

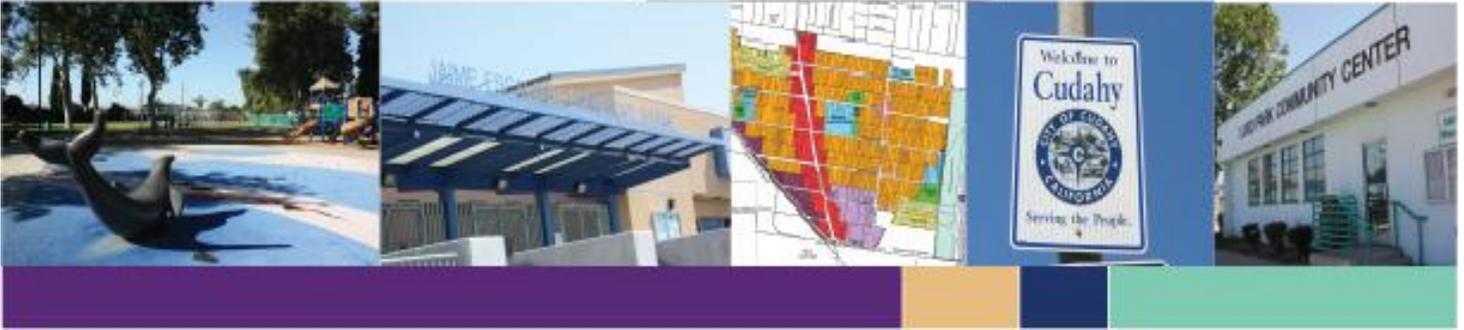
CUDAHY



Existing Conditions Report Cudahy 2040

FEBRUARY 11, 2016





EXISTING CONDITIONS REPORT CUDAHY 2040



Contact: Michael Allen, Acting Community Development Director

Prepared by:



In Association with:
Fehr and Peers
Fuscoe Engineering, Inc
Kelly Associates Management Group

February 11, 2016

TABLE OF CONTENTS

Chapter	Page
1. Introduction	1-1
Overview and Purpose.....	1-1
Cudahy’s Historical Context.....	1-1
Existing Conditions Report Organization	1-4
2. Population, Housing, Land Use, and Aesthetics	2-1
Introduction	2-1
Environmental Setting	2-1
Population.....	2-1
Housing.....	2-4
Land Use	2-6
Aesthetics	2-13
Regulatory Framework.....	2-22
Key Baseline Issues.....	2-31
3. Fiscal Conditions	3-1
Introduction	3-1
Environmental Setting.....	3-1
Capital Projects.....	3-2
Assessment of Existing General Plan and Zoning Code	3-3
General Plan Policies and Goals	3-4
Economic Development Opportunities.....	3-4
Strategic Planning Goals and Objectives.....	3-8
Marketing of Economic Development Opportunities	3-9
4. Transportation and Traffic	4-1
Introduction	4-1
Environmental Setting.....	4-1
Transportation System, 2015.....	4-2
Highway System	4-3
Public Transportation System.....	4-4
Bicycle System	4-4
Pedestrian Facilities.....	4-4
Public Parking.....	4-6
Freight.....	4-6
Traffic Analysis	4-6
Regulatory Framework.....	4-8
Key Baseline Issues.....	4-10
5. Utilities and Service Systems	5-1
Introduction	5-1
Environmental Setting.....	5-1
Storm Drain.....	5-1
Sewer.....	5-3
Water	5-5
Regulatory Framework.....	5-8
Key Baseline Issues.....	5-9
6. Parks and Recreation	6-1
Introduction	6-1

Environmental Setting	6-1
Parkland and Recreation Facilities Inventory.....	6-1
School Recreation Facilities	6-4
Bikeways and Trails.....	6-4
Projected Parkland Needs	6-4
Regulatory Framework.....	6-5
Key Baseline Issues.....	6-6
7. Public Services.....	7-1
Introduction	7-1
Environmental Setting	7-1
City of Cudahy Public Safety Commission.....	7-1
Fire Protection and Emergency Services.....	7-1
Schools	7-5
Libraries	7-7
Regulatory Framework.....	7-7
Key Baseline Issues.....	7-9
8. Noise	8-1
Introduction	8-1
Environmental Setting	8-4
Roadways	8-6
Railway Noise and Vibration	8-6
Airplane and Airport Noise.....	8-7
Non-Transportation Noise Sources.....	8-7
Regulatory Framework.....	8-7
Key Baseline Issues.....	8-13
9. Hazards	9-1
Introduction	9-1
Environmental Setting	9-1
Hazardous Materials and Wastes	9-1
Geologic and Seismic Hazards.....	9-7
Flood Hazards	9-13
Fire Hazards	9-15
Airport Hazards.....	9-16
Regulatory Framework.....	9-16
Key Baseline Issues.....	9-21
10. Greenhouse Gas Emissions	10-1
Introduction	10-1
Environmental Setting	10-5
Regulatory Framework.....	10-7
Key Baseline Issues.....	10-12
11. Health and Human Services.....	11-1
Introduction	11-1
Environmental Setting	11-1
Environmental and Population Health Risk Factors.....	11-1
Overview of Health Conditions.....	11-8
Community Services.....	11-14
Integrating Health into the Planning Process.....	11-14
What is a Healthy Community?.....	11-14
Key Baseline Conclusion	11-14

List of Tables

	Page
Table 2-1 Population Characteristics	2-3
Table 2-2 Housing Characteristics	2-5
Table 2-3 Land Use Distribution, 2015.....	2-7
Table 2-4 Existing (2010) General Plan Land Use Designations	2-24
Table 2-5 Development Standards	2-29
Table 3-1 General Fund Revenue Gap.....	3-2
Table 3-2 Description of Commercial and Industrial Land Uses	3-3
Table 3-3 Commercial and Industrial Zoning Designations.....	3-3
Table 3-4 Long Range Property Management Plan – Property Inventory	3-6
Table 3-5 Strategic Plan Goals – Economic Development	3-8
Table 4-1 Bus Transit Lines in the City of Cudahy	4-4
Table 4-2 Signalized Intersection LOS Criteria	4-7
Table 4-3 Intersection Level of Service.....	4-7
Table 4-4 Roadway Segment Levels of Service	4-8
Table 6-1 Parkland and Recreational Facilities Inventory	6-3
Table 6-2 Schools Inventory	6-4
Table 6-3 Existing and Projected Park and Open Space Ratios.....	6-5
Table 7-1 Cudahy Schools Enrollment.....	7-6
Table 8-1 Ambient Noise Measurements.....	8-6
Table 8-2 Reference Vibration Source Amplitudes for Construction Equipment.....	8-9
Table 8-3 Groundborne Vibration and Noise Impact Criteria	8-9
Table 8-4 Vibration Damage Potential Threshold Criteria	8-11
Table 8-5 Vibration Annoyance Potential Threshold Criteria	8-11
Table 8-6 Maximum Exterior Noise Levels.....	8-12
Table 8-7 Maximum Vibration in Industrial Districts	8-13
Table 9-1 CERLA Sites.....	9-2
Table 9-2 RCRA Facilities.....	9-5
Table 9-3 TRI Facilities	9-6
Table 9-4 SWRCB Site Cleanup Programs.....	9-6
Table 9-5 Leaking Underground Storage Tanks	9-7
Table 9-6 Potential Seismic Sources	9-10
Table 10-1 Global Warming Potential (GWP) of Greenhouse Gases (GHG).....	10-3
Table 10-2 Scoping Plan Measures	10-10
Table 10-3 CALGREEN Requirements.....	10-12

List of Exhibits

	Page
Exhibit 1-1 Cudahy City Boundary	1-2
Exhibit 1-2 Regional Context.....	1-3
Exhibit 2-1 Population Growth Trends	2-2
Exhibit 2-2 Existing Land Use Distribution, 2015	2-7
Exhibit 2-3 2015 Land Use Character and Features	2-9
Exhibit 2-4 2010 General Plan Land Use Map	2-25
Exhibit 2-5 Zoning Map	2-28
Exhibit 3-1 Allocation of \$8,222,805 General Fund Budget (Fiscal Year 2015-16).....	3-2
Exhibit 3-2 Location of LRPMP Opportunity Sites.....	3-7
Exhibit 4-1 City of Cudahy Overview.....	4-1
Exhibit 4-2 Street Classifications.....	4-3
Exhibit 4-3 Transit Service	4-5
Exhibit 5-1 City of Cudahy Storm Drain System.....	5-2
Exhibit 5-2 City of Cudahy Sewer System	5-4
Exhibit 5-3 City of Cudahy Water System	5-6
Exhibit 6-1 Parks and Recreational Facilities.....	6-2
Exhibit 7-1 Fire Department Service Area Map.....	7-2
Exhibit 7-2 Schools and Library Location Map.....	7-6
Exhibit 8-1 Hertz Diagram	8-1
Exhibit 8-2 Activity-Based Noise Levels.....	8-2
Exhibit 8-3 Noise Measurement Locations.....	8-5
Exhibit 8-4 State of California Recommended Land Use Compatibility Standards	8-12
Exhibit 9-1 Hazardous Facilities and Sites	9-3
Exhibit 9-2 Geologic Hazards.....	9-11
Exhibit 9-3 FEMA Flood Zones	9-14
Exhibit 10-1 California GHG Emissions Inventory by Sector.....	10-6
Exhibit 10-2 Gateway Cities GHG Emissions by Source	10-6
Exhibit 11-1 Cudahy CalEnviroScreen 2.0 Comprehensive Results	11-3
Exhibit 11-2 CalEnviroScreen 2.0 Pollution Burden by Percentile	11-4
Exhibit 11-3 CalEnviroScreen 2.0 Pollution Burden Map	11-5
Exhibit 11-4 CalEnviroScreen Population Risk Factors by Percentile.....	11-6
Exhibit 11-5 CalEnviroScreen 2.0 Population Risk Factors Map	11-7
Exhibit 11-6 Walking Shed Access to Grocery Stores	11-10
Exhibit 11-7 Walking Shed Access to Parks	11-11
Exhibit 11-8 Walking Shed Access to Schools.....	11-10
Exhibit 11-9 Walking Shed Access to Unhealthy Land Uses: Liquor Stores, Convenience Stores, and Fast Food Restaurants.....	11-13

Overview and Purpose

The City of Cudahy's General Plan update, known as Cudahy 2040, represents the culmination of many years of City effort. The General Plan identifies the community's vision for the future and provides a framework to guide decision making on growth and development, aesthetics, transportation, and community health. The General Plan was last comprehensively updated in 1992, with minor updates made in 2010. Since then, the City has secured significant grant money to improve circulation, promote active transportation, and develop a new regulatory structure for land use development. The General Plan update will be a community-driven comprehensive update that reflects local values and needs, is easy to understand, cutting edge, and focused on meaningful results and actions. This document, the "Existing Conditions Report Cudahy 2040", summarizes and analyzes key considerations that will be important to the community and policy makers when developing Cudahy 2040.

Cudahy's Historical Context

Cudahy encompasses 1.2 square miles in southeastern Los Angeles County. Cudahy, originally part of Rancho San Antonio, was purchased in the early 1900s by Michael Cudahy to sell to people looking for a place to live in town, yet where they also had space to garden and keep a few animals. The one-acre ranchettes in "Cudahy Acres" were remarkable for their dimensions: approximately 100 feet by 395 feet. These "railroad lots" proved very popular in the 1910s and 1920s. After World War II, the city thrived along alongside local industries like General Motors, Chrysler, Firestone, and Bethlehem Steel. The City was incorporated in 1960. Since that time the long, narrow lots have been developed, redeveloped and subdivided, leading to a characteristic design pattern of very long public blocks off of which many long driveways, often gated, lead to homes and apartment buildings arranged one behind another.

