary factors.**

- Goal 6** **Promote energy efficiency and conservation throughout Hercules.**

AB 162 General Plan Amendments

AB 162 (and related revisions to Section 65302 of the California Government Code) requires an update to the General Plan to identify areas subject to flooding upon the next adoption of the Housing Element. Identification of rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and storm water management are also required. Although this amendment is to a separate section of the General Plan, it is associated the update of the Housing Element (as the update is triggered by the update to the Housing Element).

The Safety Element of the General Plan has been revised to reflect updated flood risks based on the most recent available data from the Federal Emergency Management Agency (FEMA), including revisions to the Floodprone Areas Map. Data was added for informational purposes to comply with State law; no existing General Plan policies were revised or removed and no new General Plan policies were added.

SB 1241 General Plan Amendments

SB 1241 (and related revisions to Section 65302 of the California Government Code) requires the General Plan be reviewed and updated as necessary to address the risk of fire in “fire hazard zones” identified as *state responsibility areas* and *very high fire hazard severity zones (local responsibility*

areas), taking into account specified considerations, including, among others, the most recent version of the Office of Planning and Research's "Fire Hazard Planning" document.

The Safety Element of the General Plan has been revised to reflect updated fire hazard zones based on the most recent available data from the California Department of Forestry and Fire Protection (CALFire), including the addition of a new Fire Hazard area map. General Plan programs have also been updated to comply with State law.

2.9 Project Objectives

The goals, policies, and programs in the Housing Element build upon the identified housing needs in the community, constraints confronting the City, and resources available to address the housing needs. Hercules's housing goals, policies, and programs address the following six major areas:

- Assist in the provision of housing that meets the needs of all socioeconomic segments of the community.
- Conserve and improve housing supply.
- Provide adequate housing sites.
- Remove government constraints.
- Provide equal housing opportunity.
- Promote energy efficiency and conservation.

2.10 Environmental Setting

The City of Hercules is located in western Contra Costa County, approximately 15 miles north of Oakland. Situated along the coast of San Pablo Bay it is located in the eastern region of the San Francisco Bay area. Major freeways traversing the City include I-80 and State Route 4 (SR-4). The City's total planning area, including the Sphere of Influence is 11,634 acres (18 square miles). Hercules's pattern of land uses transitions between predominantly suburban and commercial areas, with pockets of vacant land dispersed in between subdivisions. Cities surrounding Hercules are also similarly developed and with comparable layout, design, and character. The Pinole Ridge and Mendocino Reservoir are located south of the City. See Exhibit 3 for general locations of the proposed Opportunity Areas for the Housing Element.

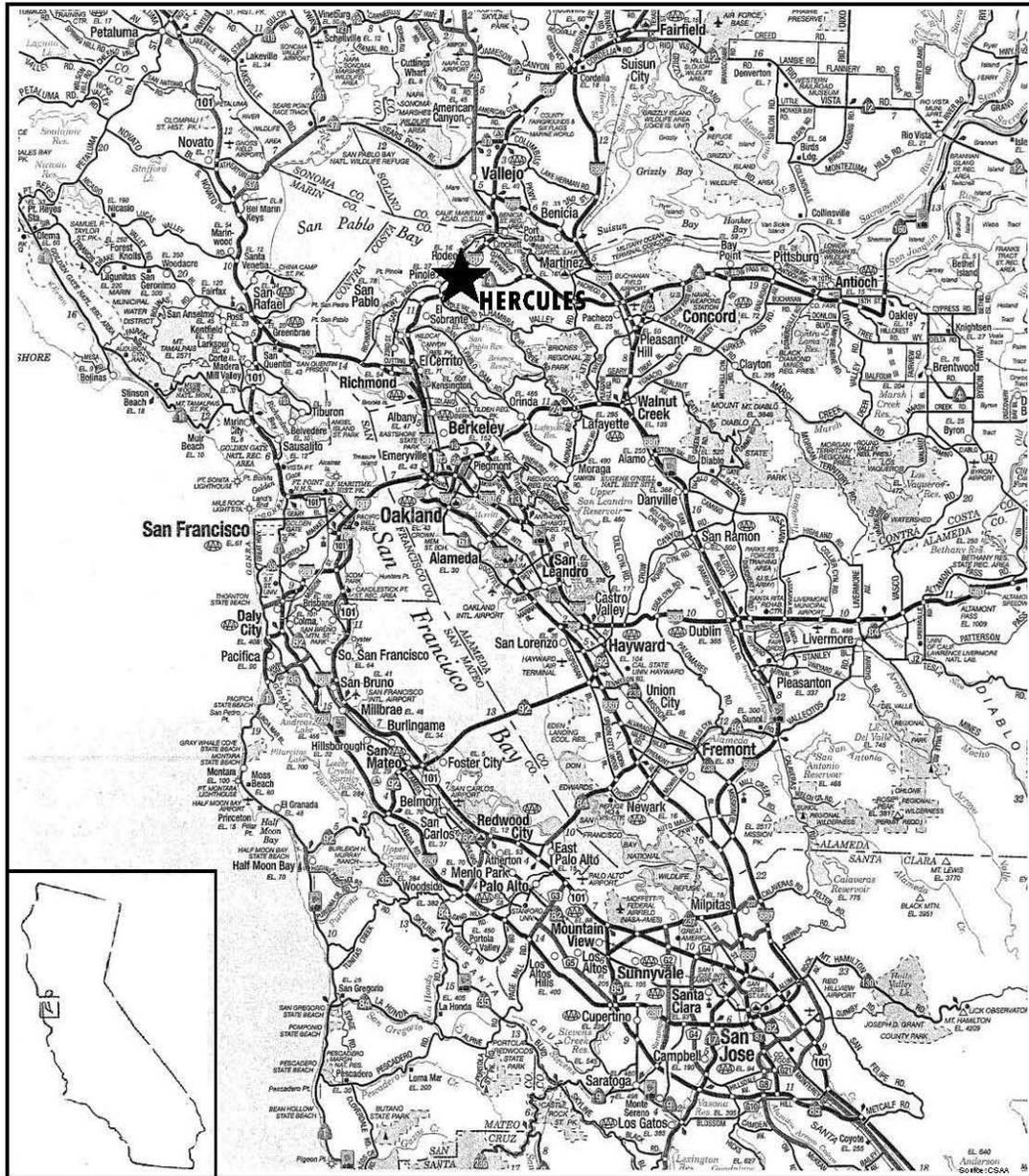
2.11 Required City Approvals

The City Council must approve a General Plan Amendment to incorporate the 2015-2023 Housing Element into the City's General Plan and to incorporate flood (AB 162) and fire (SB 1241) hazard information in the Open Space-Conservation and Safety Elements of the General Plan in compliance with State Law.

2.12 Other Agency Approvals

The State of California, Department of Housing and Community Development (HCD) has reviewed the Housing Element for compliance with State law and has indicated that the adopted Element is in substantial compliance (Article 10.6 of the Government Code).

Exhibit 1. Regional Context



CITY OF HERCULES
INITIAL STUDY / HOUSING ELEMENT & ZONING ORDINANCE AMENDMENT

Exhibit 1
REGIONAL CONTEXT

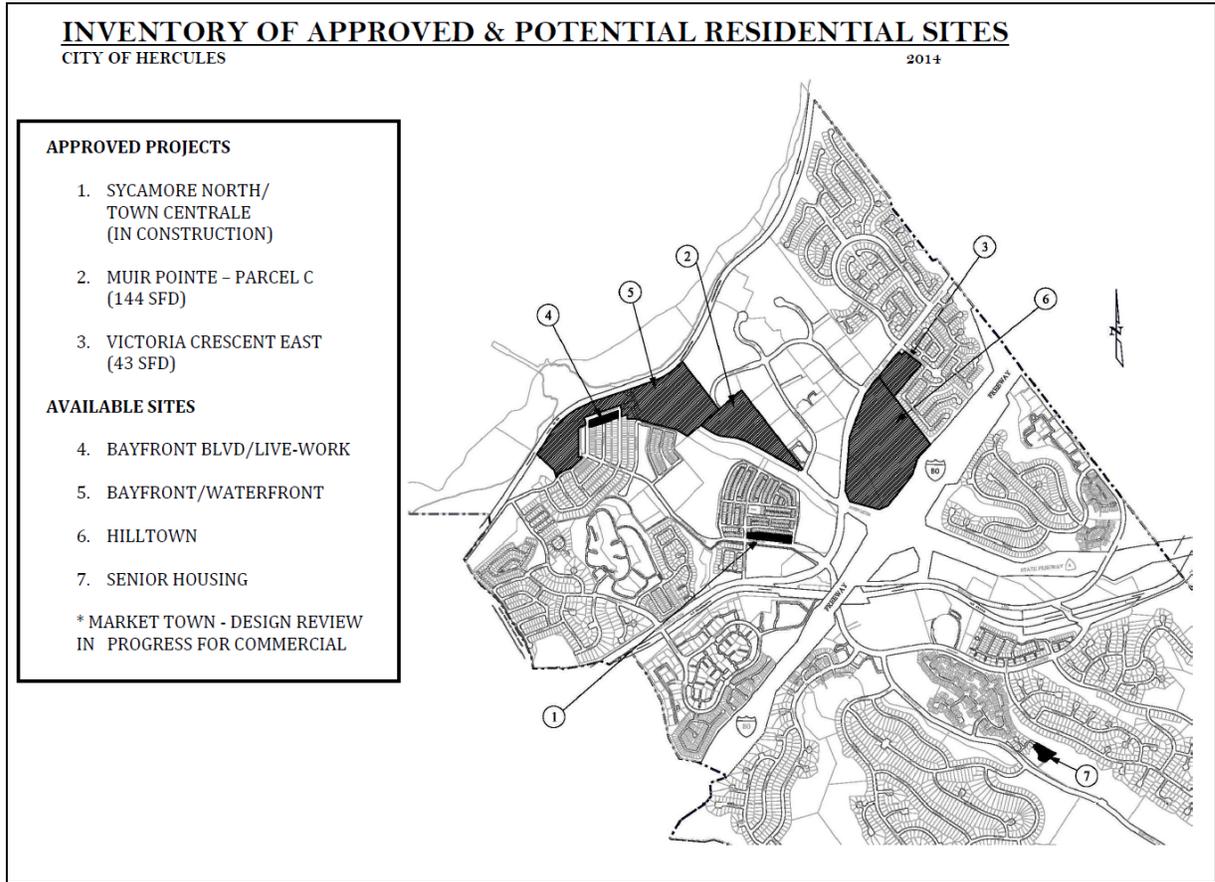
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0 2 4 6 8 10 miles

Exhibit 2. Local Context



Exhibit 3. Housing Opportunity Sites



SECTION 3: DETERMINATION (NEGATIVE DECLARATION)

1. **Project description:** Adoption of an updated Housing Element as part of the Hercules General Plan as well as implementation of the updated Element
2. **Lead agency:** City of Hercules
3. **Contact person:** Holly Smyth, Planning Manager
4. **Project location:** City-wide
5. **Project sponsor:** City of Hercules
6. **General Plan designations:** Various
7. **Zoning:** Various
9. **Other agency required approvals:** Certification by the California Department of Housing and Community Development

3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project.

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture Resources	<input type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology /Soils
<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Hydrology / Water Quality	<input type="checkbox"/> Land Use / Planning
<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise	<input type="checkbox"/> Population / Housing
<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation	<input type="checkbox"/> Transportation/Traffic
<input type="checkbox"/> Utilities / Service Systems	<input type="checkbox"/> Mandatory Findings of Significance	

3.1 Determination

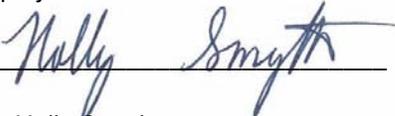
On the basis of this initial evaluation:

X I find that the proposed project **could not** have any new and significant effects on the environment that were not previously identified and addressed in the earlier environmental analyses described in Section 3.3, and a **Negative Declaration** will be prepared.

___ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A **Mitigated Negative Declaration** will be prepared.

___ I find that although the proposed project **may** have a significant effect on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on earlier analysis as described on the attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An **Environmental Impact Report** is required, but must only analyze the effects that remain to be addressed.

___ I find that although the proposed project could have a significant effect on the environment, there **will not** be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed on the proposed project.

Signature: 

Date: 01/15/16

Printed Name: Holly Smyth

3.2 Evaluation of Environmental Impacts

- 1) A brief explanation is required for all answers except “no impact” answers that are adequately supported by the information sources a lead agency cites in the parenthesis following each question. A “no impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A “no impact” answer should be explained where it is based on project-specific factors as well as general factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect is significant. If there are one or more “potentially significant impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less-Than-Significant Unless Mitigation Incorporated” implies elsewhere the incorporation of mitigation measures reduces an effect from “potentially significant effect” to a “less than significant impact.” The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less-Than-Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead Agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.

- 9) The explanation of each agency should identify: (a) the significance criteria or threshold, if any, used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to a less than significant level.

3.3 Earlier Analysis

Earlier analyses may be used where, pursuant to tiering, a program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or Negative Declaration [Reference CEQA Guideline Section 15063 (c)(3)(d)].

Portions of the environmental analysis for this Initial Study refer to information contained in one or more of the EIRs listed below. The draft Housing Element does not propose any General Plan or applicable Specific Plan land use changes or any rezoning of properties except for those General Plan Amendments necessary to comply with AB 162 (flood hazards) and SB 1241 (fire hazards). The City proposes to meet its RHNA through existing General Plan land use and zoning designations. The following environmental review documents assumed these existing designations and/or zoning in their respective analyses.

- Hercules New Town Center EIR, SCH# 2007062002, certified on February 10, 2009.
- Hercules Update 2009 Redevelopment Plan EIR, SCH # 2008112040, certified on May 26, 2009.
- Hercules Bayfront Project EIR, SCH # 2009112058, certified on October 11, 2011.

These documents are incorporated herein by reference and are available for public review at the Hercules Planning Department, 111 Civic Drive, Hercules, during normal business hours.

3.4 Environmental Checklist

The following Environmental Checklist form is used to describe the impacts of the proposed project, as detailed in the Project Description. Potential environmental impacts are described as follows:

Potentially Significant Impact: An environmental impact that could be significant and for which no feasible mitigation is known. If any potentially significant impacts are identified in this Checklist, an Environmental Impact report (EIR) must be prepared.

Potentially Significant Unless Mitigated: An environmental impact that requires the incorporation of mitigation measures to reduce that impact to a less-than-significant level.

Less-Than-Significant-Impact: An environmental impact may occur, however, the impact would not be considered significant based on CEQA environmental standards.

No Impact: No environmental impacts are proposed.

SECTION 4: EVALUATION OF ENVIRONMENTAL IMPACTS

4.1 Aesthetics

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Overview. Visual and aesthetic characterizes within Hercules vary considerably within the community. Portions of the community lying east of the I-80 freeway are characterized by rolling hills, scattered residential uses, and commercial service land uses. With the exception of R&D and business park uses located west of San Pablo Avenue and north of John Muir Parkway, the portion of Hercules lying west of the I-80 freeway include a mix of residential uses at varying densities, commercial uses, parks, civic uses, vacant land, and resource protection areas.