Cudahy consists predominantly of dense residential development, with retail, commercial, light industrial, and public uses found along main streets. The population of 24,000 is predominantly Latino. Eighty-three percent of residents rent their homes. Households tend to be larger than is average in the region, at 4.3 persons, and Cudahy is the second densest in the state. **Exhibit 1-1** shows the boundary of the city, while **Exhibit 1-2** shows the regional context of Cudahy.

BASE MAP FEATURES
Cudahy Boundary
Street Center Lines

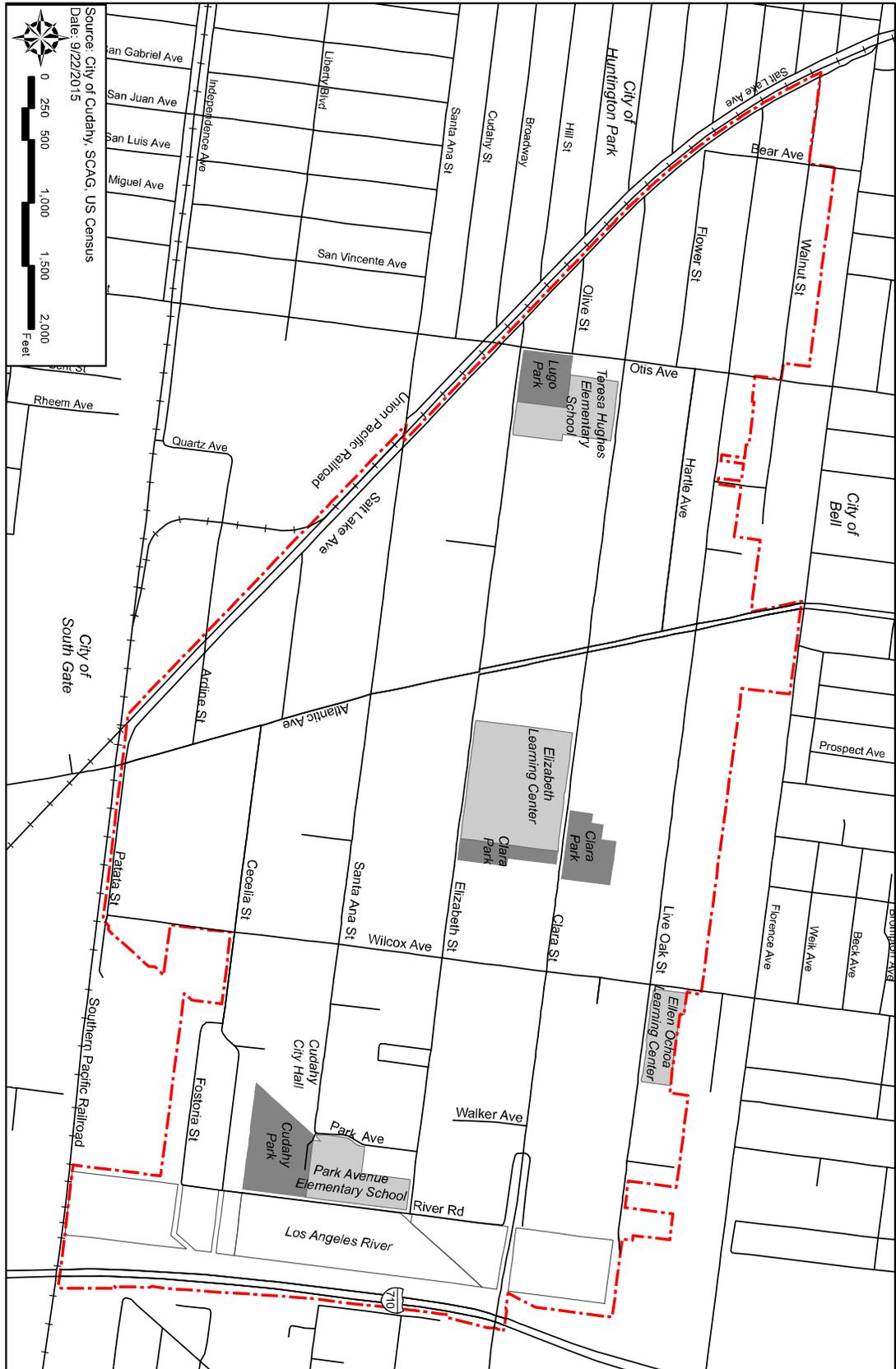
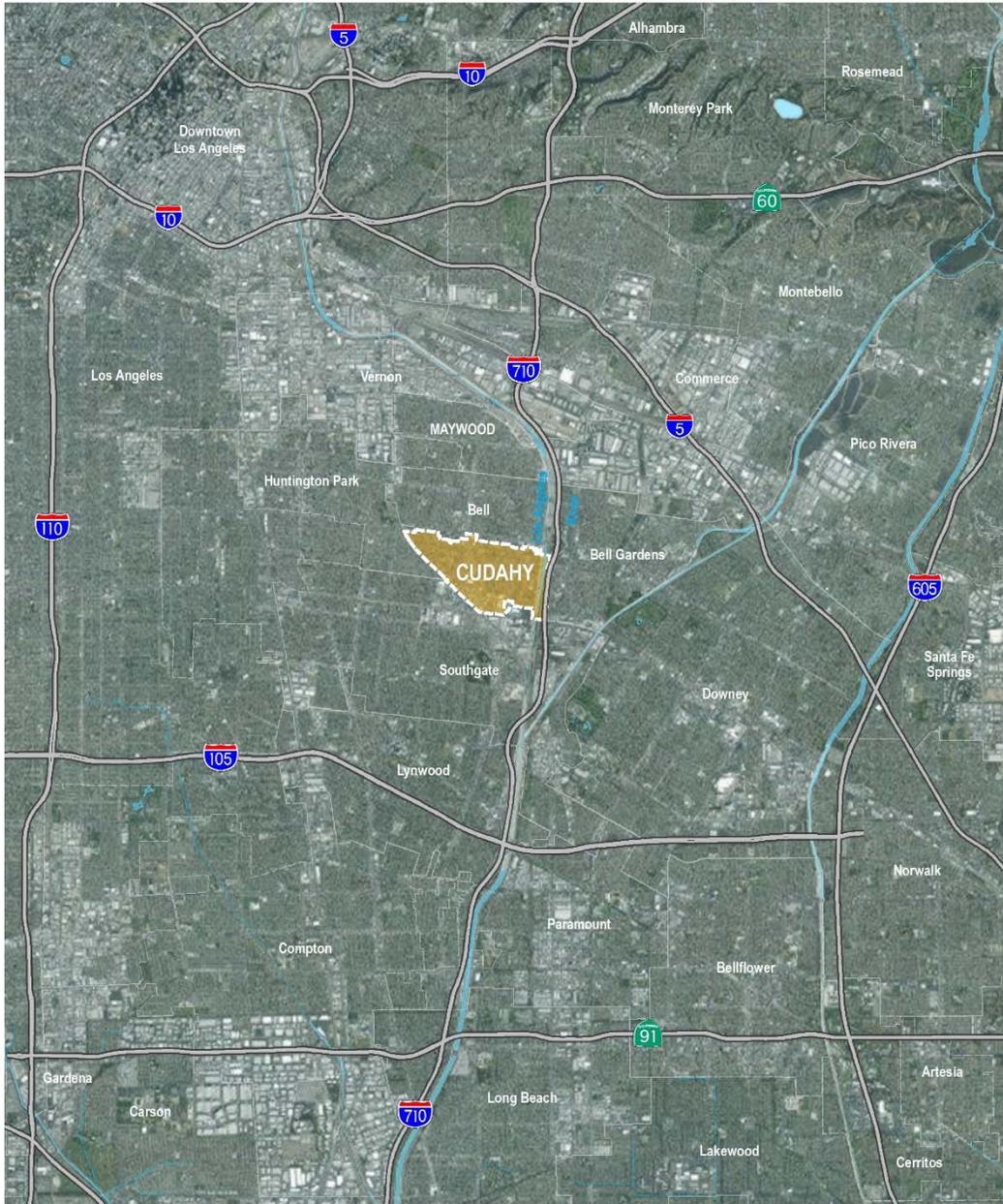


Exhibit 1-1
Cudahy City Boundary



**Exhibit 1-2
Regional Context**

Existing Conditions Report Organization

This document, “Existing Conditions Report Cudahy 2040”, is a compendium of technical analyses prepared by land use planners, economists, noise experts, civil engineers, air quality experts, and traffic engineers. The Existing Conditions Report profiles the existing characteristics, trends and forecasts, and issues that affect Cudahy in 2015. This document provides specific detailed information on:

- Population, Housing, Land Use, and Aesthetics
- Fiscal Conditions
- Transportation and Traffic
- Utilities and Service Systems
- Parks and Recreation
- Public Services
- Noise
- Hazards
- Greenhouse Gas
- Health and Human Services

The information contained in this document is intended to assist policymakers and the community with making informed decisions regarding the Cudahy General Plan. The Existing Conditions Report is one of the first steps in the process of preparing the General Plan, Cudahy 2040.

This document contains the following chapters:

- **Population, Housing, Land Use, and Aesthetics.** This chapter documents Cudahy’s 2015 baseline land use conditions and ownership patterns and identifies issues and opportunities. The information provides a context for examining development constraints and opportunities for land use change over the long term, and includes an aesthetic summary of existing development and public spaces. The chapter also addresses population, housing, gentrification, and development issues in the context of local and regional economic conditions.
- **Fiscal Conditions.** This chapter presents the City’s current status relative to fiscal conditions, recent economic development goals and activities, local and regional trends, and potential growth opportunities.
- **Transportation and Traffic.** This chapter documents and analyzes existing transportation, circulation and traffic conditions in Cudahy, including multi-modal and non-auto transportation.
- **Utilities and Service Systems.** This chapter provides an overview of Cudahy’s water, wastewater, and storm drainage facilities based on information from the Los Angeles County Sanitation District, Los Angeles County Public Works, Track 180/Tract 349 Water Company, and City of Cudahy Public Works staff.
- **Parks and Recreation.** This chapter identifies and describes local parks and recreational facilities, including trails, as provided by the City of Cudahy and as observed during field visits. The chapter examines usage patterns, facility service areas, accessibility, plans for improvements, and open space policies.
- **Public Services.** This chapter contains a summary of the 2015 crime and emergency response statistics from the Sheriff and Fire Departments, as well as a summary of community policing plans.
- **Noise.** This chapter provides background information regarding the City’s noise environment.
- **Hazards.** Natural hazardous conditions that affect the planning area are identified and discussed in this chapter. This chapter focuses on seismic hazards, geologic hazards, flooding/inundation hazards, and fire hazards.
- **Greenhouse Gas.** This chapter presents GHG emissions and reports risk factors identified in Cal EnviroScreen2.
- **Health and Human Services.** This chapter provides an overview of health conditions in Cudahy based on data from Kaiser Hospitals and the State Department of Health, as well as existing and potential healthy community programs and resources.

2. POPULATION, HOUSING, LAND USE, AND AESTHETICS

Introduction

This chapter documents Cudahy's 2015 baseline population, housing, land use, and aesthetics. The information provides a context for examining development constraints and opportunities for change over the long term.

Environmental Setting

Population

Population Growth

The Census data estimates a population of 24,073 in Cudahy in 2014. In the 1970's, the population in Cudahy was just under 17,000. Since then, the city's population has grown about 42%, with the largest period of growth occurring between 1970 and 2000. Since the 2000 Census, Cudahy's population has dropped about 0.6%. Table 2-1 compares population figures for Cudahy and surrounding cities between 2000 and 2014 Census. Similar to Cudahy, the cities of South Gate, Huntington Park, Bell Gardens, Paramount, and Lynwood also had a drop in population since 2000.¹ In comparison, the County of Los Angeles as a whole grew by about five percent. Cudahy's population drop illustrates that the City is a built-out community with relatively little room for growth. Additional factors such as declining real estate prices, declining job opportunities, reverse migration, and relocation to regions and states that have more affordable housing and better job availability can also explain the City's falling population numbers.

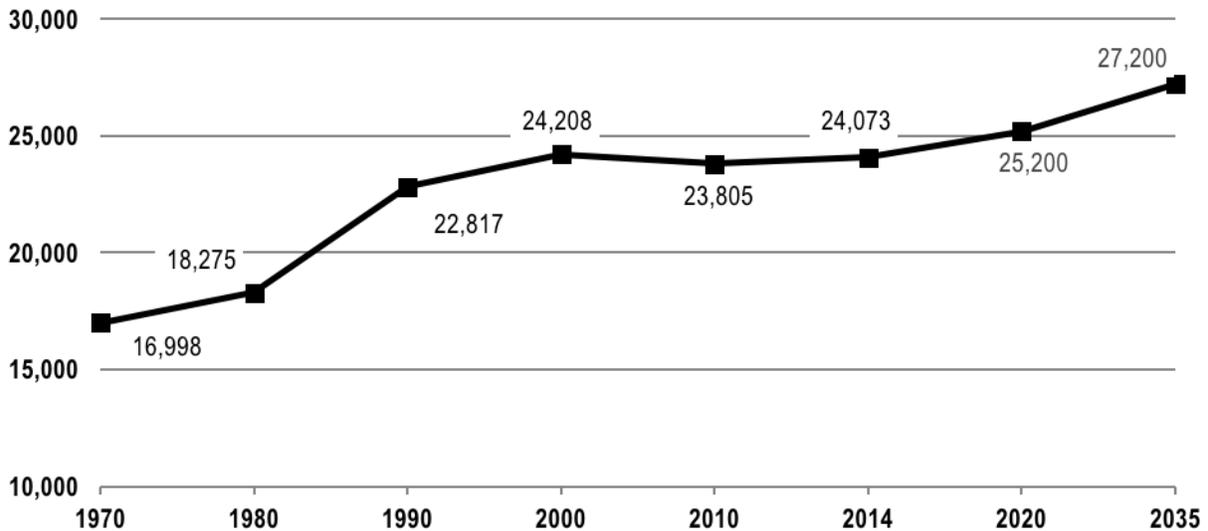
Cudahy has an estimated population density of just over 20,000 persons per square mile making it one of the densest cities in the United States. Cudahy ranks as the 16th most dense area among the 265 neighborhoods in Los Angeles County². Among its close neighbors, only Huntington Park and Maywood had a higher population density. Population density for the area in and around Cudahy ranks among the highest in the world, surpassing cities such as Tokyo, Japan, Shanghai, China, and Mexico City, Mexico. The demand on public services and infrastructure that accompanies this level of dense growth can result in school overcrowding as well as the need for additional public facilities and expanded services.

The Southern California Association of Governments (SCAG) 2012 growth forecasts predict a slight but steady increase in population through 2035 (Exhibit 2-1). From 2014 to 2020, SCAG estimates that the City's population will grow by 4.7% and will grow by 13% by 2035. SCAG estimates a similar growth pattern region wide.

¹ City of South Gate. 2013-2021 Housing Element.

² The Los Angeles Times. "Mapping L.A. Population Density Rankings." (Accessed December 7, 2015)

Exhibit 2-1 Population Growth Trends



Source: California Department of Finance 1850-2010 Historical US Census Populations of Counties and Incorporated Cities/Towns in California; U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates; Southern California of Governments (SCAG) Adopted 2012 Regional Transportation Plan (RTP) Growth Forecast

Age

In 2014, the median age in Cudahy was 26.3 years, nine years younger than the median age in the County (35.3 years). The cities of South Gate and Huntington Park have a younger population as well (Table 2-1). Most of the City's population is under 44 years old (68.5%) with young adults (20-44 years) making up the largest age group (39.6%) followed by the school age group (5-19 years) at 28.9%³. Less than five percent of the City's population was 65 years or older. While still a small proportion of the City's population, the number of residents over 65 years old is starting to rise, likely due to longer expected life spans, improved health care and services, current residents staying in the community, and an overall aging trend seen nationwide.

³ U.S. Census Bureau. 2010-2014 American Community Survey 5 Year Estimates

**Table 2-1
Population Characteristics**

Demographic Categories	City of Cudahy	City of South Gate	City of Bell	City of Huntington Park	Los Angeles County
Population	24,073	95,515	35,896	58,787	9,974,203
Population Growth Since 2000	-0.6%	-0.9%	-2.1%	4.2%	4.8%
Median Age	26.3	30.6	30.0	29.8	35.3
Race/Ethnicity					
<i>Hispanic</i>	97.4%	95.6%	92.7%	97.5%	48.1%
<i>White</i>	1.4%	2.8%	5.0%	0.9%	27.2%
<i>Black</i>	0.2%	0.6%	1.3%	0.3%	8.0%
<i>Asian/Pacific Islander</i>	0.7%	0.8%	0.8%	1.2%	14.0%
<i>Other</i>	0.3%	0.2%	0.3%	0.1%	2.6%
Household Type					
<i>Families</i>	88.7%	85.2%	85.0%	83.6%	67.1%
<i>Families with Kids Under 18 Years</i>	57.6%	45.2%	49.4%	45.7%	31.3%
<i>Single Parent Families</i>	27.6%	17.4%	25.4%	19.8%	10.6%
<i>Households with one or more persons 65 years and over</i>	13.9%	22.2%	21.1%	20.3%	24.9%
Median Household Income	\$37,759 (67.6% County median)	\$43,526 (77.9% County median)	\$36,496 (65.3% County median)	\$34,777 (62.2% County median)	\$55,870
Families in Poverty	32.2%	19.8%	25.8%	29.1%	14.6%
Educational Attainment					
<i>Less than a High School Diploma</i>	56.5%	48.0%	54.7%	60.0%	23.2%
<i>High School Diploma/GED</i>	23.8%	25.3%	19.9%	19.0%	20.5%
<i>Some College</i>	11.5%	15.4%	14.6%	11.4%	19.5%
<i>Associate's Degree</i>	3.8%	4.3%	4.6%	3.9%	6.8%
<i>Bachelor's Degree</i>	3.2%	5.4%	5.3%	4.7%	19.5%
<i>Master's/Professional/Doctorate Degree</i>	1.1%	1.5%	0.9%	1.1%	10.4%

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

Race and Ethnicity

In Cudahy, most of the population is Hispanic. While the region is about 48% Hispanic, Cudahy's Hispanic population makes up 97.4% of the population. Its surrounding neighbors have a similar proportion of Hispanic residents. Most of the City's Hispanic residents are of Mexican (79.7% of the Hispanic population) or Central American (16.7%) origin. Salvadorian and Guatemalan residents make up most of the City's Central American population.

Household⁴ Composition

In 2014, the Census reported that most of Cudahy households (88.7%) were family households, a higher proportion than the County as a whole (67.1%). About 57.6% of all households in the City were families with children and 27.6% were single-parent families – a proportion two and a half times that seen in the County. Cudahy has half as many

⁴ The Census Bureau defines a household as all persons living in a single housing unit, whether or not they are related. One person living alone is considered a household, as is a group of unrelated people living in a single housing unit.

households with elderly members (65+ years) compared with the region. Close to 14% of households had at least one elderly member and two percent of all households were made up of an elderly person living alone.

Income and Educational Attainment

The median household income in Cudahy is \$37,759 according to the 2014 Census data, or 67% of the regional median income of \$55,870. Cudahy has a higher median income than the neighboring cities of Bell and Huntington Park but lower than South Gate.

According to 2000 Census data and 2014 ACS Census data, in absolute terms, the median income in the City has risen since 2000 by over 30% (it rose by 33% at the County level). When inflation is not factored in, the City and County posted significant median household income gains compared with 2000. However, adjusting the year 2000 income to 2014 shows that both the City and County experienced a decrease in median income, a trend seen nationwide. When adjusted for inflation, the median income in Cudahy has dropped by five percent since 2000. The decrease in median income may be attributed to the economic downturn that started in 2007 and has recently started to level off.

2012 Comprehensive Housing Affordability Strategy (CHAS) data provides special Census tabulations (developed for HUD) and calculates household income adjusted for family size and tenure. In Cudahy, 82% of households earned less than 80% of the Area Median Income and were considered lower-income in 2012. In 2014, close to a third of Cudahy families were living in poverty. The proportion of families in poverty was more than twice the proportion region wide.

Income levels are strongly associated with educational attainment. According the 2014 Census data, less than a quarter (23.8%) of Cudahy residents has a high school diploma. More than half of residents have less than a completed high school education and only eight percent have any type of college or professional degree.

Housing

Housing Growth

According to 2014 Census data, there are approximately 5,770 housing units in Cudahy, just a fraction of the size of its larger neighboring cities (**Table 2-2**). Between the 1990 and 2000 Census, the housing stock in Cudahy grew by just two percent. Between 2000 and 2010, the City experienced a four percent increase in the number of housing units. Since then, there has been virtually no growth in housing units (2010-2014)⁵.

⁵ California Department of Finance. "Population and Housing Estimates for Cities, Counties, and the State." January 1, 2011-2015, with 2010 Benchmark.

**Table 2-2
Housing Characteristics**

Housing Characteristics	City of Cudahy	City of South Gate	City of Bell	City of Huntington Park	Los Angeles County
Housing Units	5,770	24,205	9217	15,265	3,462,075
Persons per HHs	4.31	4.11	3.99	4.02	3.02
Tenure					
Owner	17.3%	47.1%	28.8%	25.6%	46.4%
Renter	82.7%	52.9%	71.2%	74.4%	53.6%
Vacancy Rate	2.8%	3.7%	3.8%	3.7%	5.8%
Housing Type					
Single Family Detached	37.0%	63.2%	51.6%	41.3%	49.5%
Single Family Attached	22.8%	7.9%	9.0%	13.4%	6.6%
2-4 Units	5.6%	13.3%	10.7%	10.4%	8.2%
5+ Units	27.3%	14.5%	24.6%	34.3%	34.0%
Mobile Home	7.3%	1.2%	4.2%	0.6%	1.7%
Median Year Built	1963	1950	1955	1950	1962
Overcrowded Units	35.2%	24.6%	27.8%	38.3%	12.1%
Severely Overcrowded Units	8.4%	8.1%	10.5%	18.8%	4.9%

Note: As defined by the U.S. Census, a household with more than 1.01 persons per room, excluding bathrooms, kitchens, hallways, and porches. Severe overcrowding is defined as households with more than 1.51 persons per room.
Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates; California Department of Finance Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2015, with 2010 Benchmark

Tenure and Vacancy

Most housing in Cudahy is renter-occupied (82.7%). Compared with the County (53.6%), Cudahy has a significantly higher proportion of renter-occupied housing. According to State Department of Finance estimates, the City of Cudahy has a residential vacancy rate of 2.8% compared to a vacancy rate of 5.8% for Los Angeles County. The City has among the lowest vacancy rates in the County, which can result in an increased demand for a limited supply of housing units; in turn, this could affect the cost of both rental and owner-occupied units.