Major scenic vistas. Major scenic vistas in the Hercules planning area include the I-80 freeway, which provides distant views of San Pablo Bay and nearby hillside areas. Drivers traversing SR-4 are afforded views of vacant hillsides in their natural state and the Franklin Canyon Golf Course. Neither of these state routes is designated as scenic highways by the State of California (source: http://www.dot.ca.gov/hq/LandArch/scenic_highways.indenx.htm). However, the City of Hercules has designated SR-4 as a City Scenic Route. Also, San Pablo Avenue from Pinole Valley Road to I-80 has been designed a local Scenic Route.

Other scenic routes include San Pablo Avenue (a north–south arterial roadway that traverses wetland and riparian resources in the Refugio Valley) and Refugio Valley Road (an east–west arterial that parallels Refugio Creek in the central portion of Hercules).

Views of San Pablo Bay are available from Railroad Street and Bayfront Boulevard adjacent to the Bay. San Pablo Bay Regional Shoreline also provides a scenic vista to San Pablo Bay.

Finally, local parks in Hercules provide for scenic vistas of nearby hillsides and other views.

Scenic resources. Scenic resources in the Hercules planning area include surface water and riparian bodies of water, undeveloped natural hillsides, and major stands of vegetation.

The major surface body of water in the Hercules planning area is San Pablo Bay, located immediately west of the upland portion of the community. Refugio Creek provides another major scenic resource that flows from lands with higher elevations in the eastern portion of Hercules into San Pablo Bay.

A number of major natural and man-made vegetated areas exist in Hercules. These include:

- A corridor along Refugio Creek and Refugio Valley Road.
- Natural hillsides lying northeast of Emerald Way and Turquoise Drive in the southern portion of Hercules.
- Tree resources within local parks, including but not limited to Refugio Valley Park.

Light sources. Numerous sources of lights exist within the developed portions of Hercules. These include street lights, parking lot lights, building lights, security lights, and similar sources of light. Undeveloped portions of the community generally do not have light sources.

Impacts and Mitigation Measures from Previous EIRs

A number of impacts and mitigation measures included in previously certified CEQA documents that include the housing opportunity sites (see **Exhibit 3**) are listed below.

Hercules New Town Center EIR. This EIR identified a potentially significant impact caused by future development within the New Town Center project would alter the existing visual character of the project area and its surrounding area. Mitigation Measure AES1 requires that future development within the New Town Center project area be maintained in a clean and orderly condition. A screen fence shall be placed around construction sites, and construction staging areas are to be located away from public view.

Updated 2009 Redevelopment Plan EIR. Impact AES-2 identified a significant and unavoidable impact with respect to damage or removal of scenic resources adjacent to scenic corridors, including hillside areas, removal of mature trees, and removal of a riparian area for which a Statement of Overriding Consideration was adopted. Mitigation Measures AES-2a through 2f required: replacement of lost trees; sensitive placement of future buildings to minimize view obstruction; avoidance of inconsistent building designs; and installation of landscaping along San Pablo Avenue to soften the visual mass of future buildings. Even with adherence to these measures, this impact would not be reduced to a less-than-significant level. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.

Impact AES-3 noted that construction of the proposed project would alter the existing visual character of the sites and could substantially degrade the visual character and quality of the sites and their respective surroundings. This was identified as a significant and unavoidable impact. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.

Impact AES-4 identified a potentially significant impact with respect to creation of new sources of light and glare that could impact nighttime views of the area. Adherence to Mitigation Measures AES-4a and -4b reduces this impact to a less-than significant level by requiring parking areas in the Sycamore Crossing and Hill Town areas to be screened with trees and vegetation and the use of hooded and downward-directed light fixtures.

Hercules Bayfront Project EIR. Impact 4.1 found an impact with respect to scenic resources should the Bayfront project be approved and constructed. Specifically, views of the Bay and Refugio Creek would be blocked from a number of vantage points. Adherence to Mitigation Measure 4-1 partially reduces this impact by requiring changes to the project site plan. If these changes cannot be made, this impact would be significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan

Impact 4.2 identified a significant and unavoidable impact with respect to changing the visual character of the site from an undeveloped area to an urbanized area. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan

Impact 4.3 identified an impact with the introduction of light and glare to the project site and vicinity. Adherence to Mitigation Measure 4-3 reduces this impact to a less-than-significant level by requiring the City Community Development Department to approve a lighting plan that demonstrates minimization of light and glare from the site.

Regulatory Framework

The City of Hercules has the following regulations to minimize impacts to visual and aesthetic resources.

General Plan. The General Plan contains the following goals and policies regulating aesthetic and scenic features of the City.

Land Use Element Objective 7 directs the City to achieve a pattern of development that is consistent with the City's desired image.

Open Space and Conservation Element Objective 1.d states that the City should plan for the preservation and enhancement of visual qualities as viewed from scenic routes.

Open Space/Conservation Element Objective 13 directs the City to preserve and enhance scenic views within the community. The following policies are also related to this Objective:

Development proposals shall be reviewed in terms of natural objects in the vicinity that have aesthetic significance. This may include opens space, eucalyptus groves or vegetation that serves as a view corridor or has important visual attributes. Development proposals shall be sites to ensure that these features are retained or replaced to the extent feasible, resulting in minimal view impairment (*Policy 13a*)

Plantings that serve to screen views of residential development or that help to maintain a natural-appearing landscape, shall be retained to the extent feasible. Such plants could be thinned selectively if thinning would improve view corridors. If specific trees are to be removed, such as eucalyptus trees, replace with trees, preferably native trees that will provide suitable screening while retaining important view corridors, especially along San Pablo Avenue, which is designated as a scenic corridor. (*Policy 13b*).

Development shall preserve important view corridors, where feasible, by identifying and preserving the attributes of the view corridor that characterize its significance (e.g. framing elements, surface water reflections, presence or absence of impinging details) as seen from roadways, pedestrian paths or other public vantage points to avoid view obstruction. Buildings shall be sited so as to minimize view obstruction from sensitive viewpoints (*Policy 13d*).

New development shall be designed to minimize light and glare impacts (*Policy 13e*).

Circulation Element Objective 2 directs the City to plan for the preservation and enhancement of visual qualities as viewed from designated scenic routes.

Hercules Zoning Ordinance. The Hercules Zoning Ordinance contains Chapter 25, the Scenic Road and Highway Overlay District. The purpose of this District is to implement the scenic road and highway designations of the General Plan, to review the visual impacts of development proposals adjacent to scenic corridors, and to encourage aesthetically attractive architecture and site designs.

The Zoning Ordinance also requires establishment and maintenance of a 50-foot wide setback from the top of banks for Refugio Creek and Rodeo Creek. (Section 22.400 (1)). The setback may be reduced for the west branch of Refugio Creek if the 50-foot setback proves infeasible.

Tree Removal Ordinance. The City's Tree Removal Ordinance regulates the removal of mature trees on public and private lands in the community. The ordinance defines a mature tree as a living tree with a trunk diameter of 12 inches or more measured approximately 4.5 feet above adjacent ground surface.

Project Impacts

- a) **Less than Significant Impact.** Potential dwelling units identified in the draft Housing Element are predominantly located in the central and western portions of Hercules, and impacts related to scenic vistas of the various housing sites have been analyzed in the Hercules New Town Center EIR, the 2009 Updated Redevelopment Plan EIR, and the Bayfront Project EIR. The Updated 2009 Redevelopment Plan EIR determined that approval and construction of dwelling units and other development pursuant to that plan, including the proposed Sycamore Crossing and Hilltown developments, would have a significant and unavoidable impact on scenic vistas and scenic resources. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.

The Bayfront Project EIR found that buildout of this project would obscure existing views of San Pablo Bay and Refugio Creek from a number of vantage points on the project site. Mitigation Measure 4.-1 contained in the EIR requires that modifications be made in the site design and roadway network to more effectively preserve bay views and vistas. With such modifications, potential impacts with respect to scenic vistas would be less-than-significant.

Transitional housing, supportive housing, and emergency shelters would likely be small-scale in nature and could be located within existing structures with no impacts to scenic vistas.

Impacts of constructing future dwellings included in the updated Housing Element have been analyzed in project-specific CEQA documents, which are identified in the Earlier Analysis section of this Initial Study, and thus no new analysis is required. All mitigation measures contained in previous CEQA documents related to scenic vistas will continue to apply to future residential construction identified in the draft Housing Element so that this topic will be less-than-significant.

- b) **Less than Significant Impact.** Although there are no state-designated scenic highways within the City of Hercules, there are locally designed scenic routes as summarized in the Environmental Setting section. The Updated 2009 Redevelopment Plan EIR determined that approval and construction of dwelling units and other development pursuant to the updated redevelopment plan, including the proposed Sycamore Crossing and Hilltown developments, would have a significant and unavoidable impact on scenic vistas and scenic resources for which a Statement of Overriding Consideration was adopted. No such significant and unavoidable impacts were identified in the Hercules New Town Center EIR.

Future site-specific housing development proposals submitted to the City as part of the New Town Center, Updated 2009 Redevelopment Plan, and Bayfront projects, as well as transitional and supporting housing units, will be required to comply with applicable EIR mitigation measures and other City regulations and policies to protect scenic resources. This topic will be less-than-significant.

- c) **Less than Significant Impact.** The Updated 2009 Redevelopment Plan EIR determined that approval and construction of dwelling units and other development pursuant to the updated redevelopment plan, including the proposed Sycamore Crossing and Hilltown developments, would result in a significant and unavoidable impact on the visual character of the Updated 2009 Redevelopment Plan project area by developing currently vacant parcels of land for which a Statement of Overriding Consideration was adopted. No similar significant and unavoidable impacts were identified in the Hercules New Town Center EIR.

Impacts of the proposed Bayfront project with respect to degradation of the scenic character of the waterfront site was analyzed in the EIR document and was found to be significant and unavoidable since the proposed development would change the existing visual character of the site of one of the last undeveloped waterfront open spaces in Hercules. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.

Future site-specific housing development proposals submitted to the City, including transitional housing, supportive housing units, and similar developments will be required to comply with applicable EIR mitigation measures and other City regulations and policies to protect scenic resources. A less-than-significant impact is anticipated with respect to this topic.

- d) **Less than Significant Impact.** Previous CEQA documents prepared for various housing sites identified potentially significant impacts with respect to adding new sources of light and glare on housing sites associated with housing construction.

Adherence to the mitigation measures contained in the three previous certified EIRs as noted above plus review of individual housing development projects as part of the City of Hercules review process will ensure that spillover of light and glare off of individual housing sites is limited and that impacts of light and glare will be less-than-significant.

4.2 Agricultural and Forestry Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

All of the housing sites identified in the Housing Element have urban-type General Plan land use designations and similar zoning. None of the sites are zoned for agricultural uses, are being used for agricultural production, or have a Williamson Act Land Conservation Contract.

The 2008 Contra Costa County Important Farmland Map shows that the various housing sites included in the draft Housing Element are urban and built-up lands and are not considered as prime farmland.

Similarly, none of the housing sites contain significant stands of trees or forests.

Project Impacts

a-c) **No Impact.** No impacts are anticipated with respect to conversion of prime agricultural soils to non-agricultural uses, or to conflict with agricultural zoning or a Williamson Act contract, since none of the identified housing sites contain any of these features. See the next checklist item for potential impacts to forests and timberland preserves.

d,e) **No Impact.** Approval of the proposed General Plan amendments would have no impact on forestland, since no forested lands exist on any of the housing opportunity sites.

4.3 Air Quality

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Air Pollution Climatology. The amount of a given pollutant in the atmosphere is determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain and, for photochemical pollutants, sunshine.

Hercules is located in western Contra Costa County just south of the Carquinez Strait and is within the nine-county San Francisco Bay Area Air Basin. Its location near San Pablo Bay and the Carquinez Strait has a major influence on the climate and air quality of the area.

The Carquinez Strait is the only sea-level gap between San Francisco and the Central Valley. During the summer and fall months, high pressure offshore coupled with temperature-related low pressure in the Central Valley causes marine air to flow eastward through the Strait. The wind is strongest in the afternoon. During the nighttime weaker down-slope drainage flows are common, particularly in winter.

The pollution potential of the site area is relatively low compared to other portions of the Bay Area. Ventilation is relatively good, and there is limited transport of pollutants from other upwind urban areas. However, during periods of light or calm winds, which typically occur in the fall and winter months, the entire Bay Area air basin is subject to stagnation and poor air quality.

Ambient Air Quality Standards

Criteria Pollutants. The Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called “criteria” pollutants because the health and other effects of each pollutant are described in criteria documents. Table 4 identifies the major criteria pollutants, characteristics, health effects and typical sources. The federal and California state ambient air quality standards are summarized in Table 5.

The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and particulate matter (PM₁₀ and PM_{2.5})

Toxic Air Contaminants. Toxic air contaminants (TACs) are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A wide range of sources, from industrial plants to motor vehicles, emit TACs. Like PM_{2.5}, TAC can be emitted directly and can also be formed in the atmosphere through reactions among different pollutants.

The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects (such as cancer, birth defects, neurological damage, asthma, bronchitis or genetic damage) or short-term acute affects, such as eye watering, respiratory irritation (coughing), running nose, throat pain, and headaches. For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure. Non-carcinogenic substances differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are expressed as a hazard index (HI), which is the ratio of expected exposure levels to an acceptable reference exposure levels.

TACs are primarily regulated through State and local risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. A chemical becomes a regulated TAC in California based on designation by the California Office of Environmental Health Hazard Assessment (OEHHA). As part of its jurisdiction under Air Toxics Hot Spots Program, OEHHA derives cancer potencies and reference exposure levels (RELs) for individual air contaminants based on the current scientific knowledge that includes consideration of possible differential effects on the health of infants, children and other sensitive subpopulations, in accordance with the mandate of the Children’s Environmental Health Protection Act.

PM_{2.5} is a complex mixture of substances that includes elements such as: carbon and metals; compounds such as nitrates, organics, and sulfates; and complex mixtures such as diesel exhaust and wood smoke. PM_{2.5} can be emitted directly and can also be formed in the atmosphere through reactions among different pollutants.

Compelling evidence suggests that PM_{2.5} is by far the most harmful air pollutant in the San Francisco Bay Area Air Basin in terms of the associated impact on public health. A large body of scientific

evidence indicates that both long-term and short-term exposure to PM_{2.5} can cause a wide range of health effects, e.g., aggravating asthma and bronchitis, causing visits to the hospital for respiratory and cardiovascular symptoms, and contributing to heart attacks and deaths.

Common stationary source types of TAC and PM_{2.5} emissions include gasoline stations, dry cleaners, and diesel backup generators, which are subject to BAAQMD permit requirements. The other, often more significant, common source type is on-road motor vehicles on freeways and roads such as trucks and cars, and off-road sources such as construction equipment, ships, and trains.