Housing Unit Type

According to the 2015 California Department of Finance data, there were 5,774 housing units in Cudahy. Of this total, 2,141 units (37.1%) were single detached units, 1,313 units (22.7%) were single attached units, 326 units (5.6%) were developments with two to four housing units, and 1,574 units (27.3%) were developments with five or more units. In addition, a significant number of households live in mobile home parks. A total of 420 units (7.3%) are mobile home units.

Between 1980 and 2010, the number of single-family units (both attached and detached housing including those units located in planned developments) increased by 941 units. Most of this new housing was infill development that required the demolition of older units. In addition, a substantial number of units were constructed as replacement housing for units that were displaced as part of the Century Freeway’s construction⁶.

⁶ City of Cudahy, 5th Cycle General Plan Housing Element 2013-2021.

Household⁷ Size and Overcrowding

Cudahy has the fifth highest average household size in the County (4.31 persons per household). Compared with all of Los Angeles County, Cudahy has 1.3 persons more per household. Prior to 2010, Cudahy's population growth (number of persons) did not result in a corresponding increase in the number of households; therefore increasing the average household size (the number of persons that live in a single unit). This trend was likely due to a number of trends including larger family sizes, cost reduction by shared living spaces, and overcrowding due to housing availability and cost. Since 2010, the average household size in the City has increased very little.

Approximately 35% of all households in Cudahy are overcrowded and 8% are severely overcrowded. Overcrowding in Cudahy is three times the level of overcrowding seen Countywide. Household overcrowding is reflective of various living situations:

- (1) a family lives in a home that is too small;
- (2) a family chooses to house extended family members; or
- (3) unrelated individuals or families are doubling up to afford housing. However, cultural differences also contribute to the overcrowded conditions. Some cultures tend to have larger household size than others due to the preference of sharing living quarters with extended family members as a way of preventing homelessness among family members. Overcrowding can strain physical facilities and the delivery of public services, reduce the quality of the physical environment, contribute to a shortage of parking, and accelerate the deterioration of homes.

Age of Housing

2014 Census data shows that close to half (45.5%) of the Cudahy's housing units were constructed prior to 1960. Housing units that were constructed prior to 1960 are generally considered to be potential candidates for rehabilitation since the structures are fifty years in age or older. Close to 38% of housing units were constructed during the 1960s, 1970s, and 1980s. Only 17% of housing units were built since 1990.

Housing Condition

A parcel specific housing condition survey was completed by the City in February 2013. The survey showed that the great majority of the units in Cudahy were in sound condition. The survey identified 118 units that require major repair (such as roof replacement) and an additional three units would most likely require demolition.

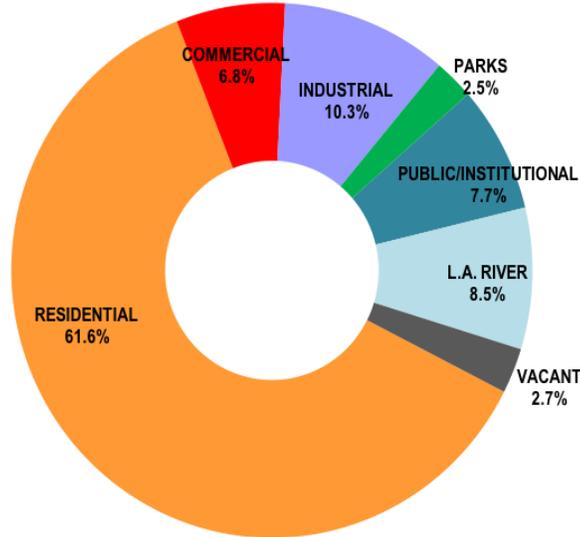
Land Use

Land Use Pattern

Cudahy contains over 1,600 parcels encompassing almost 670 acres (not including street right-of way). The majority of the development in Cudahy is residential (412.2 acres), which accounts for almost 62% of the city's total land area. Industrial uses are concentrated in the southerly portion of Cudahy while commercial development extends along Atlantic Avenue and at key intersections. The commercial and industrial land uses total 45.2 acres (6.8%) and 68.9 acres (10.3%), respectively. The average lot size in Cudahy is 0.41 acres (close to 18,000 square feet) but are larger for properties used for Public/Institutional (0.83 acres), Community Commercial (0.75 acres), and Industrial (0.69 acres) uses. **Exhibit 2-2** illustrates the distribution of land uses in Cudahy; they are summarized below in **Table 2-3**.

⁷ The Census Bureau defines a household as all persons living in a single housing unit, whether or not they are related. One person living alone is considered a household, as is a group of unrelated people living in a single housing unit.

**Exhibit 2-2
Existing Land Use Distribution, 2015**



**Table 2-3
Land Use Distribution, 2015**

Generalized Land Use Category	Detailed Land Use Category	Acres	Percent of Total
Residential		412.2	61.6%
	Residential, Single-Family	95.9	14.3%
	Residential, Duplex	45.0	6.7%
	Residential, Triplex	37.2	5.6%
	Residential, Four Units	37.4	5.6%
	Residential, Multiple-Family (5+ Units)	180.7	27.0%
	Residential, Mobile Home Park	16.0	2.4%
Commercial		45.2	6.8%
	Community Commercial	40.7	6.1%
	Neighborhood Commercial	4.6	0.7%
Industrial		68.9	10.3%
Recreation		16.4	2.5%
	Parks/Open Space	16.4	2.5%
Institutional		50.5	7.7%
	Schools	39.2	5.9%
	Government	2.7	0.4%
	Churches	8.1	1.3%
	Miscellaneous	0.5	0.1%
Los Angeles River		57.3	8.5%
Vacant		18.3	2.7%
	Vacant Residential	4.7	0.7%
	Vacant Commercial	2.7	0.4%
	Vacant Industrial	10.9	1.6%
Total		669.6	100%

Source: MIG, 2015.

Residential Land Uses

The residential land use pattern corresponds with the subdivision pattern of the land. Most of Cudahy was originally subdivided into approximately 105-foot wide by 387-foot deep lots. Many of these lots were subsequently further subdivided into 53 foot by 387 foot lots (nearly half-acre lots). The resulting subdivision pattern resulted in fairly deep and narrow lots that can only accommodate a narrow and linear strip of dwelling units along lot's depth. Smaller lots in Cudahy are found in the southeastern section along Cecelia Street and Fostoria Street and in the northwestern section along Live Oak Street, Hartle Avenue, Walnut Street, Flower Street, Clara Street, and Olive Street (**Exhibit 2-3**). These smaller lots range in area from approximately 6,000 square feet up to 9,000 square feet. The addition of dwelling units located in the rear of the deep lots is a common practice in Cudahy. In addition, a number of garage conversions have also occurred. The recycling of residential lots has been more recently characterized by the replacement of a single-family unit on a lot by condominiums or additional units constructed to the rear of the main residence. In recent years, planned unit developments at higher densities have been constructed as part of newer infill developments. With most of the City zoned for high density residential uses, the recycling of land to higher uses is expected to continue into the future.⁸

The Residential, Single-Family land use category is characterized by a single lot developed with a single-family residence. The total combined land area of the parcels occupied by a single-family home is 95.9 acres or 14.3% of all land uses. Single family units are found throughout Cudahy, but a concentration is visible in the northwest portions of the city. Specifically, residential areas west of Otis Avenue, between Otis and Atlantic Avenues and north of Hartle Avenue and south of Cecilia Avenue in the southeast corner of the city are subdivided in smaller, more traditional, single family lot sizes compared with other residential areas of Cudahy. Residential densities in this category reach as high as 25 units per acre but are developed at an average of 9 units per acre.



Examples of Single Family Homes in Cudahy

The Residential, Duplex to Four Units land use category contains two to four dwelling units within a single parcel. The total area of the parcels occupied by a structure containing two to four units is 119.6-acres. These properties are found throughout Cudahy but are concentrated west of Otis Avenue and in the neighborhoods around Wilcox Avenue and to the east. Residential densities for duplexes in this category reach as high as 29 units per acre but are developed at an average of 10 units per acre. Residential densities for triplexes reach as high as 30 units per acre but are developed at an average of 13 units per acre. Residential densities for properties with four units reach as high as 44 units per acre but are developed at an average of 17 units per acre.

⁸ City of Cudahy. 2010 General Plan Land Use Element.

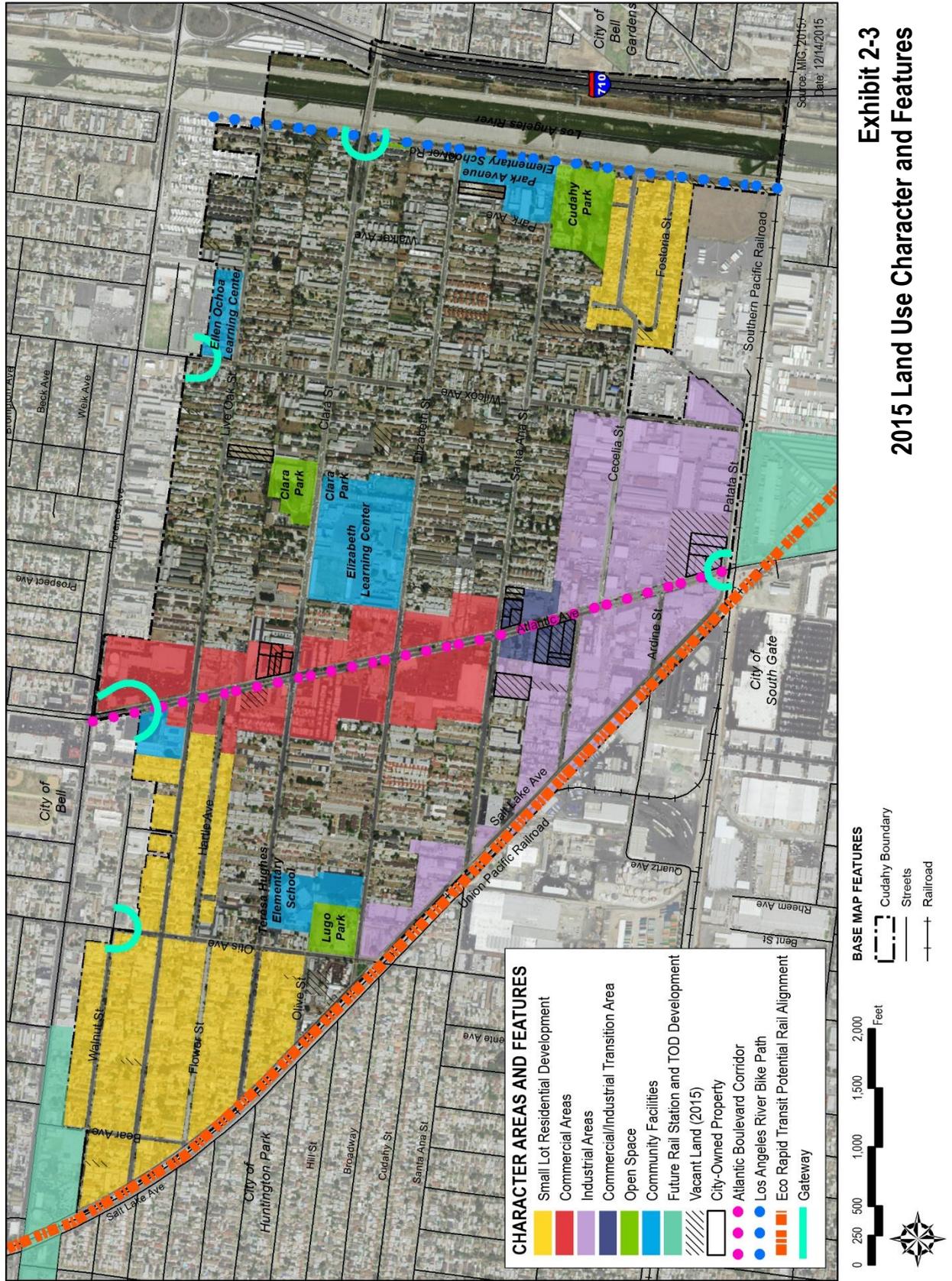


Exhibit 2-3
2015 Land Use Character and Features

The largest residential land use category (27% of all land uses), the Residential, Multiple-Family category, includes lots developed with a multi-family structure containing five or more units. The total combined land area of the parcels developed as multi-family residential is 180.7 acres. These multi-family residential lots make up the bulk of the land uses east of Otis Avenue. In this area, larger and longer lots have facilitated the development of multifamily uses. Residential densities in this category reach as high as 55 units per acre but are developed at an average of 18 units per acre.



Examples of Multi-Family Homes in Cudahy

There are 16 acres of land categorized as Mobile Homes/Trailers Parks. Mobile home/trailer parks are located generally near Atlantic Avenue between Live Oak and Santa Ana Streets and in and around the industrial areas west of Atlantic Avenue and south of Santa Ana Street. Residential densities for mobile home parks reach as high as 38 units per acre but are developed at an average of 24 units per acre.

Commercial Land Uses

Commercial areas in Cudahy make up 6.8% of all land uses (45.2 acres) with the majority of these uses located along Atlantic Avenue.



Example of Typical Commercial Development

Land designated as Neighborhood Commercial includes smaller commercial establishments and neighborhood shopping centers and make up less than one percent of land uses (4.6 acres).

Larger commercial centers include shopping centers, markets, offices, specialty retail centers; they are categorized as Community Commercial. These land uses occupy 40.7 acres or 6.1% of all land uses and all are located along the Atlantic Avenue corridor north of Santa Ana Street. The total land area of the commercial uses included in this designation totals 38 acres.



Large Commercial Centers in Cudahy

Industrial Land Uses

Industrial uses are located in the southern portion of Cudahy and along Salt Lake Avenue. Industrial and manufacturing uses account for approximately 68.9 acres or 10.3% of Cudahy's total land area. Industrial uses include various manufacturing uses (toys, furniture, paint, rubber, paper boxes, plastics, metal wire), scrap metal sales, welding supplies, machine shops, trucking companies, lumber yards, and warehousing.



Examples of Industrial Facilities in Cudahy

Public/Institutional Land Uses

This land use category applies to public and quasi-public uses including schools (public and private), churches, and various utilities. The total land area devoted to these uses is 50.5 acres or 7.7% of land in Cudahy. The City's Civic Center is located at the eastern end of Santa Ana Street next to Cudahy Park. The Civic Center includes the City Hall, a County Library, and the Bedwell Community Center. An office of the Department of Public Social Services is located on Atlantic Avenue, south of Santa Ana Street. Los Angeles Unified School District (LAUSD) maintains and operates local public schools. Five public schools currently operate in Cudahy. Three of the schools are elementary schools (Teresa Hughes, Park Avenue, and Jaime Escalante). The remaining two schools serve multiple grade levels and include the Ellen Ochoa Learning Center (kindergarten through 8th grades) and the Elizabeth Learning Center (kindergarten through the 12th grade). The Opportunities for Learning (OFL) Charter School also serves grades 7 through 12.



Examples of Public and Institutional Land Uses

Park/Open Space/River Land Uses

Four public parks in Cudahy (Cudahy Park, Lugo Park, Clara Street Park, and Cudahy River Park) are included in this category. The City parks have a total land area of approximately 16.4 acres. The parks are improved with game courts, sports fields, picnic areas, and tot lots. In addition, a small roadway island located on Salt Lake Avenue is also considered as open space. At the eastern edge of the City, the banks of the Los Angeles River are designated as a riding and hiking trail. The entire trail system extends north into the Angeles National Forest in the San Gabriel Mountains and south to the Pacific Ocean.



Local Parks

Vacant Land

Parcels that are vacant or otherwise undeveloped take up just over 18 acres of land in Cudahy. Most vacant land is intended for industrial uses (10.9 acres) with just two sites making up close to 9 acres of the vacant industrial land use inventory. Both sites are fully or partially owned by the Cudahy Economic Development Corporation (EDC), the City's redevelopment successor agency. Many of the other large vacant sites (commercial and industrial) are also owned by the City.

Development Trends and Opportunities

- City staff indicates that, in general, most development activity and interest have been for the development of higher density residential uses -- specifically for condominium and townhome type development ranging from 15 to 20 units on a single lot. Ideally, creating larger lot sizes through lot consolidation could accommodate better building and site design, enhanced landscaping, and more effective on site circulation patterns. In Cudahy, lot consolidation is rarely included in residential development projects.
- The commercial areas have had some interest in development of fully or partially vacant sites owned by the City's RDA successor agency (City of Cudahy Economic Development Corporation). Initial developer interest has been for large commercial center developments and mixed use developments. Several large vacant commercial and industrial sites in Cudahy are also owned by the City and are currently undergoing an RDA asset review by the State of California. Disposition and development of the sites is uncertain at this time⁹. City-owned land is shown in **Exhibit 2-3**.
- Eco-Rapid Transit, formerly known as the Orangeline Development Authority, is a joint powers authority (JPA) created to pursue development of an environmentally friendly, state-of-the-art high speed rail transit system spanning 40 miles from Bob Hope Airport through Downtown Los Angeles to Artesia. The proposed route between the City of Artesia and Downtown Los Angeles (West Santa Ana Branch Transit Corridor – WSAB) travels along the western edge of the City and is scheduled to be built by 2027. The project is in the planning stages with the proposed alignment being refined. This part of the route is one of twelve Measure R transit projects. In 2015, the route has a \$240 million Measure R funding allocation. The project is also included in the adopted 2009 Los Angeles County Metropolitan Transportation Authority's (LACMTA) Long Range Transportation Plan. Two proposed stations are located just outside of Cudahy. The planned

⁹ Allen, Michael, Acting Community Development Director (2015, December 10). Phone Interview.

EcoRapid Transit Station, in the City of South Gate, is located at the southeast corner of Atlantic Avenue and Patata Street, adjacent to Cudahy's southern boundary. The planned EcoRapid Transit Station, in the City of Huntington Park (the Cudahy/Huntington Park Station), is located on the southeast corner of California and Florence Avenues adjacent to the Cudahy's northwestern corner boundary. In addition to expanding the City's transit resources, both stations offer opportunities for creation of transit oriented development such as mixed use development coupled with pedestrian friendly amenities and public uses focal points such as plazas. Development of these areas, while located outside the City, can be a catalyst for development of properties and gateways within the City of Cudahy.

Aesthetics

Aesthetics, as addressed in the California Environmental Quality Act (CEQA), refers to visual considerations, including scenic resources, scenic vistas, changes in visual character, and lighting or glare.

Cudahy is fully urbanized with no natural features. The urban environment is primarily dense residential neighborhoods divided by a commercial and industrial corridor along the City's main north-south thoroughfare, Atlantic Avenue. A large industrial section also runs along part of the City's western boundary and in southern portions of the City. The Los Angeles River, running along Cudahy's eastern boundary, is lined and concrete dikes have been constructed on both sides of the channel resulting in the loss of riparian habitats.

Scenic Vistas

Scenic vistas can generally be defined as natural landscapes that form views of unique flora, geologic, or other natural features that are generally free from urban intrusions. Typical scenic vistas include views of mountains and hills, large, uninterrupted open spaces, and water bodies. Scenic vistas can play a large role in the way a community defines itself and also effects development patterns as projects are designed to take advantage of viewsheds.

Cudahy has a, generally, flat topography that limits views and scenic vistas to the immediate surrounding development. There are almost no scenic views to areas outside of the city. Cudahy lies about 16 miles south of the San Gabriel Mountains. Although limited by distance and air quality, views of the San Gabriel Mountains are visible from the relatively higher elevation of the Clara Street overpass of the Los Angeles River and along the Los Angeles River bike path. These mountains are well outside the Cudahy's planning area and jurisdiction.

Scenic Resources

While scenic vistas form a complete viewshed, scenic resources are isolated occurrences of aesthetically pleasing natural or man-made forms. Typical examples of natural scenic resources include rock outcroppings, trees, and prominent ridgelines. Scenic resources can also be architecturally distinctive structures, historic buildings, etc.

Within Cudahy lies a portion of the Los Angeles River that is generally dry and flows through a concrete channel with no natural habitat or foliage features. Landscaping is visible along some portions of the River's bike path that runs along the western bank. This landscaping is part of the bike path feature, not a natural riparian feature.



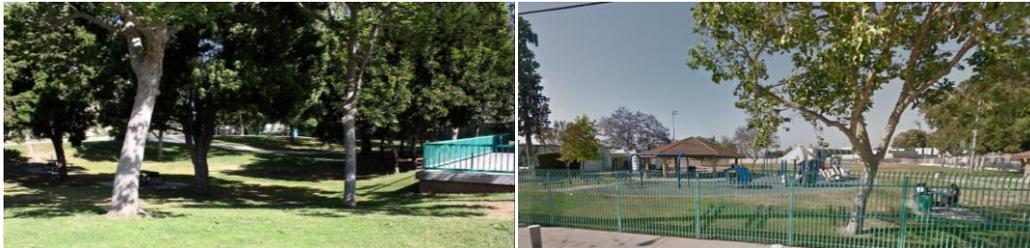
Los Angeles River Bike Path Facing North



Los Angeles River Bike Path Facing South

Tree cover is limited even at the City's parks. Although most City streets have some trees, there are no significant tree features in Cudahy. Along Atlantic Avenue's commercial area, trees are planted sporadically and a few areas have landscaped medians. In the predominantly industrial areas south of Cecilia Street, tree features are rare. Tree coverage in residential areas varies by area. In the northern neighborhoods, the trees are more mature, however, the number and frequency of trees varies by street and block. For example, homes along Walnut Street, in the northwestern section of the City, have relatively more trees than homes located one or two blocks south. Tree features vary by residential development types; as small lot single family homes tend to have more trees than denser multi-family developments.

Clara Street Park has a cluster of trees located in the center and southwest corner of the park, while Lugo Park and Cudahy Park trees are limited to the edges of the parks. Cudahy River Park is a quarter-acre mini-park at River Road and Clara Street and faces an access point to the Los Angeles River Trail. The park was designed as a miniature urban riparian forest and serves as a rest spot for pedestrians and bicyclists coming from the river path. The park has a small assortment of trees along the western edge facing River Road. Due to its location next to and below the Los Angeles River Bike Path and Clara Street Bridge, the Cudahy River Park has no views other than concrete walls of those structures.