Ambient Air Quality. The BAAQMD maintains a network of monitoring sites in the Bay Area. The closest to the project site are located in San Pablo several miles southwest of the site and in Vallejo several miles northwest of the site. Table 6 summarizes violations of air quality standards at these monitoring sites for the period 2007–2009. Table 6 shows that the federal ambient air quality standards are met in the project area with the exception of PM_{2.5}. State ambient standards are met with the exception of ozone and PM₁₀.

Attainment Status and Regional Air Quality Plans. The federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the state where the federal or state ambient air quality standards are not met as “nonattainment areas.” Because of the differences between the national and state standards, the designation of nonattainment areas is different under the federal and state legislation. The U. S. Environmental Protection Agency has classified the San Francisco Bay Area as a non-attainment area for the federal 8-hour ozone standard. The Bay Area was designated as unclassifiable/attainment for the federal PM₁₀ and PM_{2.5} standards. Under the California Clean Air Act, Contra Costa County is a non-attainment area for ozone and particulate matter (PM₁₀ and PM_{2.5}). The county is either attainment or unclassified for other pollutants.

Table 4. Major Criteria Pollutants

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive photochemical pollutant created by the action of sunshine on ozone precursors (primarily reactive hydrocarbons and oxides of nitrogen). Often called photochemical smog.	Eye irritation; Respiratory function impairment.	The major sources of ozone precursors are combustion sources such as factories and automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	Impairment of oxygen transport in the bloodstream. Aggravation of cardiovascular disease. Fatigue, headache, confusion, dizziness. Can be fatal in the case of very high concentrations.	Automobile exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	Reddish-brown gas that discolors the air, formed during combustion.	Increased risk of acute and chronic respiratory disease.	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
Sulfur Dioxide	Sulfur dioxide is a colorless gas with a pungent, irritating odor.	Aggravation of chronic obstruction lung disease. Increased risk of acute and chronic respiratory disease.	Diesel vehicle exhaust, oil-powered power plants, industrial processes.
Particulate Matter	Solid and liquid particles of dust, soot, aerosols, and other matter which are small enough to remain suspended in the air for a long period of time.	Aggravation of chronic disease and heart/lung disease symptoms.	Combustion, automobiles, field burning, factories, and unpaved roads. Also a result of photochemical processes.

Source: Donald Ballanti, 2009

Table 5. Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	--	0.09 PPM
	8-Hour	0.075 PPM	0.07 PPM
Carbon Monoxide	8-Hour	9.0 PPM	9.0 PPM
	1-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual Average	0.053 PPM	0.030 PPM
	1-Hour	0.10 PPM	0.18 PPM
Sulfur Dioxide	Annual Average	0.03 PPM	--
	24-Hour	0.14 PPM	0.04 PPM
	1-Hour	--	0.25 PPM
PM ₁₀	Annual Average	--	20 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
PM _{2.5}	Annual	15 µg/m ³	12 µg/m ³
	24-Hour	35 µg/m ³	--
Lead	Calendar Quarter	1.5 µg/m ³	--
	30 Day Average	--	1.5 µg/m ³
Sulfates	24 Hour	--	25 µg/m ³
Hydrogen Sulfide	1-Hour	--	0.03 PPM
Vinyl Chloride	24-Hour	--	0.01 PPM

PPM = Parts per million

µg/m³ = Micrograms per cubic meter

Source: California Air Resources Board, Ambient Air Quality Standards (2/16/10)

<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

Table 6. Summary of Air Quality Data for San Pablo and Vallejo

Pollutant	Standard	Monitoring Site	Days Exceeding Standard in:		
			2007	2008	2009
Ozone	State 1-Hour	San Pablo	0	0	0
		Vallejo	0	1	2
Ozone	Federal 8-Hour	San Pablo	0	0	0
		Vallejo	0	0	0
Ozone	State 8-Hour	San Pablo	0	0	0
		Vallejo	0	3	1
Carbon Monoxide	State/Federal 8-Hour	San Pablo	0	0	0
		Vallejo	0	0	0
Nitrogen Dioxide	State 1-Hour	San Pablo	0	0	0
		Vallejo	0	0	0
PM ₁₀	Federal 24-Hour	San Pablo	0	0	0
		Vallejo	0	0	0
PM ₁₀	State 24-Hour	San Pablo	2	0	0
		Vallejo	2	0	0
PM _{2.5}	Federal 24- Hour	San Pablo	-	-	-
		Vallejo	4	7	5

Source: Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2010.

(<http://www.arb.ca.gov/adam/cgi-bin/adamtop/d2wstart>)

Sensitive Receptors. The Bay Area Air Quality Management District defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill, and the chronically ill) are likely to be located. These land uses include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics.

Impacts and Mitigation Measures from Previous EIRs

Impacts and mitigation measures included in previously certified CEQA documents are listed below:

Hercules New Town Center EIR. The New Town Center identified several potentially significant air quality impacts and mitigation measures, as follows:

- There would be short-term air quality impacts associated with site preparation and construction associated with future development. Mitigation Measures AQ1 and AQ2 require a number of specific measures to minimize fugitive dust emissions. Mitigation Measure AQ3 requires future contractors to adhere to Bay Area Air Quality Management District standards with respect to use and application of exterior coatings and paints. Taken together, conformance with the three measures reduces this impact to a less than significant level.
- Operation of project improvements would result in air quality emissions, including emissions from both stationary and mobile sources. Although Mitigation Measure AQ4 would partially reduce this impact, long-term operational impacts would remain significant and unavoidable. Mitigation Measure AQ4 requires future individual development projects to incorporate features to reduce operational emissions, such as solar or low-emission water heaters, use of EnergyStar appliances and low-flow appliances. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.
- Cumulative build-out of the proposed New Town Center would conflict with the local air quality management plan. This was determined to be a significant and unavoidable impact. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.
- Regional air emissions resulting from operation of the proposed project could impact regional air quality on a cumulative basis. Adherence to Mitigation Measure AQ4 partially but not fully mitigated this impact, but not to a less-than-significant level, so that this impact would remain significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.

Updated 2009 Redevelopment Plan EIR. This EIR identified several potentially significant air quality impacts and mitigation measures, as follows:

- Impact AQ-1 identified an impact with respect to a conflict with and an obstruction to implementing the local air quality plan since there would be a population increase with the proposed project that was not reflected in the local air quality plan. Mitigation Measure AQ-1 required the City to provide updated population projections to the Bay Area Air Quality Management District to be included in future regional projections; however this impact would remain significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.
- Impact AQ-2 noted that demolition or construction activities facilitated by the proposed project could generate construction-related exhaust emissions and fugitive dust that would affect local air quality.

Adherence to Mitigation Measure AQ-2 reduces this impact to a less-than-significant level by requiring adherence to BAAQMD dust and construction emissions requirements.

- Impact AQ-3 noted that demolition or construction activities facilitated by the proposed project could generate construction-related exhaust emissions and fugitive dust that would affect local air quality. Adherence to Mitigation Measure AQ-2 reduces this impact to a less-than-significant level by requiring adherence to BAAQMD dust and construction emissions requirements.
- Impact AQ-5 found that development facilitated by the 2009 Redevelopment Plan would result in the emission of new air pollutants into the air basin. These emissions would exceed the standards of significance for regional pollutants. Mitigation Measures 5a and 5b requires future individual developers to adhere to BAAQMD measures to reduce vehicle and stationary emissions; however, even with implementation of these measures Impact AQ-5 would remain significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.
- Impact AQ-8 found that emissions of PM₁₀ would result in a cumulatively considerable increase into the environment, which would increase pollutants into a non-attainment area. Although Mitigation Measures AQ-5 would partially reduce cumulative emissions, this impact would remain significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.

Bayfront Project EIR. The following potentially significant air quality impacts and mitigation measures were identified in this EIR, as follows:

- Impact 5-1 identified construction-related air quality impacts from construction equipment exhaust and from fugitive dust generated by grading activities. Mitigation Measure 5-1 will reduce this impact to a less-than-significant level by requiring adherence to BAAQMD methods for construction-related impacts.
- Impact 5-2 identified long-term regional emission impacts from project build-out that would exceed standards for reactive organic gases and oxides of nitrogen. Even with adherence to Mitigation Measure 5-1 that requires implementation of a transportation management plan, use of energy efficient facilities and other requirements, this impact was found to be significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.

Project Impacts

- a) **No Impact.** Residential dwellings identified in the draft Housing Element, including transitional and supportive housing units, are included within the Hercules General Plan and current land use projections prepared by the Association of Bay Area Governments (ABAG), which are used for air quality emissions included in the Bay Area Air Quality District's Clean Air Plan.

The 2009 Updated Redevelopment Plan EIR found that residential development associated with the project would have a significant and unavoidable impact with respect to a conflict with the BAAQMD regional air quality plan and a Statement of Overriding Considerations was approved by the City of Hercules when certifying this EIR. The Bayfront EIR did not identify any conflicts with the Clean Air Plan for this project.

No significant impacts would result with respect to conflicts to or obstructions of the Clean Air Plan should the draft Housing Element be adopted by the City of Hercules.

- b,c) **Less than Significant Impact.** Previous EIRs that include housing opportunity sites identified significant and unavoidable impacts with respect to air quality violations for which a Statement of Overriding Consideration was adopted. In certifying the Updated 2009 Redevelopment Plan EIR, the Bayfront Project EIR, and the New Town Center EIR, Statements of Overriding Considerations were adopted for project and cumulative air quality emissions. Impacts of constructing future dwellings included in the draft Housing Element have been analyzed in previous CEQA documents identified in the Earlier Analysis section of this Initial Study, and no new analysis is required. All air quality Mitigation Measures contained in previous CEQA documents will continue to apply to future residential construction occurring in each of the identified housing sites so that these potential impacts would be less-than-significant. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.

- d) **Less than Significant Impact.** New dwelling units facilitated by the draft Housing Element could be occupied by sensitive receptor populations (senior citizens, chronically ill individuals, etc.). Future individual housing projects located near sources of major pollutants (such as freeways, arterial roadways, and similar generators) will be reviewed to ensure that: a) the location of housing on individual sites will minimize air quality impacts to sensitive receptors, and b) appropriate on-site pollutants control features, such as air conditioning systems, will be included with such housing developments. This review will take place as part of the normal and customary City of Hercules review process, including but not limited to conditional use permits and Planned Development Plans. Overall, impacts associated with this topic are expected to be less-than-significant.

- e) **No Impact.** The project would not result in new land uses that would emit objectionable odors, since the project involves future residential development. No impacts are therefore anticipated.

4.4 Biological Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Environmental Setting

Biological communities. Housing opportunity sites identified in the draft Housing Element contain a variety of biological communities, including but not limited to non-native grasslands, disturbed scrublands, intermittent stream/riparian, and wetlands.

Special Status Plants and Wildlife Species. The Updated 2009 Redevelopment Plan, Bayfront Project, and New Town Center EIRs identify a number of potentially occurring special-status plant and wildlife species listed by state and/or federal agencies that could occur on a number of identified housing sites.

These include:

- Bent-flowered fiddleneck
- Fragrant fritillary
- Diablo helianthella
- Contra Costa goldfields
- San Joaquin spearscale
- Congdon's Tarplant
- * Mt. Diablo fairy-lantern
- Santa Cruz tarplant
- Delta tule pea
- Mason's lilaepsis
- Rayless ragwort

Special-Status wildlife and birds

- Monarch butterfly
- Great blue heron
- White-tailed kite
- Northern harrier
- Long-billed curlew
- Loggerhead shrike
- Salt marsh common yellowthroat
- Pallid bat
- California red-legged frog

Seasonal wetlands. A number of seasonal and freshwater marsh habitat areas have been documented to exist on a number of potential housing sites.

Regulatory Framework

Federal Species Protection. The federal Endangered Species Act (FESA) protects listed species from harm or "take," which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that results in death or injury to a listed species. An activity can be defined as a "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife

species. Listed plant species are legally protected from take under FESA, if they occur on federal lands or if the project requires a federal action, such as a wetland fill permit.

Migratory Bird Treaty Act. In addition to FESA, the federal Migratory Bird Treaty Act (16 U.S.C., Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Most native bird species on the project site are covered by this act.

California Endangered Species Act. The California Endangered Species Act (CESA) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, California Department of Fish and Game (CDFG) has jurisdiction over state-listed species (California Fish and Game Code 2070).

California Species of Special Concern. Additionally, the CDFG maintains lists of “species of special concern” that are defined as species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. Pursuant to the requirements of CESA, a state agency reviewing a proposed project within its jurisdiction must determine whether any state-listed or proposed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species.

Clean Water Act. Under Section 404 of the federal Clean Water Act, the U.S. Army Corps of Engineers (Corps) is responsible for regulating the discharge of fill material into waters of the United States (U.S.). Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed “isolated wetlands” and, depending on the circumstances, may not be subject to Corps jurisdiction.

California Water Quality and Related Programs. Pursuant to Section 401 of the federal Clean Water Act and the state’s Porter-Cologne Act, projects that are regulated by the Corps must obtain water quality certification from the Regional Water Quality Control Board (RWQCB). This certification ensures that the project will uphold state water quality standards. The RWQCB may impose mitigation requirements even if the Corps does not.

The CDFG also exerts jurisdiction over the bed and banks of watercourses and waterbodies according to provisions of Sections 1601 to 1603 of the Fish and Game Code. The Fish and Game Code requires a Streambed Alteration Permit for the fill or removal of material within the bed and banks of a watercourse or body of water.

California Native Plant Society List. The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed lists of special-status plant species of concern in California. Vascular plants included on these lists are defined as follows:

- List 1A Plants considered extinct.
- List 1B Plants rare, threatened, or endangered in California and elsewhere.
- List 2 Plants rare, threatened, or endangered in California but more common elsewhere.
- List 3 Plants about which more information is needed - review list.
- List 4 Plants of limited distribution - watch list.

Although the CNPS is not a governmental regulatory agency and plants on these lists have no formal regulatory protection, plants appearing on List 1B or List 2 are, in general, considered to meet CEQA's Section 15380 criteria and adverse effects to these species are considered "significant."

Hercules General Plan. The Open Space and Conservation Element of the Hercules General Plan contains several policies with respect to the protection of biological resources:

The City shall require project proponents to design construction footprints to avoid wetlands and provide buffer zones around wetlands. If avoidance is not possible, projects shall be redesigned so as to impact the least amount of wetlands. Any areas that are classified as wetlands and will be affected by wetlands shall be re-created either on or off site in accordance with the California Department of Fish & Game and Corps of Engineers (*Policy 2a*).

Design of building footprints along any riparian corridor shall be outside the Department of Fish & Game and Corps of Engineers pre-approved buffer zone. Sensitive riparian habitats shall be marked by a qualified biologist to deter any destruction by equipment during construction (*Policy 3a*).

Protect riparian and wetland habitat communities from degradation through introduction of urban pollutants in stormwater runoff (*Policy 4a*).