Clara Street Park and Lugo Park

The National Register of Historic Structures does not identify any structure in Cudahy, nor does the Office of Historic Reservation California Historic Landmarks. The 2010 General Plan Conservation Element identified four of the oldest non-residential buildings in the City. Two have been replaced by newer development. The other two are:

1. Scott Gasket at 8220 Atlantic Avenue (since the 1940's)
2. Turner's Casting at 8333 Wilcox Avenue (since the 1940's)

In 1984, the City of Cudahy identified 21 important and interesting residential structures with unique architectural significance¹⁰. Of these 21 structures, 8 have been replaced with newer development and several have updated many of their defining features, such as wood facades, columns, and windows. The following is a list of the structures listed and their current condition.

3. 7505 Atlantic Avenue – The structure has been removed, the property is developed with commercial uses.

¹⁰ Hernandez, Luis C. "Survey of Old Houses in the Community". City of Cudahy. April 1984.

4. 8212 Atlantic Avenue – The identified Colonial Revival structure stands and is located on the same property as a used auto business, small commercial office, and a large truck parking area. The exterior of the structure is weathered and in need of maintenance. While the condition of the structure is poor, it retains many of the original architectural details. The structure was identified as having interesting columns and it was noted that the home was at its original location.



5. 5159 Clara Street – The structure has been removed; the site is now developed with senior residential apartments.
6. 5224 Clara Street – This home, identified in the City's 1984 survey as a Tudor style home, is still in use as a residential unit. The exterior of the structure looks to be in fair condition with many of the original design details still intact. The structure was identified as having an interesting brick design.



7. 5315 River Road - The identified Bungalow style home is still in use as a residential unit. The exterior of the structure looks to be in fair condition. The 1984 report identified the address as 5016 Clara Street. Using the document map, the property was located at 5315 River Road. The structure has since been painted red.



8. 4258 Elizabeth Street – The structure has been removed, the site is now developed with single family attached residential units.
9. 4820 Elizabeth Street – The structure has been removed, the site is now developed with multiple family residential units.
10. 5000 Elizabeth Street – The identified Bungalow style home is still in use as a residential unit. The structural exterior looks to be in fair condition. The structure was identified as having interesting porch construction details and prominent stone columns. The original report indicated that the exterior walls were made up of horizontal wide pattern wood shingles. The walls look to have been updated with wood siding panels.



11. 5016 Elizabeth Street – The identified Bungalow style home is still in use as a residential unit. The exterior of the structure looks to be in fair condition. The structure was identified as having interesting porch details.



12. 5257 Elizabeth Street – The structure has been removed, the site is now developed with single family detached residential units.
13. 4237 Live Oak Street – The identified Chalet style home is still in use as a residential unit. The exterior of the structure looks to be in excellent condition. The structure was identified as interesting based on its original rolled roof.



14. 4316 Live Oak Street – The identified Bungalow style home is still in use as a residential unit. The exterior of the structure looks to be in fair condition. The structure was identified as interesting based on front porch details and wood columns. The original report indicated that the exterior walls were made up of wood shingles. The walls look to have been updated with stucco and no wood columns are visible.



15. 4728 Live Oak Street – The structure has been removed, the site is now developed with multiple family residential units.
16. 5037 Live Oak Street – The structure has been removed, the site is now developed with the Ellen Ochoa Learning Center.
17. 5041 Live Oak Street – The structure has been removed, the site is now developed with the Ellen Ochoa Learning Center.

18. 5309 Live Oak Street – The identified Queen Anne style home is still in use as a residential unit. The exterior of the structure looks to be in fair condition with many of the original details still intact. The structure was identified as interesting based on front porch details and pitched roof.



19. 4446 Santa Ana Street – The identified Tudor style home is still in use as a residential unit. The exterior of the structure looks to be in fair condition with many of the original wood slat details still intact. The structure was identified as interesting based on its condition, gardens, and wood brackets.



20. 4766 Santa Ana Street - The identified Tudor home is still in use as a residential unit. The exterior of the structure is in excellent condition. The 1984 report identified the address as 4768 Clara Street. Aerial photographs show the property is located at 4766 Santa Ana. The structure was identified as interesting based on its interesting porch columns. The original report indicated that the exterior walls were made up of wood boards and shingles. The walls look to have been remodeled with stucco.



21. 4948 Santa Ana Street - The identified Colonial Revival home is still in use as a residential unit. The exterior of the structure is in fair to poor condition but with many of the structure's original details intact. The structure was identified as interesting based on its gable roof.



22. 4956 Santa Ana Street – This home, identified in the 1984 survey as a Colonial Revival home, is still in use as a residential unit. The exterior of the structure is in fair condition. The structure was identified as interesting based on its front façade, Corinthian columns, and wood brackets under the roof and eaves. The home has retained some of the original features but columns were removed as was the chimney.



23. 7315 Wilcox Avenue -This home, identified as a Spanish Revival home in the 1984 survey, is still in use as a residential unit. The exterior of the structure is in fair condition but with many of the structures original details intact. The structure was identified as interesting based on its chimney design.



Scenic Highways

Cudahy does not have any officially designated Scenic Highways or any highways that are considered eligible for Scenic Highway status.

Visual Character

A community's visual character can be defined by the historical development pattern and architectural precedence that has occurred over its history, coupled with the community theming and design elements that have been implemented. Most cities' visual character is divided into sub-areas, each with its own visual pattern.

The visual character of the Atlantic Avenue corridor includes a mix of small one-story commercial uses, parking lots, and a few large commercial shopping centers. Newer commercial uses are generally located in the northern portion of the Atlantic Avenue corridor. In the more southern portions, generally south of Elizabeth Street, many commercial and industrial buildings exhibit deferred maintenance and poor design quality. Atlantic Avenue serves as a primary entry point at the northern and southern entries to the City and is Cudahy's major north-south corridor. Neither entry has prominent gateway features.



Typical Development along the Atlantic Avenue Corridor



Gateway on Atlantic and Florence Avenues, Looking South

Gateway on Clara Street and Florence Avenue, Looking West

The City's eastern entry along Clara Street includes a portion of the Clara Street Bridge that crosses over the Los Angeles River. A half block section of Clara Street at the edge of the City looking west includes an unobstructed tree-lined view into Cudahy made possible because of the elevated height of the Clara Street Bridge.

The Union Pacific railroad right-of-way is the most prominent visual features along Cudahy's western edge. The railroad runs at-grade along Salt Lake Avenue. Just beyond the railroad right-of-way, the general views are of residential and industrial uses in the neighboring cities of Huntington Park and South Gate.



View from Salt Lake Avenue Looking West

Most Cudahy residential areas include a mix of one and two-story multiple family buildings and smaller scale, single family houses. In general, a defining visual feature of Cudahy's residential neighborhoods is the use of perimeter fencing from chain link fencing to more ornate wrought iron fencing. Residential neighborhoods in the northwest area of the city, west of Otis Avenue and north of Clara Street, have a different visual character than other residential neighborhoods in Cudahy. Defined by small lot single family developments with fewer multiple family developments, these areas show a more consistent pattern of maintenance and upkeep. In addition, the lower scale of development in this area and ample development setbacks, give the streets a wider, less dense and busy look and allow for the tree features to stand out.

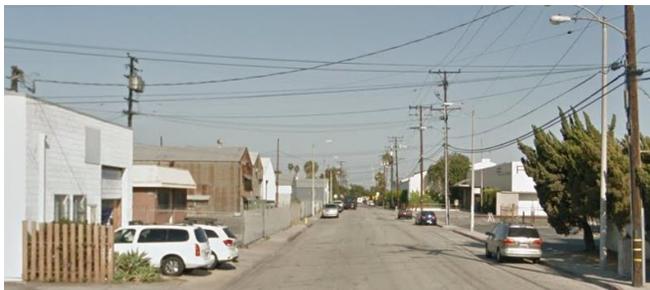


Single Family Neighborhood - Walnut Street Looking West



Well Maintained Single Family Home

In the southern parts of the city, industrial development is characterized by large and boxed-shaped industrial buildings some with brick and stucco exteriors and many with corrugated metal exteriors. Many industrial buildings exhibit deferred maintenance and poor design quality.



Industrial Uses on Cecilia Street, Looking East



Dilapidated Industrial Use

Outdoor Lighting and Night Skies

The City is fully urbanized, with numerous outdoor lighting sources such as street lights, building and parking lot lighting, sports field lighting, illuminated signs, etc. Views of night skies and stars are impacted throughout Cudahy.

Regulatory Framework

The Regulatory Framework section summarizes existing policy documents that affect land uses in the City of Cudahy. These include the City's 2010 General Plan, Zoning Code, and other local and regional planning initiatives. There are no specific plan areas or airport influence areas in Cudahy.

2010 General Plan

The existing General Plan for Cudahy was adopted in 2010 (the Housing Element was updated in 2013.) The General Plan provides a citywide approach to planning for future development. It includes the seven required General Plan elements: Land Use, Transportation, Housing, Open Space (combined with Recreation), Conservation, Noise, and Public Safety, along with an optional Air Quality Element. The General Plan identifies goals, policies and implementation programs related to each of the following chapters:

1. The *Land Use Element* designates the general location, distribution, and extent of the various permitted land uses within the City. The element identifies standards for population density and development intensity for each type of land use.

2. The *Transportation Element* discusses the location and extent of the existing and proposed roadway and circulation improvements. The Transportation Element's scope also addresses alternative means of transportation.
3. The *Open Space and Recreation Element* details plans for the preservation of open space for recreation and the management of natural resources. This element also addresses recreational resources and facilities in Cudahy.
4. The *Conservation Element* addresses the conservation, use, and maintenance of key natural resources.
5. The *Public Safety Element* establishes standards and plans for the protection of the community from a variety of hazards including flood, fire, and geologic hazards.
6. The *Noise Element* examines the existing and future noise environment in the city and establishes policies to encourage noise-compatible uses and provides the framework for noise control in Cudahy.
7. The *Housing Element* evaluates the existing and projected housing needs and establishes goals, policies, objectives, and programs for the preservation, improvement, and development of housing to meet local and regional housing needs.
8. The *Air Quality Element* addresses local and regional air quality, stationary and mobile emission sources in the community, and identifies programs that will be effective in reducing pollutant emissions generated within Cudahy.

The 2010 General Plan Land Use Designations are summarized in **Table 2-4**. The 2010 General Plan Land Use Plan is shown on **Exhibit 2-4**. Reflecting a discrepancy in the 2010 General Plan Land Use Element, the designations listed in the Element and the categories on the land use map do not correspond in all cases. For example, while the General Plan does not mention the Salt Lake Improvement District or the Garden Overlay of the High Density Residential designation, these uses are included in the 2010 General Plan Land Use Plan Map. The General Plan Land Use map also designates several sites as being City-owned or indicated that they are to be acquired. No underlying land uses is identified for these properties.