The City shall review development proposals for consistency with minimizing impacts to salt marsh zones. Buildings shall be located on existing developed or graded areas, where practicable (*Policy 5a*).

The City shall continue to utilize environmental review under CEQA to review development projects that are not exempt from the CEQA Guidelines for impacts on sensitive species and their habitats (*Policy 6a*).

The City shall require that development within the General Plan area incorporate features to preserve habitat for sensitive species (*Policy 6b*).

As much open space as possible within sites proposed for development shall be retained as informal open space for wildlife habitat, rather than as formal, landscaped parks or grounds. The City shall require that native plants from the local area be used in landscaping and in areas with a lower water table, native drought tolerant species shall be used in landscaping (*Policy 6c*).

Impacts and Mitigation Measures from Previous EIRs

Impacts and mitigation measures included in previously certified CEQA documents that are listed below.

Hercules New Town Center EIR. The New Town Center identified several potentially significant biological resource impacts and mitigation measures, as follows:

- Future development consistent with the New Town Center plan could have a substantial effect, either directly or indirectly through habitat modification on candidate, special-status, and/or sensitive species, including state and federally listed species. The EIR includes five measures that reduced this impact to a less-than-significant level, including conducting pre-construction surveys for California red-legged frog species and implementation of appropriate mitigation if such species are found (BIO1), limiting mass grading between April 1 to October 31 to avoid impacts to dispersing frogs during the rainy season (BIO2), constructing an exclusion fence to protect aquatic habitat and any construction area along with one-way openings out of

construction areas (BIO3), adherence with C.3 water quality standards (BIO4), and conducting pre-construction surveys for nesting birds and bats if construction would occur during respective breeding seasons (BIO5).

- Development of the New Town Center project could have a substantial adverse impact on state and federally protected wetlands, riparian areas, and associated policies and regulations protecting such wetland resources. Adherence to Mitigation Measure BIO6 requires 1:1 replacement ratio for lost or filled wetlands, as well as a mitigation plan if replacement wetlands are to be created. This mitigation also requires performance criteria for replacement wetlands and a monitoring and maintenance plan. BIO7 requires planting of replacement vegetation at a 2:1 ratio within the planning area or at a 3:1 ratio if off-site. A Mitigation Plan is also required be developed for replacement plantings. With adherence to these measures, impacts to wetlands and riparian areas were found to be less-than-significant.

Updated 2009 Redevelopment Plan EIR. This EIR identified several potentially significant air quality impacts and mitigation measures, as follows:

- Impact BIO-1 identified potential impacts with respect to sensitive habitats and natural communities, including riparian habitats, intermittent drainages and freshwater emergency wetlands. Adherence to Mitigation Measures BIO-1a through 1d reduces this impact to a less-than-significant level. These measures require contact with the US Army Corps of Engineers to obtain a jurisdictional wetland determination (Mitigation Measure BIO-1a), contacting the California Department of Fish & Game to determine wetlands under state jurisdiction and determine an appropriate setback from identified wetland areas (Mitigation Measure BIO-1b), securing approval from the appropriate regulatory agency for any encroachments into wetland buffer areas (Mitigation Measure BIO-1c), and ensuring that any project fencing complies with state and federal biological regulatory agency requirements (Mitigation Measure BIO-1d).
- Impact BIO-2 noted a potentially significant impact with respect to candidate, sensitive and other special-status species, as identified on plans and policies adopted by various regulatory agencies. Adherence to Mitigation Measures BIO-2a through 2c reduces this impact to a less-than-significant level. These measures require focused surveys for special-status plants if grading is to occur between April and May (Mitigation Measure BIO-2a), conducting focused surveys for monarch butterflies, salt marsh common yellowthroat, and raptor species in the project area (Mitigation Measure BIO-2b), and preparing landscape plans for manufactured slope areas that include any region-specific plants and designed to encourage habitat value (Mitigation Measure BIO-3c).
- Impact BIO-3 identified an impact with respect to an inconsistency between the project plans and General Plan policies and the City's tree preservation ordinance. Adherence to Mitigation Measures BIO-3, requiring conformance with the City's Tree Ordinance, will reduce this impact to a less-than-significant level.
- Impact BIO-4 identified a cumulative impact on biological resources. Adherence to Mitigation Measures BIO-1 through BIO-3 will reduce this impact to a less-than-significant level.

Bayfront Project EIR. This EIR identified several potentially significant air quality impacts and mitigation measures, as follows:

- Impact 6-1 found an impact with respect to special-status bird species, including destruction of nests adjacent to Refugio Creek and loss of habitat for a number of special-status bird species. Adherence to Mitigation Measure 6-1 will reduce this impact to a less-than-significant level by limiting construction periods to prohibit construction periods or providing adequate buffer areas adjacent to inhabited nests.
- Impact 6-2 identified an impact with respect to inadvertent “take” of special-status mammal species during construction, including the salt marsh wandering shrew and the San Pablo vole. Adherence to Mitigation Measure 6-2 will reduce this impact to a less-than-significant level by conducting pre-construction surveys and relocating any species to a suitable alternative habitat prior to construction.
- Impact 6-3 found an impact with the possibility of inadvertent take of vernal fairy shrimp. Adherence to Mitigation Measure 6-3 reduces this impact to a less-than-significant level by requiring pre-construction surveys for vernal fairy shrimp and, if found, implementing avoidance or other measures to protect this species per USFWS requirements.
- Impact 6-4 found an impact with the possibility of inadvertent take of steelhead, western pond turtle, or California red-legged frog. Adherence to Mitigation Measure 6-4 will reduce this impact to a less-than-significant level by requiring pre-construction surveys for these species, and if found, implementing avoidance or other measures to protect this species per USFWS requirements.
- Impact 6-5 found an impact with the possibility of loss of roosting habitat for special-status bats. Adherence to Mitigation Measure 6-3 reduced this impact to a less-than-significant level by requiring pre-construction surveys for roosting bats and, if found, implementing a minimum 200-foot wide buffer adjacent to bat roosts until the roosts are vacated.
- Impact 6-6 found an impact with the potential loss of sensitive marsh habitat communities including two federally and state list special-status species. Adherence to Mitigation Measure 6-6 reduces this impact to a less-than-significant level.
- Impact 6-7 identified an impact with respect to loss or modification of jurisdiction wetlands or other waters as a result of project construction. Adherence to Mitigation Measure 6-7 reduced this impact to a less-than-significant level by requiring avoidance of wetland areas or, if avoidance is not feasible, providing suitable replacement wetlands in project open space areas.
- Impact 6-8 noted that project landscaping could include invasive plant species. Adherence to Mitigation Measure 6-8 reduced this impact to a less-than-significant level by implementing specific methods to minimize inadvertent spread of non-native, invasive plant material.

Project Impacts

- a) **Less than Significant Impact.** Future housing projects that could be constructed in the City of Hercules pursuant to the draft Housing Element are subject to policies contained in the Open Space

and Conservation Element of the General Plan. This Element contains policies to protect stream corridors, wetlands and riparian vegetation, wildlife habitat and sensitive plant and wildlife species.

Developers of future housing projects on sites identified in the draft Housing Element as well as future transitional and supporting housing units are also required to comply with the Mitigation Measures contained in the 2009 Updated Redevelopment Plan EIR, the Bayfront Project EIR, and the Hercules New Town Center EIR, as applicable to each respective site, to minimize impacts to candidate, sensitive, and other special-status species. Impacts to candidate and special-status species would be less-than-significant.

- b, c) **Less than Significant Impact.** Future development on a number of the identified housing sites could result in fill of a limited amount of wetlands and loss of some riparian habitat. Adherence to wetland and riparian protection mitigation measures contained in the Updated 2009 Redevelopment Plan EIR, the Bayfront Project EIR, and the New Town Center EIR, as well as wetland protection policies contained in the Open Space and Conservation Element of the Hercules General Plan will ensure that impacts to wetlands and riparian resources will be less-than-significant.
- d) **Less than Significant Impact.** Adherence to adopted Mitigation Measures identified for applicable certified EIRs in the Environmental Setting section and resource protection goals contained in the Open Space and Conservation Element of the General Plan reduces any impacts related to movement of fish or wildlife species to a less-than-significant level.
- e, f) **No Impact.** No Habitat Conservation Plans or Natural Community Conservation Plans have been established in the City of Hercules. Future development that could be facilitated by the proposed Project is required to comply with all City ordinances and requirements protecting biological resources, including impacts to heritage trees. No impacts would therefore result. None of the identified housing sites are located within the boundaries of any Habitat Conservation Plan or Natural Community Conservation Plan area and no impact is anticipated.

4.5 Cultural Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Prehistoric Resources. Based on background information contained in the Hercules General Plan, prehistoric sites within western Contra Costa County are typically found near the edge of historic San Pablo Bay margins, on valley and midslope terraces, and in hilly areas on terraces near seasonal watercourses.

Numerous aboriginal village and camp sites have been uncovered in the bay margins. Hercules has one confirmed prehistoric site (CA-CCO-370) and one unconfirmed site (CA-CCO-248), both of which are located west of the I-80 freeway.

Historic Setting. In the early to mid-1800s, the area now known as Hercules was part of a Spanish land grant called Rancho El Pinole. In the late 1800s much of this land was purchased by the California Powder Works as a site for the production of dynamite. The Town of Hercules was incorporated in 1900 as the company town.

In 1917, Hercules Incorporated became the largest producer of dynamite in the United States, and operations encompassed approximately 3,000 acres of land.

During the 1960s the plant transitioned from dynamite to fertilizer production and much of the land was sold off to private builders and developers. The plant closed in the late 1970s.

As the plant was closing, suburban housing development began creating the community known today.

A number of older company buildings and Victorian-style homes remain from earlier times, including the former company headquarters and a number of company-owned homes.

Impacts and Mitigation Measures from Previous EIRs

Impacts and mitigation measures included in previously certified CEQA documents that are listed below:

Hercules New Town Center EIR. The New Town Center EIR identified several potentially significant impacts with respect to disturbance or destruction of prehistoric resources, paleontological resources, human remains and/or historic resources. Adherence to Mitigation Measure CUL1 reduced this impact to a less-than-significant level. This measure requires that, during the construction process, a project sponsor shall retain a qualified archeologist to train construction crews to identify cultural resources. In the event cultural resources are found, work shall be stopped and the archeologist shall consult with the City to determine the best treatment for such resources. In the event human remains are found, the County Coroner is to be called. If remains are believed to be of Native American ancestry, the Native American Heritage Commission is to be contacted. All recovered materials are to be subject to scientific analysis, professional museum curation and reporting.

Updated 2009 Redevelopment Plan EIR. This EIR identified several potentially significant cultural resource impacts and mitigation measures, as follows:

- Impact Cult-1 stated that the proposed project could cause a substantial adverse change in the significance of archeological resources pursuant to Section 15064.5 of the CEQA Guidelines. Adherence to Mitigation Measure CUL-1 requires that if prehistoric or unique archeological resources are discovered during construction of future projects, work within a 50-foot radius of the discovery shall be halted until a qualified archeologist evaluates the find and determines proper protection measures. Work within the 50-foot radius of the find shall be halted until the archeologist states in writing that continuing work would not result in a significant effect on such resource and the City concurs.
- Impact Cult-2 identifies that the proposed project could potentially destroy unknown unique paleontological resources within the project area. Adherence to Mitigation Measure CUL-2 reduced this impact by requiring review of individual development proposals in the 2009 Redevelopment Plan to determine the potential for deposits of paleontological resources on each site. For sites identified as having sensitivity to such resources, a paleontological monitoring program shall be implemented prior to grading operations. If necessary, the program may require maintenance of daily field logs, recovery of soil samples, and the ability to remove resources as needed. A photo log of grading operations of the site must also be kept. If significant paleontological resources are found, the monitor shall have the authority to halt operations that affect such resources.
- Impact Cult-3 identified an impact with respect to disturbance of unidentified human remains, including those interred outside of formal cemeteries. Mitigation Measure CUL-3 requires construction work on individual project sites to be suspended if human remains are found. Then, the Hercules Public Works Department and County Coroner shall be notified. If remains are determined to be of Native American origin, the Native American Heritage Commission shall be notified within 24 hours.

Bayfront Project EIR. This EIR identified several potentially significant cultural resource impacts and mitigation measures, as follows:

- Impact 8-1 identified an impact with disturbance of archeological resources on the project site. Adherence to Mitigation Measure 8-1 reduced this impact to a less-than-significant level by requiring future developers in the Bayfront area to retain a qualified archeologist in the event of discovery of unrecorded historic resources and, if possible, preserving the site. If preservation is not possible, a data recovery plan shall be submitted and approved by the City and then implemented by the developer.
- Impact 8-2 noted an impact with respect to destruction or degradation of two identified historic resources with construction of planned project improvements. Adherence to Mitigation Measure 8-2 reduced this impact to a less-than-significant level by requiring future developers to renovate structures in a manner consistent with Secretary of Interior standards and incorporate historic structures into the ultimate development of the project.

Regulatory Framework

Hercules General Plan. The Land Use Element of the General Plan contains Objective 8, which reads: "Preserve Hercules history while developing its future."

The Open Space and Conservation Element contains the following objective and policy with respect to the protection of cultural resources:

- Protect and preserve important historic and prehistoric resources (*Objective 12*).
- Historic resources shall be identified and preserved to the extent feasible. If previously unknown subsurface resources are discovered during excavation, excavation would be temporarily halted and an archeologist consulted as to the importance of the resource. (*Policy 12a*).

Project Impacts

- a) **Less than Significant Impact.** A majority of the identified housing sites do not contain historic resources. If historic resources are encountered as a result of future construction of dwellings and associated housing units under the auspices of the updated Housing Element, mitigation measures contained in certified CEQA documents for each of the sites reduce this impact to a less-than-significant level. Future housing developments will also be required to adhere to applicable Objectives and Policies of the Hercules General Plan to protect significant historic resources.
- b-d) **Less than Significant Impact.** Future housing developments in the City of Hercules that could be facilitated as a result of the updated Housing Element are required to comply with mitigation measures contained in certified EIRs that cover identified housing sites and appropriate General Plan objectives and policies to ensure impacts to archeological, Native American, and paleontological resources and human remains will be less-than-significant.

4.6 Geology and Soils

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Geologic conditions. The Hercules planning area is located in the Coast Range geomorphic province of California, which is characterized by a series of parallel, northwesterly trending and faulted hills and valleys. Local geology consists of a mix of alluvial deposits in lower elevations caused by stream erosion and sedimentary rocks within higher elevations.

Seismicity. The San Francisco Bay area, within which Hercules is located, is one of the most seismically active areas in the United States. Major regional faults include Hayward, Rodgers Creek, Calaveras, San Andreas, and San Gregorio Faults. The United States Geological Survey (USGS) Working Group on California Earthquake Probabilities estimated a 62% probability of one or more earthquakes of Richter magnitude 6.7 or greater occurring in the Bay Area between 2003 and 2032.

No properties within Hercules are located within an Earthquake Fault Zone as defined by the Alquist-Priolo Act.

Environmental effects associated with seismic activity include:

- Surface fault rupture, which involves cracks or chasms on the ground surface caused by seismic activity. The risk of surface fault rupture in the Hercules planning area is considered low due to the absence of active faults.
- Ground shaking is the violent shaking of the ground surface during a seismic event. In general, the greater the distance from a seismic epicenter, the less intensity of ground shaking that could be expected. The effects of ground shaking include damage to structures, roads, utility facilities, and other infrastructure.
- Liquefaction is a phenomenon in which saturated, cohesionless soil experiences temporary loss of strength due to the buildup of water pressure induced by a seismic event. Generally, soils susceptible to liquefaction are loose, clean, saturated, and fine grained sands located near bodies of water. The effects of liquefaction include collapse of buildings and road improvements.
- Landslides can be triggered by seismic events particularly on steep slopes with a history of soil instability.

Expansive soils. Expansive soil conditions typically occur in soils with high clay content. Typically, these soils swell when moisture is added and shrink under dry conditions. Expansive soils can damage building foundations and underground utilities.

Soil erosion. Unprotected soils are subject to erosion caused by wind or water action.

Impacts and Mitigation Measures from Previous EIRs

Impacts and mitigation measures included in previously certified CEQA documents are listed below.

Hercules New Town Center EIR. The New Town Center EIR identified two potentially significant impacts with respect to geology and soils:

- Exposure of people or structures to risk of loss, injury, or death involving strong seismic shaking or seismic related ground failure. Adherence to Mitigation Measure GS1 reduces this impact to

a less-than-significant level. This measure requires completion of geotechnical investigations for individual development projects. Such investigations include subsurface testing and laboratory analysis. Recommendations made in such investigations shall be implemented in final building plans, grading, and other construction designs.

- Development that could occur under the New Town Center Plan and associated zoning could be located on expansive soil creating a potential risk to life and property. Adherence to Mitigation Measure GS2 reduces this impact to a less-than-significant level by requiring that contractors for future development proposals test for moisture conditions prior to grading, place non-expansive fill below building slabs, and/or design building foundations to resist soil movement associated with expansive soils.

Updated 2009 Redevelopment Plan EIR. The Updated 2009 Redevelopment Plan EIR identified two potentially significant geology and soils impacts and mitigation measures, as follows:

- Impact GEO-1 found that the proposed project could expose people and structures to substantial adverse effects related to seismic groundshaking. Adherence to Mitigation Measure GEO-1 requires the preparation of site-specific geotechnical investigations for any new development located in the Updated 2009 Redevelopment Plan area. Each report shall conform to current building code requirements. Structures for human habitation shall be designed to meet appropriate standards contained in the California Building Code.
- Impact GEO-2 identified a potentially significant impact related to exposure of people and structures to seismic-related liquefaction or landslides. Adherence to Mitigation Measures GEO 2a and 2b reduces this impact by requiring individual, site-specific geotechnical reports for site preparation, grading, retaining walls, and building foundations. The project proponent of the Hill Town development is required to form a Geologic Hazard Abatement District for the purpose of carrying out monitoring of geological hazards and identifying site-specific measures to reduce such hazards.

Bayfront Project EIR. This EIR identified several potentially significant geology and soil impacts and mitigation measures, as follows:

- Impact 9-1 identified an impact regarding potentially significant effects of ground shaking on project improvements during seismic events. Adherence to Mitigation Measure 8-1 reduces this impact to a less-than significant level by requiring future developers to prepare detailed, design-level geotechnical investigations to assess the risk of seismic activity and related soil hazards. Recommendations included in such reports shall be included in construction plans and specifications.
- Impact 9-2 identified an impact concerning the possibility of landslide, slope stability, and erosion hazards with project construction. Adherence to Mitigation Measure 9-1 reduces this impact to a less-than significant level as noted above.
- Impact 9-3 identified an impact related to the presence of expansive soils on the site. Adherence to Mitigation Measure 9-1 reduces this impact to a less-than significant level as noted above.

- Impact 9-4 found that project grading, changed drainage patterns, and installation of project landscape irrigation could impact existing groundwater flow in the area, resulting in slope instability. Adherence to Mitigation Measure 9-1, requiring a detailed design-level geotechnical investigation reduces this impact to a less-than significant level, as noted above.

Regulatory Framework

Hercules General Plan. The Safety Element of the General Plan contains Policy 2D regarding geologic hazards. This Policy reads:

The administration of subdivision and grading ordinances should allow for flexibility in the review and approval of construction plans to permit sound engineering design in the solution of specific geological problems. Site-specific geotechnical investigations shall be required for every new development.

Project Impacts

- a) **Less than Significant Impact.** The proposed project would facilitate construction of new dwellings and other housing facilities through implementation of the updated Housing Element. Potential impacts related to soil and geologic impacts on future residential construction would be reduced by adherence to the Safety Element of the Hercules General Plan, which addresses impacts related to geological issues, including groundshaking, ground rupture, and related soil-based hazards, such as differential settlement, liquefaction, and landslides.

All future housing projects constructed pursuant to the updated Housing Element are required to comply with the Safety Element of the General Plan to obtain site-specific geotechnical investigations as required by mitigation measures set forth in the Hercules New Town Center, Bayfront Project, and Updated 2009 Redevelopment Plan EIRs for these respective project areas. Adherence to these Mitigation Measures, identified above in the Environmental Setting Section, reduces this impact to a less-than-significant level.

- b) **Less than Significant Impact.** Although new housing structures could be constructed in the community pursuant to the updated Housing Element of the General Plan, adherence to Best Management Practices (BMPs) as required by the City of Hercules to implement the City's NPDES permit as part of normal and customary review of individual residential development projects will ensure less-than-significant impacts regarding substantial soil erosion or loss of topsoil. These BMPs typically include but are not limited to installation of silt fences, sandbags, and similar measures to minimize substantial erosion and loss of topsoil. Future housing developments will also be required to comply with applicable mitigation measures set forth in certified EIRs on identified housing sites.
- c-d) **Less than Significant Impact.** Adherence to the Safety Element of the Hercules General Plan and mitigation measures for future site-specific housing sites as identified in the Environmental Setting Section, will ensure that impacts related to unstable soils, liquefaction, lateral spreading, landslide, and other soil hazards for future construction will be less-than-significant.
- e) **No Impact.** All new housing projects are required by the City of Hercules to connect to the local sewer system, maintained by the East Bay Municipal Utility District (EBMUD). No impacts would therefore result with regard to septic systems or alternative wastewater disposal systems.

4.7 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as a driving force for global climate change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and anthropogenic activities that alter the composition of the global atmosphere.

California State law defines greenhouse gases as:

- Carbon Dioxide (CO₂)
- Methane (CH₄)
- Nitrous Oxide (N₂O)
- Hydrofluorocarbons
- Perfluorocarbons
- Sulfur Hexafluoride

The overall approach to the GHG calculation in this report is based upon the technical advisory of the Governor's Office of Planning and Research (OPR) embodied in the document *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review*. According to the Governor's Office of Planning and Research, the most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide. The last three of the six identified GHGs are primarily emitted by industrial facilities. For this analysis, only carbon dioxide, methane, and nitrous oxide emissions are considered, as described below.

Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 35 percent. Carbon dioxide is the most widely emitted GHG and is the reference gas [Global Warming Potential (GWP) of 1] for determining GWPs for other GHGs.

Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.

Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 310.

Greenhouse Gas Effects. There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming, although there is uncertainty concerning the magnitude and rate of the warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Sources of Greenhouse Gas Emissions. Anthropogenic GHG emissions worldwide as of 2005 totaled approximately 30,800 CO₂ equivalent million metric tons (MMTCO₂E). The United States was the top producer of greenhouse gas emissions as of 2005. The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities.

Regulatory Setting

Federal Greenhouse Gas Regulations. In September 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO₂ per year. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

In April 2009, EPA published its Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act (CAA) (Endangerment Finding) in the Federal Register. The Administrator proposed the finding that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the CAA. The final finding was released on December 7, 2009. The findings do not in and of themselves impose any emission reduction requirements but rather allow EPA to finalize the GHG standards recently proposed for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.

State Greenhouse Gas Regulations. California has adopted several pieces of legislation and the Governor has issued executive orders mandating reductions in greenhouse gasses. These include but are not limited to Assembly Bill 32, Assembly Bill 1493, Senate Bills 1078 and 107, Senate Bill 1368, Senate Bill 375, Senate Bill 97, and several Executive Orders.

Local Greenhouse Gas Regulations. The Bay Area Air Quality Management District (BAAQMD) has established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the Bay Area.

The climate protection program includes measures that promote energy efficiency, reduce vehicle miles traveled, and develop alternative sources of energy, all of which assist in reducing emissions of GHG and in reducing air pollutants that affect the health of residents. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

Project Impacts

a, b) **Less than Significant Impact.** Future housing units that could be built under the updated Housing Element would incrementally increase GHG emissions associated with traffic increases and direct and indirect energy use. This incremental increase would contribute to regional and global increases in GHG emissions and associated climate change effects. However, future development under the updated Housing Element would be proposed by private developers and subject to the City's permitting process and would be reviewed for CEQA compliance at the time of submittal. The City would require GHG reduction features to be incorporated into individual developments at that time, which could consist of installation of energy efficient appliances, additional building insulation, installation of drought tolerant landscaping, and other techniques to reduce GHG increases to a less-than-significant level on a project and cumulative basis.

The City of Hercules and other governmental agencies currently enforce a number of programs and requirements to make development more energy efficient, to provide alternative modes of travel that reduce vehicular traffic, and other similar measures that reduce greenhouse gas emissions. A number of these include:

- Title 24 Building Energy Efficiency Standards and Green Building Standards to maximize building insulation, lighting requirements, and similar standards.
- Appliance Energy Standards adopted by the California Energy Commission to improve heating and cooling appliances used in residential dwellings.
- Transportation energy efficiency standards as required by the City of Hercules, including but not limited to installation of sidewalks, bike lanes, and bus turnouts.
- Water Use Efficiency, which limits use of water for irrigation pursuant to the State's Model Water Efficiency Ordinance.
- The City of Hercules has adopted stringent requirements for recycling of household materials as well as construction debris.

4.8 Hazards and Hazardous Materials

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Soil and/or Groundwater Contamination. A number of housing sites have been identified on the Cortese List (http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm) as possibly containing contaminated soil and/or water conditions. These include but are not limited to:

- Hercules New Town Center site. Parcels within the New Town Center project area include: the Carone Brothers parcel (1350 Bayberry Way), a Caltrans maintenance yard (1369 Willow Way), and others.
- Updated 2009 Redevelopment project area. Numerous investigations undertaken within the Hill Town site have found residue of heavy metals and hydrocarbons.
- Bayfront project site. Much of the site has been remediated from historic activities related to dynamite, black powder and later fertilizer manufacturing although isolated pockets of contaminated material may still exist.

Pipelines. At least one of the proposed housing sites, the Hill Town site, is traversed by an oil pipeline. One of the New Town Center parcels is also traversed by an underground oil pipeline.

Airports and Airstrips. No public or private airports or airstrips exist within or near the Project area.

Wildland Fire. Identified housing sites are all located within urbanized portions of Hercules and have a minimal chance of being subject to a significant wildland fire hazards. As identified in the amendment to the General Plan Safety Element, no Opportunity Site or other residential area within the City is within a Very High Fire Hazard Severity Zone (VHFHZ) as mapped by the California Department of Forestry and Fire Projection (CALFIRE).

Impacts and Mitigation Measures from Previous EIRs

Impacts and mitigation measures included in previously certified CEQA documents analyzing hazards and hazardous materials impacts are listed below.

Hercules New Town Center EIR

- Future development within the New Town Center project area could create a significant hazard to the public through the reasonably foreseeable release of hazardous materials into the environment. Adherence to Mitigation Measures HM1 through HM12 reduces this impact to a less-than-significant level. These measures require additional testing for contaminated materials for a number of parcels within the project area and remediation of hazardous materials if actionable levels of such materials are encountered. Measures HM4 through HM12 deal with future construction activities.
- Development that could occur within the New Town Center zoning district could create a significant hazard to the public or environment due to the presence of a contaminated site within the project area. Adherence to Mitigation Measure HM 7.11 and 12 reduces this impact to a less-than-significant level.

Updated 2009 Redevelopment Plan EIR

- Impact HAZ-1 states that the proposed project could involve hazardous material release during the decommissioning and dismantling of industrial facilities within the Hill Town project area. Adherence to Mitigation Measure HAZ-1a, 1b, and 1c reduces this impact to a less-than-significant level. These measures require additional testing of conditions of petroleum storage tanks and other facilities on the site and require appropriate removal and disposal of such material, if found.
- Impact HAZ-2 identifies a potentially significant impact to the public related to an accidental upset or leak from existing petroleum pipelines through the Hill Town site. Adherence to Mitigation Measures HAZ-2e through 2h reduces this impact by requiring that no buildings be located within pipeline rights-of-way, consultation with the Fire Protection District regarding the adequacy of safety procedures for the pipeline, and future notification of the presence of the pipeline to future residents.
- Impact HAZ-5 notes that site remediation efforts on the Hill Town site could result in a potentially significant impact due to the transport of hazardous material on City streets. Adherence to Mitigation Measure HAZ-6 reduces this impact by requiring that all remediation plans contain detailed transportation plans and that such routes avoid school sites.

Bayfront Project EIR. This EIR identified several potentially significant hazardous materials impacts and mitigation measures, as follows:

- Impact 10-1 stated that the project site and vicinity could contain hazardous materials from previous site uses that could pose a hazard to construction workers, employees, visitors, and future residents. Adherence to Mitigation Measure 10-1 reduces this impact to a less-than significant level by requiring additional site remediation to County, state, and federal standards, if required.

- Impact 10-2 noted a potential impact with respect to asbestos, PCBs and/or mercury. Adherence to Mitigation Measure 10-2 reduces this impact to a less-than-significant level by requiring future site surveys for these contaminants and remediation of any hazards encountered as a result of the survey.
- Impact 10-3 identified an impact with respect to potential exposure of future site occupants and visitors to lead-based paint as a result of building renovations. Adherence to Mitigation Measure 10-3 reduces this impact to a less-than-significant level by requiring safe removal of any lead-based paint in a manner consistent with CalOSHA regulations.