**Table 2-4
Existing (2010) General Plan Land Use Designations**

2010 General Plan Land Use Designation	Description	Maximum Density (DU/acre)/ Intensity(FAR)	Corresponding Zone District	Acres	Percent of Total
Low Density Residential	Single-family developments on small lots.	9 DU/acre	Single-Family Residential (LDR)	36.1	5.3%
Medium Density Residential	One or two single-family units on a lot or multi-family developments of 12 dwelling units per acre.	12 DU/acre	Light Multiple Residential (MDR)	61.0	9.0%
High Density Residential	Single-family and multi-family developments on lots that are predominantly one-half acre in size.	Lot Size/Density: <1 acre: 16 DU/acre 1-1.9 acres: 20 DU/acre 2-2.9 acres: 25 DU/acre 3+ acres: 30 DU/acre	Medium Multiple Residential – Garden Overlay (HDR-G)	308.9	45.6%
Neighborhood Commercial	Small retail stores located near residential neighborhoods to serve the daily needs of residents.	Max.: 1.0 to 1.5 FAR Average: 0.5 to 1.0 FAR	Neighborhood Commercial (NC)	3.8	0.6%
Community Commercial	Service and retail stores as found along the Atlantic Avenue corridor. Also includes mixed use.	1.0 to 1.2 FAR Mixed use: 35 DU/acre Average: 0.3 to 1.0 FAR	Community Commercial (CC)	80.3	11.9%
Commercial/ Manufacturing	Industrial uses on the City's southern edge.	1.0 to 1.5 FAR Average: 0.5 to 1.0 FAR	Commercial Manufacturing (C-M)	64.6	9.5%
Schools		1.0 to 1.2 FAR	Schools	33.8	5.0%
Parks		N/A	Parks	19.3	2.9%
Civic Center		1.0 to 1.2 FAR	N/A	Not Included in 2010 Land Use Plan Map	
Los Angeles River		N/A	N/A	58.9	8.7%
Other		N/A	N/A	10.0	1.5%
<p>Notes:</p> <ol style="list-style-type: none"> 1. DU/Acre - dwelling unit per acre refers to the number of dwelling units that may be built on a gross acre of land. 2. FAR - floor area ratio refers to the allowable floor area in a structure, expressed as a factor of the net area of the site. The net area of a site is the portion of land which can be built upon, excluding public or private rights-of-way, public open space and flood ways. 3. Corresponding Zone District names are taken from Chapters 20.64 and 20.68 of the Cudahy Municipal Code. 4. The Commercial Manufacturing Designation includes the Salt Lake Improvement District which is shown on the 2010 General Plan Land Use Plan Map but not included in the 2010 Land Use Element. 5. Other includes parcels along River Road, railroad right-of-way, and City properties. 					



Exhibit 2-4
2010 General Plan Land Use Map

Housing Element

The Housing Element for the City of Cudahy is a required element of the City's General Plan. It covers the period from October 15, 2013 to October 15, 2021 and includes extensive background information on current housing, as well as updated policies, programs, and quantified objectives to address meet the existing and projected housing needs of all economic segments of the community. The 2013 Housing Element was certified as being in compliance with state housing element law by the California Department of Housing and Community Development (HCD)¹¹.

The goals, policies, and implementing programs for the City of Cudahy, responding to the assessment of the 1992 Housing Element as well as key issues, trends, opportunities, and constraints outlined in a housing needs analysis and the assessment of the City's housing resources and constraints. The five goals in the Housing Element are:

- Housing Element Goal 1: The City of Cudahy will improve the housing supply and the choice of housing opportunities through private investment and, where necessary, through public action and financing.
- Housing Element Goal 2: The City of Cudahy will promote affordable housing and shelter for all economic segments of the community.
- Housing Element Goal 3: The City of Cudahy will support and provide incentives for the maintenance and rehabilitation of the existing housing stock.
- Housing Element Goal 4: The City of Cudahy will encourage development of a viable urban community consistent with orderly growth and environmental conservation to provide suitable living environments, with access to employment, community facilities, and services.
- Housing Element Goal 5: The City of Cudahy will promote equal access and opportunity to housing regardless of race, religion, sex, marital status, ancestry, national origin, or color.

State law requires that a community provide an adequate number of sites to allow for and facilitate production of the City's regional share of housing units. The primary goal of the RHNA numbers is to act as residential development targets for jurisdictions to achieve during the planning period. Since local jurisdictions are rarely if ever involved in the actual construction of housing units, HCD does not penalize jurisdictions for not meeting RHNA targets, as long as they have allocated enough land for the construction of units and have made a good effort through the implementation of housing policies and programs to help meet the RHNA targets. SCAG's Regional Housing Needs Assessment (RHNA) estimated the seven-year (2014-2021) future housing construction need for Cudahy at 318 units. To determine whether the City has sufficient land to accommodate its share of regional housing needs for all income groups, the City must identify "adequate sites" with appropriate zoning and development standards. Compliance with this requirement is measured by the jurisdiction's ability to provide adequate land to accommodate the RHNA. Potential housing sites identified in the 2013 Housing Element are shown in the General Plan Land Use Map in **Exhibit 2-4**. If changes in development standards reduce residential capacity on these identified sites, alternative sites will have to be identified to ensure continued certification of the City's Housing Element.

Aesthetics

The current General Plan contains many policies addressing the issue of maintenance and enhancement of the visual character of the City, generally in the Land Use Element. The following policies can be found in the Land Use Element:

- Land Use Element Policy 1.2. The City of Cudahy will encourage development that complements and enhances the community.
- Land Use Element Policy 1.5. The City of Cudahy will establish a community identity and pride through the emphasis on high quality development.
- Land Use Element Policy 2.1. The City of Cudahy will encourage and promote the development of safe and attractive residential developments.

¹¹ Allen, Michael. Acting Community Development Director (2015, December 14). Email Communication.

- Land Use Element Policy 2.2. The City of Cudahy will enforce the maintenance of housing units to prevent the deterioration of neighborhoods.
- Land Use Element Policy 2.3. The City of Cudahy will encourage programs and citizens' efforts directed toward neighborhood improvement and beautification.
- Land Use Element Policy 2.5. The City of Cudahy will encourage the planting of street trees and the maintenance of parkways along major roadways.
- Land Use Element Policy 3.5. The City of Cudahy will continue to implement landscaping improvements along the length of Atlantic Avenue.
- Land Use Element Policy 3.6. The City of Cudahy will continue to encourage the improvement of existing store facades on Atlantic Avenue.
- Land Use Element Policy 3.7. The City of Cudahy will actively require the construction of high quality commercial developments.
- Land Use Element Policy 4.2. The City of Cudahy will promote the development of modern, attractive and safe industrial facilities that do not produce detrimental effects on surrounding properties and the city as a whole.
- Land Use Element Policy 4.4. The City of Cudahy will encourage the maintenance, rehabilitation, and beautification of the existing industrial properties.

Zoning Code

Zoning is the means by which cities implement their General Plan. The City of Cudahy's Zoning Code translates the long-term goals and policies of the General Plan into the regulations and guidelines used for decision-making on future developments. While the General Plan and Zoning designations are consistent, the Zoning Code identifies specific uses allowed within each zoning district and provides specific development requirements, such as density, setbacks, height, size, and development character and appearance. The City of Cudahy's Development Code is contained in Title 20 of the Municipal Code. Zone districts implementing the General Plan Land Use Designation are included in **Table 2-4** and shown on **Exhibit 2-5**. Key development standards by zone district are shown in **Table 2-5**.

**Table 2-5
Development Standards**

Development Standards	Single-Family Residential (LDR)	Light Multiple Residential (MDR)	Medium Multiple Residential – Garden Overlay (HDR-G)	Neighborhood Commercial (NC)	Community Commercial (CC)	Commercial Manufacturing (CM)
Density	2,500 sq. ft./unit	4,000 sq. ft./unit	3,000 sq. ft./unit			
Yards	Front: variable Side: 5' Rear: 10'	Front: variable Side: 5' Rear: 5' (+2' for each additional story)	Front: variable Side: 5' (+2' for each additional story) Rear: 10'	Front: variable Side: 10' when adjoining Res. Rear: 20' when adjoining Res.	Front: variable Side: 10' when adjoining Res. Rear: 5' when adjoining Res.	Front: 10' Side: none. 10' on corner lots Rear: 30' when adjoining Res.
Lot Coverage/ Open Space	250 sq. ft./unit or 25% of the lot area/unit (exclusive of the front yard setback)	Private: 150 sq.ft./unit Common: 280 sq.ft./unit	Private: 150 sq.ft./unit Common: 280 sq. ft./unit	50%	50%	60%
Building Height	Two stories or 35' (whichever is less)			35'	Two stories or 35' (whichever is less)	Two stories or 30' (whichever is less)
Distance Between Buildings	10' (main buildings) 5' (accessory buildings)					
Parking	2-car garage/unit, 1 guest parking space per unit					
Fences, Hedges & Walls	Front: 42" solid materials; 48" wrought iron Side/Rear: 96"					
Minimum Living Area	1,100 sq. ft.		1 bedrm: 700 sq. ft. 2 bedrm: 900 sq. ft. 3 bedrm: 1,100 sq. ft. 4+ bedrm: 1,100 sq. ft. plus 150 sq. ft. for each additional			
Source: City of Cudahy Zoning Code, Title 20. 2015						

Surrounding Land Use Plans

Although the City does not have control over land use decisions outside its City limits, coordination with surrounding jurisdictions is important to minimize potential conflicts among adjacent land uses. The City of Bell Gardens is not included as it is separated from the City by the Los Angeles River and the I-710 Freeway. Jurisdictions adjacent to the City include:

- A. City of Bell: Land uses adjacent to the City's northern boundary are consistent with General Plan land uses in Cudahy. In the areas of Bell abutting Cudahy, properties on Atlantic Avenue are designated for Commercial uses and the rest of the properties are designated for medium density residential development.
- B. City of Huntington Park: The City of Huntington Park abuts the City's western boundary north of Santa Ana Street. Land uses in this part of Huntington Park are designated for lower density residential uses and are separated from Cudahy by the railroad right-of-way. Potential conflicts can occur in the Huntington Park's adjacent residential areas south of Olive Street as these are located across from industrial uses in Cudahy.
- C. City of South Gate: The City of South Gate abuts Cudahy along its southern boundary and also its western boundary south of Santa Ana Street. Consistent with uses in Cudahy, land uses in these parts of South Gate designated and developed with industrial uses.

Multi Jurisdictional Plans

Southern California Association of Governments (SCAG)

Within the greater Los Angeles Metropolitan Area, regional planning efforts are underway to provide a regional context for planning, and ensure consistency and encourage collaboration across city borders. These planning efforts are led by the Southern California Association of Governments (SCAG), which undertakes regional planning efforts for the six-county SCAG region consisting of Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial counties. SCAG's planning efforts focus on developing strategies to minimize traffic congestion, protect environmental quality, and provide adequate housing throughout the region.

State law requires that Regional Transportation Plans (RTP) be developed to address long-range transportation issues, and to help local and state decision makers shape the future of California's transportation infrastructure. The RTP provides a framework for transportation improvement projects that will allow the region to meet future mobility goals and air quality requirements in a financially-constrained environment. The Regional Transportation Plan (RTP) is developed, maintained, and updated by SCAG. On April 4, 2012, the SCAG Regional Council adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future. The 2012–2035 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375¹², improve public health, and meet the National Ambient Air Quality Standards as set forth by the federal Clean Air Act. It contains a Sustainable Communities Strategy that relies on increased investment in public transit and more walkable, transit-accessible land use patterns to reduce pollution. The City of Cudahy is a member of the Gateway Cities Council of Governments (COG), which developed a subregional Sustainable Communities Strategy (SCS) under SB 375 provisions. The subregional document submitted by Gateway Cities COG was incorporated into the regional 2012–2035 RTP/SCS in their entirety, and as such, the policies and strategies included are endorsed by the regional plan for implementation in the sub-region.