Project Impacts

- a) **No Impact.** Implementation of the proposed Housing Element would not involve any industrial, manufacturing, or similar land uses or activities that would use, generate, transport, or store significant quantities of hazardous materials, although it is likely that future housing projects would use and store normal amounts of yard chemicals, paints, solvents, and similar materials. The intent of the proposed updated Housing Element is to encourage construction of new housing in Hercules. No impact is anticipated with regard to this topic.
- b, c) **Less than Significant Impact.** The proposed project anticipates future residential development which is not expected to create hazardous emissions. As identified in the Environmental Setting section, several candidate housing sites likely contain some level of hazardous materials as a result of existing or previous uses or activities on that site or sites, including the Hill Town site, portions of the Bayfront site, and portions of the New Town Center project area. Future development on these sites will be required to adhere to mitigation measures set forth in previously certified EIRs for these projects that require remediation prior to future housing development. This impact is expected to be less-than-significant.
- d) **Less than Significant Impact.** A number of the housing sites shown on **Exhibit 3** contained in this Initial Study are listed on the California Department of Toxic Substances Control (DTSC) Cortese List of hazardous sites, including portions of the proposed New Town Center. The New Town Center EIR contains Mitigation Measures HM7, 11 and 12 that reduces this impact to a less-than-significant level. The Bayfront Project EIR contains Mitigation Measures 10-1 and 10-2 that require future remediation of any identified hazardous materials identified on this site. Future residential developers on this site will be required to adhere to these measures. Overall, this impact is less-than-significant.
- e, f) **No Impact.** No airports or airstrips are located near Hercules, and no impacts would result with respect to this topic.
- g) **No Impact.** Future housing units constructed as a result of updating the Housing Element will be constructed on private lands and will be reviewed by the Hercules Police Department and Fire District to ensure that no interference with emergency plans would occur. No impacts are anticipated with regard to this topic.
- h) **No Impact.** All proposed housing sites are located within urban areas and are not designated as subject to wildfire hazards, so there would be no impact with respect to wildland fire hazards.

4.9 Hydrology

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Surface water resources. The primary surface water feature in the Hercules planning area is Refugio Creek, a regionally significant perennial creek that, along with several primary tributaries, generally flows westward from the east end of Hercules into San Pablo Bay. A number of smaller unnamed creeks are also located within the Hercules planning area.

Drainage facilities. Stormwater flows from the urbanized portion of Hercules in a westerly direction, towards San Pablo Bay. Stormwater flows within a combination of regional facilities maintained by the Contra Costa County Flood Control District and localized drainage facilities. Generally, developed areas of Hercules are served by drainage facilities while drainage on vacant sites is by sheet flow to local streets.

Flood hazard. Flood Insurance Rate Maps (FIRMs), which are prepared by the Federal Emergency Management Agency (FEMA), identify potential flood zones (Figure S-3). Flood hazards related to storm events generally are described in terms of a 100-year or 500-year flood. A 100-year flood is defined as a major flood event that has a one percent or greater chance of occurring during any one year. Flood hazard planning practices address such storms, as well as 500-year events. These floods are considered severe; however, such flood events can be reasonably predicted and therefore reasonably mitigated. No areas with the City or Sphere of Influence have been identified within 500-year flood hazard areas. However, certain areas of the city (generally adjacent to creeks) have been identified to be within the 100-year flood zones. These areas have a one-percent chance of inundation at varying depths. The lower channel of Refugio Creek has had a history of overflowing. The upper channel is on a slumping of slide slopes. Improvements to the lower channel in recent years have reduced the potential for flooding both upstream and downstream. Approximately 2,500 linear feet of Refugio Creek adjacent

the Bayside subdivision was realigned and restored in 2004. As part of the restoration, the creek was relocated to a new 180-foot wide channel to convey flood flows.

Groundwater recharge areas. The General Plan does not designate any areas of the community for groundwater recharge.

Coastal waters and seiche or tsunami potential. Housing located in the proposed Bayfront development project is located adjacent to San Pablo Bay. Portions of the bayfront area have been identified by the Association of Bay Area Governments (ABAG) as being subject to tsunami effects (source: <http://gis.abag.ca.gov/website/tsunami-map/viewer.htm>).

Impacts and Mitigation Measures from Previous EIRs

Potentially significant impacts and mitigation measures included in previously certified CEQA documents analyzing hydrology impacts are listed below.

Hercules New Town Center EIR

- Future development within the New Town Center project area could alter existing drainage plans within the project area, including stream courses and could also increase the rate or amount of surface runoff in a manner that would result in on- or off-site flooding. Adherence to Mitigation Measure WQ1 reduces this impact to a less-than-significant level by requiring future developers in the New Town Center project to prepare hydrology analyses to ensure that no net increase in stormwater flow into the City's drainage system would occur.
- Development that could occur in the New Town Center zoning district could place future housing within a 100-year flood hazard area, or could impede or redirect flood flows. Adherence to Mitigation Measures WQ2 and WQ3 reduced this impact to a less-than-significant level by requiring future developers of individual projects to submit reports delineating 100-year flood plains near the project site and, if necessary, submitting final development plans demonstrating that finished floor elevations would be at least 1-foot above the 100-year flood hazard area.
- Development proposed in the Market Town project could violate water quality standards and waste discharge requirements. Adherence to Mitigation Measure WQ4 reduces this impact to a less-than-significant level by requiring future Market Town developer(s) to submit a Stormwater Management Plan to the Hercules Public Works Department demonstrating that applicable C.3 water quality standards will be met.
- The proposed Market Town development could create or contribute stormwater runoff that would exceed the capacity of existing and planned drainage systems or could result in substantial sources of polluted runoff. Adherence to Mitigation Measure WQ1 reduces this impact to a less-than-significant level.

Updated 2009 Redevelopment Plan EIR

- Impact Hyd-2 states that the proposed project would alter the drainage pattern of the west branch of Refugio Creek on the Sycamore Crossing site. There could also be potentially significant impacts flooding impacts with respect to proposed drainage facilities as part of

the Hill Town project site. Adherence to Mitigation Measure HYD-2 reduces this impact to a less-than-significant level. This measure requires future developers of the Hill Town and Sycamore Crossing projects to prepare hydrology reports calculating anticipated peak stormwater flows and to identify existing or planned stormwater facilities to accommodate this drainage.

- Impact Hyd-3 identifies a potentially significant impact with respect to placement of housing in a portion of Sycamore Crossing site within a 100-year flood hazard area. This could also redirect floodwater flows. Adherence to Mitigation Measures HYD-3 reduces this impact to a less-than-significant level by prohibiting development in a 100-year flood hazard area. Future developers may be required to obtain Letters of Map Revisions from the Federal Emergency Management Agency (FEMA) to remove affected properties from a flood hazard area by requiring: that no buildings be located within pipeline rights-of-way; consultation with the Fire Protection District regarding the adequacy of safety procedures for the pipeline; and future notification of the presence of the pipeline to future residents.

Bayfront Project EIR. This EIR identified several potentially significant hydrology and water quality impacts and mitigation measures, as follows:

- Impact 11-1 noted that surface water pollutants associated with project grading and construction could significantly degrade waters in Refugio Creek and ultimately into San Pablo Bay. Adherence to Mitigation Measure 11-1 reduces this impact to a less-than-significant level by requiring project compliance with City, regional, and state water quality standards, including preparation of a Stormwater Pollution Prevention Plan (SWPPP), to minimize runoff of polluted runoff into off-site surface waters.
- Impact 11-2 identified an impact with respect to project related dredging on Refugio Creek water quality. Adherence to Mitigation Measure 11-2 reduces this impact to a less-than-significant level by requiring the project applicant to obtain a dredging and disposal permit from the U. S. Army Corps of Engineers. Conditions of permit typically require a sampling plan and removal of polluted sediments from dredge spoils, if any are identified.
- Impact 11-3 stated that on-going operational activities associated with the project could increase the level of contaminants in local waters as a result of stormwater runoff and use of chemicals. Adherence to Mitigation Measure 11-3 reduces this impact to a less-than-significant level by requiring the project applicant to prepare a Stormwater Pollution Prevention Plan.
- Impact 11-4 noted that the proposed project could place housing within a 100-year flood hazard area and could place improvements in a location that would redirect or impede floodwaters. Adherence to Mitigation Measure 11-3 reduces this impact to a less-than-significant level by requiring future project housing to be located a minimum of one foot above the 100-year flood elevation and detailed analyses to ensure that future development does not contribute to downstream flooding.
- Impact 11-5 noted that the proposed construction of the Intermodal Transit Center could exceed the capacity of Refugio Creek to receive increased stormwater flows. Adherence to

Mitigation Measure 11-5 reduces this impact to a less-than-significant level by requiring that Refugio Creek flows be monitored to ensure that future flooding will not be significant.

Regulatory Framework

Contra Costa Clean Water Program. The City of Hercules participates with all of the other incorporated cities in Contra Costa County and the Contra Costa County Flood Control and Water Conservation District in the Contra Costa Clean Water Program. The Clean Water Program holds a joint Municipal NPDES permit from the Regional Water Quality Control Board to comply with the Clean Water Act.

Hercules General Plan. The General Plan contains several policies addressing hydrology and water quality, as follows.

The Growth Management Element contains Performance Standard III.E.7, which reads: "All new structures shall be located outside the Flood Zones A and B, as designated by the Flood Insurance Rate Maps; or insure that the finished floor elevation is at least one foot above the flood elevation as determined by FEMA. Development of any property shall not significantly increase the flooding potential at downstream areas, or otherwise significantly impact or aggravate a flooding problem at downstream properties."

The Seismic Safety/Safety Element contains the following applicable policies:

- Refugio Creek Channel should be improved for existing drainage so that adequate capacity for expected flood flow is provided (*Policy C.2.e.1*).
- The City should develop ordinances and enforcement mechanisms which preserve, develop and maintain existing drainage courses (*Policy C.2.e.2*).
- Review of any significant project proposals for areas which are not presently in flood zones should include an evaluation of increased downstream flows resulting from the project (*Policy C.2.e.3*).
- Finished floor elevations of all developments must be one foot above the 100-year flood elevations prescribed on the Flood Insurance Rate Map (*Policy C.2.3.4*).

Project Impacts

- a) **Less than Significant Impact.** Construction of new dwellings anticipated in the updated Housing Element have been included in the current Hercules General Plan and incorporated into local agency wastewater master planning by the City. The issues of exceeding water quality standards and waste discharge requirements have also been previously analyzed in earlier CEQA documents identified in the Earlier Analysis section of this Initial Study. Implementation of the updated Housing Element would not exceed waste discharge requirements imposed on the City by the Regional Water Quality Control Board. This topic would therefore be less-than-significant.
- b) **No Impact.** Although the construction of additional dwelling units would likely result from updating the Housing Element, the primary source of water to dwellings is imported surface water supplied by the East Bay Municipal Utility District (EBMUD) that does not primarily rely on local groundwater. There would be no impact with lowering of the water table or reducing the amount of groundwater recharge areas.

- c-e) **Less than Significant Impact.** The updated Housing Element would result in construction on currently vacant or underutilized properties. This construction could result in a greater quantity of stormwater runoff as a result of increasing the amount of impervious surfaces. The City of Hercules enforces Best Management Practices (BMPs) included in the Contra Costa Clean Water Plan to minimize siltation and erosion from individual sites. These include both construction and post-construction BMPs, including but not limited to requiring installation of silt fences and straw bales on construction sites and frequent sweeping of parking areas, covering of solid waste dumpsters, and other post-construction measures. Implementation of BMPs is required for all new development, so there would be no significant impacts from altered drainage patterns.

In addition, mitigation measures included in the Bayfront Project EIR, the New Town Center EIR, and the Hercules Updated 2009 Redevelopment Plan EIR require that each of these projects limit polluted stormwater runoff to a less-than-significant level.

- f) **Less than Significant Impact.** The City of Hercules requires all individual development projects, including future housing development projects facilitated as a result of an updated Housing Element, to meet Best Management Practices to ensure that water quality would be protected. Best Management Practices are described above in Section 8c of this Initial Study. A less-than-significant impact is anticipated with regard to this topic.
- g-i) **Less than Significant Impact.** A number of housing sites are located within a 100-year flood hazard area. This includes housing sites within the 2009 Redevelopment Plan area. Adherence to Mitigation Measure HYD-3 reduced this impact to a less-than-significant level. For the Bayfront Project, adherence to Mitigation Measures 11-4 and 11-5 reduces flooding impacts to a less-than-significant level. For other potential developments that could occur as identified in the updated Housing Element, adherence to Policies C.2.e.3 and C.2.e.4 will ensure that housing would not be placed in flood hazard areas. Furthermore, proposed Housing Element Program 1A.7 requires essential public facilities to be placed outside of flood and fire hazard areas, where possible, or to be constructed to prevent damage to those facilities where those hazards may occur. Impacts will be less than significant with implementation of existing and proposed regulatory and policy requirements.

Based on dam inundation maps prepared by the Association of Bay Area Governments, no portions of Hercules are subject to dam inundation (source: <http://quake.abag.ca.gov/dam-failure/>). Overall, impacts related to flooding are anticipated to be less-than-significant.

- j) **Less than Significant Impact.** Impacts related to seiche, tsunami and/or mudflows would be less-than-significant. In terms of tsunami and seiche incidents, many of the potential housing sites are located well inland from any major bodies of water, thus tsunami and seiche impacts would be minimal. For the proposed Bayfront project, future development would be protected by the existing railroad tracks located between the Bayfront project site and San Pablo Bay. Construction on the Bayfront site is also subject to applicable policies contained in the Safety Element that would reduce this impact to a less-than-significant level.

Regarding the potential for mudflows, many of the housing sites are located on relatively flat areas of the community so that no impact would occur with respect to this topic. For potential housing sites located on areas of steeper topography, such as Hill Town, the City of Hercules requires geotechnical studies as a normal and customary part of the development review process to

minimize any significant mudflow impacts. Overall, this impact is anticipated to be less-than-significant.

4.10 Land Use

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Existing uses, General Plan and land use designations for identified housing sites include:

- *Refugio Senior Housing*. This 1.3-acre development site is currently vacant and is planned for Residential Multi-Family/Low Density.
- *Bayfront Project*. The Bayfront project site is currently vacant and is zoned as Historic Town Center.
- *Hilltown*. The Hilltown project site—a former industrial but currently vacant site—is planned and zoned for Planned Commercial–Residential land uses.
- *New Town Center*. This site is partially developed with light industrial uses and the Hercules Transit Center. The Hercules General Plan and zoning ordinance designate this site as New Town Center.

None of the above sites are included within a Habitat Conservation Plan or Natural Community Conservation Plan.

Project Impacts

- a) **No Impact.** Construction of future dwellings and associated housing units, including but not limited to transitional housing, supportive housing, and emergency shelters, under the auspices of an updated Housing Element would proceed based on the Hercules General Plan and other applicable land use regulatory documents and would not physically divide any established communities. No impacts are anticipated.
- b) **No Impact.** The draft Housing Element includes potential housing opportunity sites, as required by the State of California. No amendments are required to the Hercules General Plan and no rezonings are required to allow construction of anticipated dwellings. Future housing developments anticipated in the updated Housing Element may be required to obtain subdivision maps, conditional use permits, building permits, and potentially other permits from the City of Hercules. No impacts are anticipated with respect to this topic.
- c) **No Impact.** No such plan has been adopted within the City of Hercules. There would therefore be no impact to a habitat conservation plan or natural community conservation plan.

4.11. Mineral Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Based on the Open Space and Conservation Map of the Hercules General Plan, no significant mineral resources exist on any of the identified housing sites.

Project Impacts

- a, b) **No Impact.** The General Plan notes no deposits of minerals on any of the housing sites, and thus no impacts would result.

4.12 Noise

Would the project result in:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Noise can be defined as unwanted sound and is commonly measured with an instrument called a sound level meter. The sound level meter "captures" sound with a microphone and converts it into a number called a sound level. Sound levels are expressed in units of decibels (dB).

To correlate the microphone signal to a level that corresponds to the way humans perceive noise, the A-

weighting filter is used. A-weighting de-emphasizes low-frequency and very high-frequency sound in a manner similar to human hearing. The use of A-weighting is required by most local agencies as well as other federal and state noise regulations (e.g., Caltrans, EPA, OSHA, and HUD). The abbreviation dBA is often used when the A-weighted sound level is reported.

Because of the time-varying nature of environmental sound, there are many descriptors that are used to quantify the sound level. Although one individual descriptor alone does not fully describe a particular noise environment, taken together, they can more accurately represent the noise environment. There are four descriptors that are commonly used in environmental studies; the L_{max} , L_{eq} , L_{90} and DNL (or CNEL).

The maximum instantaneous noise level (L_{max}) is often used to identify the loudness of a single event such as a car pass-by or airplane flyover. To express the average noise level, the L_{eq} (equivalent noise level) is used. The L_{eq} can be measured over any length of time but is typically reported for periods of 15 minutes to 1 hour. The background noise level (or residual noise level) is the sound level during the quietest moments. It is usually generated by steady sources such as distant freeway traffic. It can be quantified with a descriptor called the L_{90} which is the sound level exceeded 90 percent of the time.

To quantify the noise level over a 24-hour period, the Day/Night Average Sound Level (L_{dn} /DNL) or Community Noise Equivalent Level (CNEL) is used. These descriptors are averages like the L_{eq} except they include a 10 dBA penalty for noises that occur during nighttime hours (and a 5 dBA penalty during evening hours in the CNEL) to account for people's increased sensitivity during these hours.

In environmental noise, a change in the noise level of 3 dBA is considered a just noticeable difference. A 5 dBA change is clearly noticeable, but not dramatic. A 10 dBA change is perceived as a halving or doubling in loudness.

Existing noise sources

The Noise Element of the Hercules General Plan identifies two major sources of noise in the community. These include:

- Vehicular (mobile) sources. The most significant mobile noise sources include vehicles traversing the I-80 corridor through Hercules, vehicles using State Route 4 and vehicles using San Pablo Avenue between State Route 4, and Sycamore.
- Railroad noise Trains using main rail lines through Hercules generate a significant amount of noise on adjacent properties. Main railroad lines include the Union Pacific tracks along the east side of San Pablo Bay and the BN&SF line through eastern Hercules.

The Noise Element notes that vehicles traversing other roadways in Hercules generate moderate to minor noise levels.

Sensitive noise receptors. Sensitive noise receptors are considered to be residential uses, schools, hospitals, parks, and similar uses.

Airports and airstrips. No public airports or private airstrips are located near the Project area.

Impacts and Mitigation Measures from Previous EIRs

Potentially significant impacts and mitigation measures included in previously certified CEQA documents assessing noise impacts are listed below.

Hercules New Town Center EIR

- Future development within the New Town Center project area could result in temporary noise and vibration levels on adjacent sensitive noise receptors. Adherence to Mitigation Measure NOI1 reduced this impact to a less-than-significant level by requiring future developers in the New Town Center near sensitive noise receptors to undertake a number of noise reduction measures, including but not limited to reducing construction vehicle noise, outfitting construction equipment with mufflers, locating stationary noise sources away from stationary receptors, locating material stockpiles away from sensitive receptors, and identifying a project liaison to resolve any noise complaints.
- Development that could occur under the New Town Center Plan could result in on-site noise levels in excess of City noise standards. Adherence to Mitigation Measures NOI2 and NOI3 reduces this impact to a less-than-significant level by requiring future developers of individual projects adjacent to the I-80 corridor, SR 4, and the Union Pacific Railroad to prepare site-specific acoustic analyses to ensure that interior and exterior City noise standards are met. Adherence to Mitigation Measure NOI6 requires future developers to include sound transmission class specifications for future building construction. Mitigation Measure NOI7 requires residential buildings located along SR 4 and San Pablo Avenue require mechanical ventilation systems to be installed.
- Development proposed in this project area could result in an increase in ambient noise due to generation of on-site stationary noise sources. Adherence to Mitigation Measures NOI4 and NOI5 reduces this impact to a less-than-significant level by requiring future developers to locate mechanical noise sources away from sensitive noise receptor areas and by depressing the elevation of commercial loading docks near residential areas or locating docks in an internal building bay.

Updated 2009 Redevelopment Plan EIR

- Impact Noise-2 found that future residents of the Sycamore Crossing and Hill Town sites would be subject to noise from adjacent roadways and other sources that could exceed State noise compatibility guidelines. Adherence to Mitigation Measures NOI-1 and NOI-2 reduces this impact to a less-than-significant level. These measures require that future developers within the project area prepare design-level noise studies to ensure that future residences will not be subject to noise levels in excess of City indoor and outdoor standards.
- Impact Noise-3 noted that future development in this project area has the potential to temporarily increase noise levels during construction as well as ground vibration. Adherence to Mitigation Measures NOI-3a through 3e reduces this impact to a less-than-significant level by requiring: scheduling of noise-generating activities to limit impacts to sensitive noise receptors; scheduling of construction activities to minimize noise impacts; predrilling of foundation pilings; placement of solid noise barriers near noise receptors if

future noise would exceed 70 dB CNEL; and outfitting internal combustion-powered equipment with mufflers.

Bayfront Project EIR. This EIR identified several potentially significant noise impacts and mitigation measures, as follows:

- Impact 13-1 found an impact with respect to construction period noise. Adherence to Mitigation Measure 13-1 reduces this impact to a less-than significant level by requiring a number of specific noise minimization methods, including but not limited to scheduling of major noise-producing activities during mid-day periods, muffling construction equipment, installation of temporary noise barriers, and appointment of a noise disturbance coordinator.
- Impact 13-2 identified an impact with respect to exposure of future development residents, visitors, and employees to excessive interior noise levels. Adherence to Mitigation Measure 13-2 reduces this impact to a less-than-significant level by requiring site-specific acoustic analysis for future projects in the Bayfront project to ensure that City and state interior noise limits are met.
- Impact 13-3 identified an impact with respect to exposure of future development residents, visitors, and employees to excessive exterior noise levels. Adherence to Mitigation Measure 13-3 reduces this impact to a less-than significant level by requiring that the future retaining wall/noise barrier be constructed to adequately reduce outdoor noise levels. If the retaining wall is not constructed first, to shield other structures from outdoor noise, acoustic analyses are required to identify specific methods to reduce noise to acceptable levels. These measures are to be included in the project.
- Impact 13-4 noted an impact with respect to exposure of future development to excessive groundborne vibration that would exceed standards. Adherence to Mitigation Measure 13-4 reduces this impact to a less-than-significant level by requiring construction techniques for project residences to minimize vibration, including but not limited to restricting span lengths and joist depths and installing vibration-resistant stiffeners.

Regulatory framework

The Noise Element of the City of Hercules General Plan contains guidelines to promote land uses that are compatible with the local noise environment. The Noise Element goals and policies that would apply to this project are as follows:

Appropriate interior noise levels in commercial, industrial and office buildings are a function of the use of space and shall be evaluated on a case-by-case basis. Interior noise levels in offices generally should be maintained at 45 dBA L_{eq} (hourly average) or less (*Policy 1*).

New non-residential land development projects shall meet acceptable exterior noise level standards set forth in Table 1 of the Noise Element. The noise contour map in the General Plan (on file at City Hall) shall be used to screen projects to determine if acoustical studies will be required (*Policy 2*).

Protect existing noise-sensitive land uses from long-term noise impacts generated by new projects. The City shall use the following criteria to judge the significance of long-term noise impacts on existing noise-sensitive land uses:

- Noise level increases resulting from traffic associated with new projects will be considered significant if: (1) the noise level increase is 5 dBA L_{dn} or greater and the future noise level is less than 60 dBA L_{dn} ; or (2) the noise level increase is 3 dBA L_{dn} or greater and the future noise level is 60 dBA L_{dn} or greater.
- Noise levels produced by stationary sources associated with new projects will be considered significant if they exceed the noise level standards set forth in Table 2 of the Noise Element as measured at any affected noise-sensitive land use.
- Noise levels produced by other noise sources (such as ball fields, etc.) will be considered significant if an acoustical study demonstrates that a significant adverse community response would occur. The criteria to judge the significance of the community response would be based on acceptable analysis techniques such as the International Standards Organization's "Assessment of Noise with Respect to Community Response, ISO R-1996-1971" (*Policy 3*).

Noise created by commercial or industrial sources associated with new projects or developments shall be controlled so as not to exceed the noise level standards set forth in Table 2 as measured at any affected residential land use (*Policy 4*).

Project Impacts

- a) **Less than Significant Impact.** Construction of future dwellings in Hercules under the auspices of the updated Housing Element could be located on sites in moderate to high noise level areas of the community, including but not limited to sites adjacent to I-80, SR 4, San Pablo Avenue, and other major roadways. Future housing units on those sites could expose future residents to noise levels in excess of noise standards established in the Noise Element of the General Plan.

Other noise sources in the community include noise from railroad operations and stationary noise sources associated with on-site land uses and activities. Public and private construction projects are also temporary noise sources.

A number of noise Mitigation Measures have been adopted as part of previously certified CEQA documents for development projects that include identified housing sites. These measures, which are described above, will be applied to site-specific housing developments to reduce impacts related to exposure of noise levels above General Plan standards to a less-than-significant level.

- b) **Less than Significant Impact.** For most future housing projects identified in the updated Housing Element, it is unlikely that construction of future housing units allowed under an updated Housing Element would result in significant levels of vibration, since normal construction methods would be used. For the proposed Bayfront project, adherence to Mitigation Measure 13-4 reduces potential impacts related to groundborne vibration to a less-than-significant level. Overall, this impact is expected to be less-than-significant.
- c, d) **Less than Significant Impact.** Future residential development in Hercules resulting from implementation of an updated Housing Element could cause a temporary increase in ambient noise levels as a result of construction activities, including but not limited to demolition of existing structures (if needed), site grading and preparation, and construction activities. Adherence to exterior and interior noise standards established in the Noise Element would reduce permanent

noise impacts from future housing projects on sites identified in the updated Housing Element to a less-than-significant level.

- e, f) **No Impact.** No housing sites are located near a public or private airport, airfield, or airstrip. No impacts are anticipated with respect to this topic.

4.13 Population and Housing

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The City of Hercules is a diverse community, consisting of a mix of residential, commercial, light industrial, research and development, and civic uses, schools, parks, open spaces, and road rights-of-way. The City had an estimated population of 24,060 in 2010 (see Table 1 of the draft Housing Element.)

Regulatory framework

The draft updated Housing Element of the City of Hercules General Plan contains goals to promote stability of existing neighborhoods and the City's resident population. Key goals include:

- Assist in the provision of housing that meets the needs of all socioeconomic segments of the community (*Goal 1.0*).
- Conserve and improve the condition of the existing housing stock, especially affordable housing (*Goal 2.0*).
- Provide suitable sites for housing development which can accommodate a range of housing by type, size, location, price, and tenure (*Goal 3.0*).

Project Impacts

- a) **No Impact.** Residential development that could be facilitated as a result of adopting and implementing an updated Housing Element would not cause substantial population growth in Hercules, since anticipated dwellings are currently included in the Hercules General Plan. Also, any

potential significant growth inducement has been assessed in previously certified CEQA documents for identified housing sites. No impacts are anticipated.

- b,c) **No Impact** Adoption of the updated Housing Element and construction of residences pursuant to the updated Element would likely not displace people and residential dwellings. A majority of the sites are currently vacant or are developed with relatively new housing units. No impacts are anticipated.

4.14 Public Services

Would the project 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:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Public services to the City of Hercules are provided as follows:

- *Fire Protection.* Fire protection services are provided by the Rodeo–Hercules Fire Protection District, an independent district formed in 1937 that provides fire suppression, rescue, emergency medical, and hazardous material response to the City of Hercules and the unincorporated community of Rodeo. The District is headquartered at 1680 Refugio Valley Road in Hercules, which is also the location of Station 76, the closest station to the Project area. Station 76 is staffed by a fire captain, an engineer, and one firefighter/paramedic. The District maintains an automatic aid agreement with the Crockett–Carquinez Fire Protection District to the east.
- *Police Protection.* Police and security protection is provided by the Hercules Police Department, headquartered at the Hercules Civic Center. The Department currently has 20 sworn and 3 unsworn officers on staff.
- *Schools.* Public educational services for residents of the project site are provided by the West Contra Costa County Unified School District. The District provides K–12 educational services for residents of Richmond, El Cerrito, San Pablo, Pinole, and Hercules and some adjacent unincorporated areas.
- *Library Service.* Contra Costa County Library provides library services in the project area. Numerous branch libraries are located in both incorporated cities and unincorporated

communities throughout the County, including the Hercules Library. The library administrative headquarters is located in Pleasant Hill.

- *Maintenance.* Maintenance of local streets, roads, and other governmental facilities are the responsibility of the City of Hercules. Maintenance of I-80 and SR-4 is provided by Caltrans.

Impacts and Mitigation Measures from Previous EIRs

Potentially significant impacts and mitigation measures included in previously certified CEQA documents assessing noise impacts are listed below.

Bayfront Project EIR

- Impact 15-1 identified an impact with respect to parks, recreation facilities, and open spaces. Adherence to Mitigation Measure 15-1 reduces this impact to a less-than-significant level by requiring that the future development plans and/or subdivision maps in the Bayfront project area comply with General Plan policies and standards for the provision of parks and open spaces.

Regulatory framework

The Land Use Element of the City of Hercules General Plan contains policies applicable to public services, as follows:

Refer applicants of new developments to the appropriate school district in order to pay the District's required developer impact fees prior to the building permit issuance for individual projects, as needed and justified, to maintain school performance standards (*Policy 16A*).

Project Impacts

- a) **Less than Significant Impact.** Housing that could be built in Hercules under the auspices of the updated Housing Element would result in an increase in the number of calls for emergency services to the District. The potential for increases in such calls have been analyzed in the previous General Plan EIR and individual EIRs for the New Town Center Project, the 2009 Updated Redevelopment Plan, and the Bayfront Project. No significant impacts with provision of fire protection by the Rodeo-Hercules Fire Protection District were noted, and it is anticipated this impact will be less-than-significant.
- b) **Less than Significant Impact.** Similar to fire service, there would likely be an increase in the number of calls for service to the Hercules Police Department based on an increase in residential development as a result of the updated Housing Element. Anticipated dwelling units that could be built as a result of the proposed Housing Element have been analyzed in the Hercules General Plan EIR and previous certified CEQA documents, and less-than-significant impacts were identified with respect to police protection.
- c) **Less than Significant Impact.** Public educational services in Hercules are provided by the West Contra Costa Unified School District. The District maintains a number of K-12 schools throughout Hercules. There are also a number of private educational facilities in the community. Future residential development that could be facilitated by the updated Housing Element would generate additional school-aged children that would need to be accommodated by local schools, however

new residential development is subject to statutory school impact fees which will provide for new public educational facilities in the community. This impact would therefore be less-than-significant.

- d) **Less than Significant Impact.** Any new public facilities that would be constructed as part of any future housing development would be constructed to City standard so that a less than-significant impact would occur.
- e) **No Impact.** See Section 4.17, below.

4.15 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The City of Hercules maintains a number of neighborhood and community parks in the City. These include:

- Refugio Valley Park
- Ohlone Park and Community Garden
- Woodfield Park and Tennis Courts
- Foxboro Park and Tennis Courts
- Frog Pad Park
- Duck Pond Park
- Railroad Park
- Shoreline Park
- Hanna Ranch Park
- Beechnut Mini-Park
- Bayside Park

In addition, the City of Hercules offers a wide range of recreational programs to community members.

Regional parks near Hercules are provided by the East Bay Regional Park District. The Bay Trail has also been planned adjacent to the waterfront through Hercules.

Regulatory Framework

The Hercules Municipal Code requires new development to pay for the cost of new parks and recreation facilities based on new population added to the community.

Impacts and Mitigation Measures from the Bayfront Project EIR

This EIR identified one impact with respect to parks and recreational facilities as follows:

- Impact 15-1 found that build-out of the project would increase the demand for parks, recreational facilities, and open space. Adherence to Mitigation Measure 15-1 reduces this impact to a less-than-significant level by requiring compliance with City of Hercules park and open space requirements.

Project Impacts

- a, b) **Less than Significant Impact.** Approval and implementation would increase the need for local and regional park and recreational facilities. Future residential projects that could be constructed under the auspices of the updated Housing Element may include on-site recreational facilities, and future housing developers will be required to comply with City requirements mandating construction of private, on-site recreational facilities. Less-than-significant impacts would occur with respect to recreation.

4.16 Traffic and Transportation

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

or safety of such facilities?

Environmental Setting

Major roadways and streets in the Hercules planning area include:

- *San Pablo Avenue* is a north-south arterial roadway with two travel lanes in each direction, as well as Class II bicycle lanes in both directions. San Pablo is a route of regional significance that provides access to commercial, residential, and other uses in Hercules and also provides regional access to and from communities both north and south of Hercules. This roadway provides primary access to and from the Hill Town and Sycamore Crossing housing sites
- *Sycamore Avenue* generally runs in an east-west direction. East of San Pablo Avenue, Sycamore Avenue is a four-lane arterial roadway that provides access to residential and commercial areas in the City of Hercules. ; west of San Pablo Avenue, Sycamore Avenue provides two-lane access (one lane in each direction) to the Bayfront and Sycamore Crossing areas. Class II bicycle lanes are located on both sides of the street east of Refugio Valley Road.
- *Willow Avenue* connects to Sycamore Avenue just north of the BN&SF railroad tracks. Willow Street extends in an east-west direction and has two travel lanes. In this area, Willow Street has no pedestrian or bicycle facilities, except for a sidewalk on one side from Sycamore Avenue to a crosswalk that connects to the Hercules Transit Center. As Willow Street extends of SR-4, there is a pedestrian sidewalk on the north side of the street extending to the I-80 intersection.

Regional access to the Project area is provided by State Route 4 (John Muir Parkway) and Interstate 80 (I-80). SR-4 is a four-lane highway that connects Hercules and I-80 to Franklin Canyon, Martinez, and Interstate 680 to the east. Interstate 80 is a major north-south regionally significant freeway linking the Bay Area to points east. An interchange exists where SR-4 intersects I-80. At SR-4, I-80 is a six-lane facility extending in a north-south direction.

Transit facilities

Bus transit service in the Hercules area is provided by West Contra Costa County Transit (WestCAT). Buses operate weekdays and weekends with limited holiday service.

Impacts and Mitigation Measures from Previous EIRs

Potentially significant impacts and mitigation measures included in previously certified CEQA documents assessing traffic and transportation impacts are listed below.

Hercules New Town Center EIR

- Future development within the New Town Center project area would result in traffic on local intersections, with and without freeway ramp relocations. Adherence to Mitigation Measures TR1 to TR4 reduces this impact to a less-than-significant level. These measures require requiring future developers in the New Town Center to widen Sycamore Avenue and widen existing turn lanes, contribute to signalization of the Willow Avenue/South Bound SR 4 hook ramp intersection and install other improvements at this intersection, and signalize the Willow Avenue/Palm Avenue intersection along with related intersection improvements.

- Development that could occur under the project would increase traffic through local roadway intersections under cumulative (year 2035) conditions. Adherence to Mitigation Measures TR11 through TR13 would partially reduce this impact but not to a less-than-significant level. Mitigation Measures TR11 through TR13 requires future developers of individual projects to install a second EB left-turn from San Pablo Avenue to EB John Muir Parkway as well as to install other traffic improvements as set forth in the Development Fee program. Other mitigation requirements include widening of Willow Avenue and installation of one left-turn and one right-turn lane at the former Market Hall driveway.
- Impacts to multi-modal transit systems were identified as a result of project construction. This impact would be reduced to a less-than-significant impact by requiring future project developers to work with WestCAT to install bus transponders, re-route buses, increase busses on certain routes, and make other public transportation improvements.

Updated 2009 Redevelopment Plan EIR

- Impact Traf-1 found that build-out of the Sycamore Crossing and Hill Town sites would cause unacceptable peak hour level of service at the intersections of San Pablo Avenue/Sycamore Avenue, San Pablo Avenue/Linus Pauling Drive, Willow Avenue at BART Replacement Parking East Driveway, and Sycamore Avenue/South Front Street. Adherence to Mitigation Measures TRAF-1 reduces this impact to a less-than-significant level by requiring future project developers to pay a fair share to fund a number of roadway improvements at key intersections.
- Impact Traf-5 identified an impact with respect to project contribution to cumulative traffic conditions. Adherence to Mitigation Measure TRAF-5 requires project developers to encourage public transit use by future project residents and employers. With adherence to this measure, this impact was found to be less-than-significant.

Bayfront Project EIR. This EIR identified several potentially significant traffic and mitigation measures, as follows:

- Impact 16-1 found that existing plus project traffic would worsen congestion at the I-80 westbound mainline diverge to the John Muir Parkway off-ramp during the AM peak hour. Mitigation of this impact was found to be infeasible, and this impact would be significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.
- Impact 16-2 identified an impact with respect to worsening of intersection operations within the community during both the AM and PM peak hour periods. Adherence to Mitigation Measures 16-2-1 to 16-2-3 would partially reduce this impact to a less-than-significant level by requiring site-specific intersection improvements. Mitigation of the San Pablo Avenue/Sycamore Avenue was found not to be feasible, and this impact was found to be significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.
- Impact 16-3 noted an impact with respect to contribution of project traffic to freeway operations. Mitigation of this impact was found to be infeasible, so this impact was determined to be

significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.

- Impact 16-4 noted an impact in terms of a bicycle lane gap on a portion of John Muir Parkway. Adherence to Mitigation Measure 16-4 reduces this impact to a less-than-significant level by requiring future developers to install improvements to facilitate bicycle traffic in this location.

Project Impacts

- a, b) **Less than Significant Impact.** Impacts of approving the updated Housing Element and ultimately constructing dwelling units identified in the Element have been analyzed in previously certified EIRs, as identified above. Generally, impacts related to local roadways have been found to be less-than-significant with adherence to mitigation measures set forth in the three identified EIRs that address future housing opportunity sites; however, contributions of traffic from future housing projects to local freeway operations were found to be significant and unavoidable in previous EIRs due to the infeasibility of widening or improving freeways to accommodate additional vehicles. A Statement of Overriding Considerations was adopted for this impact due to the benefits of the plan.
- c) **No Impact.** There would be no impact associated with air traffic patterns, since the project involves consideration of an updated Housing Element that would result in the construction of future dwellings.
- d) **No Impact.** Future roadway improvements and driveway improvements will be reviewed by the City of Hercules Public Works Department, Planning Department, and Fire District to ensure that no hazards would be created and no impacts would result.
- e) **No Impact.** Future development that could occur under the auspices of the proposed Housing Element will be reviewed by the City of Hercules Police, Planning, and Public Works Departments and the Rodeo–Hercules Fire Protection District staff to ensure that adequate emergency access will be provided. No impacts are anticipated with respect to this topic.
- f) **No Impact.** Implementation of the proposed Housing Element would not conflict with local or regional plans that support non-automotive transportation modes. As is standard practice with other development proposals, the City of Hercules will require installation of bicycle racks as a condition of approval for future housing developments as well as improvements to facilitate public transportation. No impacts are anticipated with respect to this topic.

4.17 Utilities and Service Systems

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Project area is served by the following service providers:

- *Water supply.* East Bay Municipal Utility District (EBMUD). The District maintains potable water service to a majority of the Project area as well as fire hydrants.
- *Sewage collection and treatment.* Pinole-Hercules Wastewater Treatment Facility.
- *Storm drainage.* Sheet flow drainage into Refugio Creek tributaries.
- *Solid waste service.* Richmond Sanitary Service (RSS) provides residential and non-residential solid waste hauling and recycling services to dwellings and businesses.

Impacts and Mitigation Measures from Previous EIRs

Potentially significant impacts and mitigation measures included in previously certified CEQA documents analyzing public services and utilities are listed below.

Updated 2009 Redevelopment Plan EIR

- Impact USS-1 found that build-out of the Sycamore Crossing and Hill Town sites would not exceed wastewater treatment requirements of the RWQCB, but could require construction of new wastewater treatment facilities. Adherence to Mitigation Measure USS-1 reduces this impact to a less-than-significant level by requiring future project developers confirm from the wastewater provider that adequate capacity exists to serve such development.
- Impact USS-2 identified an impact with respect to the availability of a long-term water supply to serve future development. Adherence to Mitigation Measure USS-2 reduces this impact to a less-than-significant level by requiring project developers complete water supply assessments confirming the existence of an adequate long-term water supply.

Bayfront Project EIR. This EIR identified one potentially significant impact with respect to utilities. This impact and associated mitigation measure is addressed in Section 15 of this Initial Study, Recreation.

Project Impacts

- a,b) **No Impact.** Wastewater treatment service is currently provided to the City of Hercules by the Pinole-Hercules wastewater treatment plant west of the site. The plant has a treatment capacity of 3.52 MGD (million gallons per day, dry weather flow) and, as of 2011, treated an average of 3.3 MGD (dry weather flow). This information is based on Order No. R2-2012-0058, issued on August 8, 2012, by the San Francisco Bay Regional Water Quality Control Board. The plant has a current excess capacity of 0.22 MGD (220,000 gallons). The wastewater collection system within Hercules is not subject to significant inflow and infiltration issues according to the Hercules Public Works Department. Treated effluent from the Pinole Plant is then pumped to an outfall facility operated by the Rodeo Sanitary District.

Impacts related to wastewater treatment, consistency with Regional Water Quality Control Board discharge standards and related water quality impacts have been analyzed in the Hercules New Town Center EIR, the 2009 Redevelopment EIR, and the Bayfront Project EIR, and no significant impacts were identified.

- c) **Less than Significant Impact.** Refer to the Hydrology section of this Initial Study for a discussion of drainage facilities. Impacts will be less than significant.
- d) **No Impact.** Domestic water to supply future dwellings that could be constructed under the auspices of the updated Housing Element would be supplied by the East Bay Municipal Utility District (EBMUD). Each of the major housing projects identified in the updated Element have completed CEQA reviews and no significant impacts were identified with respect to long-term water supplies.
- e) **No Impact.** Wastewater collection, treatment and disposal service for new dwellings envisioned in the Hercules Housing Element would continue to be provided by the City of Hercules at the Pinole-Hercules Wastewater Treatment Facility. Impacts related to wastewater treatment capacity were been analyzed in the Hercules New Town Center EIR, the 2009 Redevelopment EIR and the Bayfront Project EIR and no significant impacts were identified.
- f) **Less than Significant Impact.** Construction of future housing units under the auspices of the updated Housing Element would generate additional quantities of solid waste. This topic was analyzed in previous CEQA documents for major housing developments that would be facilitated by approval of the Element. This impact would be less-than-significant.
- g) **No Impact.** The proposed project would have no impact with regard to federal, state, or local statutes or laws governing solid waste.

4.18 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) Less than Significant Impact. The results of the preceding analysis indicate that the proposed project would have less than significant impacts upon sensitive biological, historical, archaeological, or paleontological resources. There will be less than significant impacts to scenic vistas and visual character and resources. Less than significant impacts would also occur with regard to air quality, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology and water quality, noise, public services, recreation facilities, traffic and transportation, and utilities and services systems.				

The results of the preceding analysis indicate that the proposed project would have no significant impact on agricultural resources, land use and planning, mineral resources, or population and

housing. The proposed project involves consideration of an updated Housing Element as part of the General Plan. No construction would directly result from approval of the proposed project. Future construction that could be indirectly caused as a result of the updated Element has been previously analyzed in other CEQA documents. The City finds that impacts related to degradation of the environment will be less than significant.

- b) **Less than Significant Impact.** Cumulative effects resulting from full implementation of the City's land use policies were evaluated in the General Plan EIR. The proposed General Plan Amendments would not change any of these policies and do not propose any specific development or redevelopment project that could contribute to short-term or long-term cumulative impacts that were not addressed sufficiently in the General Plan EIR. The proposed project does not include any changes to land use designations and thus is consistent with the project analyzed in the General Plan EIR. The City finds that the contribution of the proposed project to cumulative impacts will be less than significant.

- c) **Less than Significant Impact.** As supported by the preceding environmental evaluation, the project would not result in substantial adverse effects on human beings. Under each environmental consideration addressed in the preceding analysis, the proposed project is considered to have little or no adverse impacts on people and the environment. Based on the analysis in this Initial Study, the City finds that direct and indirect impacts to human beings will be less than significant.

SECTION 5: REFERENCES

5.1 Sources

CEQA Guidelines, Bay Area Air Quality Management District, 1999

Cortese List, California Department of Toxic Substances Control,

City of Hercules General Plan Land Use and Circulation Element Update and Redevelopment Plan, Draft Environmental Impact Report, ESA, June 1995

Bayfront Project Environmental Impact Report, Wagstaff & Associates, 2010.

Hercules New Town Center Environmental Impact Report, RBF Consulting, 2008.

Hercules Updated 2009 Redevelopment Plan Environmental Impact Report, Impact Sciences, 2009.

5.2 Agencies Consulted

The following agencies and organizations were contacted in the course of this Initial Study:

City of Hercules
Holly Smyth, Planning Director

5.3 List of Preparers

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