¹² SB 375 essentially seeks to reduce passenger and light truck vehicle miles traveled (VMT), and the resulting greenhouse gas (GHG) emissions, SB375 and is one of many GHG emission reduction measures that the California Air Resources Board (ARB) is relying upon to meet the Assembly Bill 32-Global Warming Solutions Act of 2006 (AB 32) target of reducing GHG emissions statewide to 1990 levels by 2020.

Key Baseline Issues

Population and Housing

Cudahy residents are younger, have lower incomes, lower educational attainment and more of them rent the homes they live in compared with residents in the region. Eighty-two percent of Cudahy households earned less than 80% of the Area Median Income and were considered lower-income. Cudahy has two and half times more single-parent families than all of Los Angeles County and has one of the largest average household sizes. General Programs should address:

- Incentivizing the development of ownership units and large-unit (and multigenerational) residential developments.
- Prioritizing the provision of educational resources and workforce training.
- Creative approaches to the provision of adequate park and recreation amenities in a dense urban environment.
- Healthy community strategies that address the overall well-being, physical activity, nutrition, and access to health care and fresh food for the City's residents.
- Transportation policies that prioritize the need for alternative forms of transportation and pedestrian safety.

Residential Land Uses

- Recent residential development consists of the recycling of single family structures on large lots to higher density residential developments. As demand for residential development continues to increase, the City should identify areas to focus future, higher density development and areas to preserve lower density residential environments. There are attractive and viable residential neighborhoods in Cudahy that should be preserved. Among these are single family developments on small lots.
- The City of Cudahy's homeownership rate is just 17.3%. In addition to tangible financial benefits to homeowners, homeownership brings substantial social benefits for communities as a whole. Homeowners move far less frequently than renters, and hence are embedded into the same neighborhood and community for a longer period. Homeowners also have a financial interest in ensuring that their homes are well maintained. Future residential development should provide appropriate opportunities for expanding home ownership in Cudahy.
- The 2010 General Plan addresses the need for increased lot consolidation for higher density residential developments to accommodate better building and site design, enhanced landscaping, and more effective on site circulation patterns. In Cudahy, lot consolidation is rarely included in residential development projects. This issue is still relevant and a new approach or creative incentives are needed to need to make lot consolidation a desirable opportunity for local developers.
- Perimeter fencing is a prominent feature in Cudahy's residential neighborhoods. Fenced front yards are considered typical in heavily Hispanic neighborhoods. Theories about the preponderance of fencing in Hispanic neighborhoods, specifically wrought iron fencing, point towards re-creating residential neighborhoods from their origin countries where delineation of private space is necessary and moving the private home space closer to the street is desirable. Fencing, aesthetic, and maintenance issues in residential neighborhoods should be proactively considered and addressed as residential uses redevelop.

Commercial Land Uses

- The commercial corridor along Atlantic Avenue has undergone revitalization in recent years with a number of new centers constructed. However, Cudahy's commercial base can still be expanded to support its sizable population. There is a lack of variety of restaurants and retail stores. There are opportunities to increase the

number, location, and variety of commercial offerings and dining establishments throughout Cudahy, but particularly along Atlantic Avenue. Commercial intensification opportunities should be identified, especially in the City's highly traveled activity centers. These opportunities include shopping centers with large swaths of parking, underutilized commercial uses along Atlantic Avenue (such as the U-Haul property on the northeast corner of Atlantic Avenue and Elizabeth Street), and underutilized commercial neighborhood commercial areas (such as the corner of Clara Street and Wilcox Avenue). It is also possible that development could occur in the place of mobile home parks currently located along the corridor. However, this would require careful, subsidized relocation of residents to affordable housing in the vicinity.

- In Cudahy's commercial areas, interest has been expressed for the development of fully or partially vacant sites owned by the City's RDA successor agency (City of Cudahy Economic Development Corporation). Several large vacant commercial and industrial sites are also owned by the City and are currently undergoing an RDA asset review by the State of California. Disposition and development of the sites is uncertain at this time. At such time that these sites become available, they will represent some of the last large development opportunities in this built out city. Future development on the sites must provide benefits to the Cudahy community through expansion and diversification of the local economy.

Industrial Land Uses

Industrial land uses are limited to the southern portion of the City. Many larger industrial properties are vacant or showing signs of aging and deferred maintenance. As demand for residential and commercial uses increases, a strategy to retain and enhance specific types of employment-generating industrial land uses and activities is needed. Incentives should be put into place to attract cleaner and lighter industrial uses; such as high tech or business park uses. Due to the lower cost of land in Cudahy and proximity to Downtown Los Angeles, the City's industrial areas would be ideal for office and research and development uses such as the business incubator developments emerging in areas of West Los Angeles and El Segundo. Future industrial development should help to diversify Cudahy's economy and advance the economic position of its residents.

Land Use Incompatibility

Land use interfaces exist in many areas where residential neighborhoods abut commercial and industrial uses. Mobile home residents are especially susceptible to the effects of land use incompatibility as many of the City's mobile home parks are located in commercial and industrial areas. Due to Cudahy's dense and fully developed nature, integrating mobile home residents into other residential neighborhoods is not realistic. As commercial and industrial areas redevelop, development performance standards and site planning/design considerations must be put in place to minimize land use conflicts.

3. FISCAL CONDITIONS

Introduction

With the elimination of redevelopment in California, cities throughout the state have been seeking creative and innovation alternatives to promote commercial activity and to attract/retain businesses. For many years, much of the economic development focus at the local level emphasized financial incentives through redevelopment. These include the acquisition and disposal of real property, funding for loans and grants, marketing and promotion, property and structural rehabilitation (i.e., façade improvements, seismic retrofit, code enforcement, etc.), public capital improvement projects, and the development of affordable housing. Agencies frequently used tax increment funds to enter into public-private partnerships in order to encourage business growth and eliminate blight.

Since the State of California has opted to assert control over locally-generated tax increment funds, small to medium-sized cities that came to rely on these funds must now turn to other methods to promote their communities and create a business-friendly economic environment. Many of these cities have begun to actively reassess permit processes and fee regulations, establish closer ties with local real estate brokers, reprioritize capital improvements, seek out grants, work with merchants to establish business improvement districts, and update their general plans in order to reexamine long-standing zoning and land use assumptions.

In order for Cudahy's updated General Plan to effectively address future public policy issues, it is important that residents, businesses, and other stakeholders have a thorough understanding of City's current status relative to the its fiscal condition, recent economic development goals and activities, local and regional trends, and potential growth opportunities.

Environmental Setting

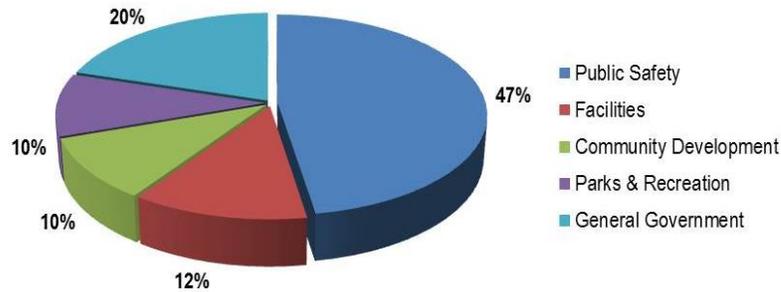
Much of Cudahy's ability to influence the course of local economic events depends on its own fiscal health and stability. Whether it's providing desired services, facilities, or infrastructure, the City plays a key role in defining the overall quality of life. The major challenge now facing the City is to find ways of closing the "gap" between annual General Fund budget appropriations and annual revenue without relying on fund balance reserves.

The economic downturn that began in 2008 has had a significant impact on general fund revenues in cities throughout the State. Two of Cudahy's critical revenue sources, the Bradley Burns Sales Tax and the local 8% Utility Users Tax, are both susceptible to local, regional, and national economic fluctuations with sales taxes being a direct indicator of economic instability. Together, these two sources represent 35% of all projected General Fund revenue for fiscal year 2015-16.

The problem for Cudahy is exacerbated by the fact that a large portion of the General Fund budget is allocated to public safety. **Exhibit 3-1** shows the percentage allocation among the major General Fund cost centers for 2015-16.

Exhibit 3-1
Allocation of \$8,222,805 General Fund Budget (Fiscal Year 2015-16)

Source: City of Cudahy 2015-16 Adopted Budget



Given the large portion of the budget is devoted to the public safety contract with the Los Angeles County Sheriff's Department, and because the City Council's control over these costs is limited to adjusting service levels, most of the City's flexibility for closing the gap between annual revenues and expenditures comes at the expense of other City services. City documents have depicted the revenue "gap" as follows:

Table 3-1
General Fund Revenue Gap

Fiscal Year	Revenue Gap
2011-12 Actual	\$508,589
2012-13 Actual	\$1,226,670
2013-14 Actual	\$1,380,830
2014-15 Amended Budget	\$947,498
2015-16 Adopted Budget	\$1,118,055

Source: City of Cudahy Annual Financial Statements (Fiscal Years 2011-12 through 2013-14), City of Cudahy 2015-16 Adopted Budget

For fiscal year 2011-12, the City's Financial Statements indicate that the General Fund had an opening fund balance of \$7,530,636. Since then, some \$5.2 million has been used to fill the annual revenue gap.

Filling annual deficits with General Fund reserves may be viewed by some as an acceptable short-term solution. However, the City must address the structural problems associated with expenditures and revenues in order to ensure that adequate fund balances are preserved.

Capital Projects

Although the City of Cudahy does not have a formally adopted Capital Improvement Program, the 2015-16 Budget provides resources from various governmental funds for a mix of projects relating to streets (i.e., Gas Tax street maintenance, Atlantic Avenue Improvements, etc.), facilities (i.e., Clara Bridge Project, Lugo Park Renovation, etc.), and Infrastructure (i.e., street lighting). It makes use of a wide variety of funding sources such as Gas Tax, Measure R, Proposition 18, Propositions A and C, Community Development Block Grants (CDBG), and County Park Bonds. For 2015-16, the City Council also allocated \$375,000 from the General Fund reserve for the Lugo Park Soccer Field and Restroom Rehabilitation Project.

As the City has continued to experience shortfalls in annual revenues against budgeted operating expenditures, it is constrained in its ability to support capital projects with discretionary General Fund dollars. In addition, the elimination of Redevelopment by the State has removed a key component for addressing the need for new public infrastructure.

This leaves the City in the position of having to rely on restricted funding sources and grants for capital expenditures and limit its General Fund support to the leveraging of other revenues and/or providing required matching funds.

Assessment of Existing General Plan and Zoning Code

The 2010 General Plan Update describes Cudahy as a fully urbanized community and as one of the smallest incorporated cities in California in terms of its 692 acre (1.08 square mile) land area. Some 62% of the developable land is residential with 69 acres of industrial uses concentrated in the southerly portion of the City. The 45 acres of commercial development are largely confined to the Atlantic Avenue corridor, which runs the length of the City from north to south.

The 17% of Cudahy’s land area devoted to commercial and industrial economic development as follows:

**Table 3-2
Description of Commercial and Industrial Land Uses**

Land Use Designation	Description	Citywide Area	Percent of Total
Neighborhood Commercial	Smaller commercial establishments and neighborhood shopping centers.	4.6 acres	0.7%
Community Commercial	Larger commercial centers that include shopping centers, markets, offices, specialty retail centers located along the Atlantic Avenue corridor.	40.7 acres	6.1%
Industrial	Industrial and manufacturing uses concentrated in the southerly portion of the City and along the Salt Lake Avenue corridor.	68.9 acres	10.3%

Source: MIG, GIS 2015

Overall, the provisions of the current Zoning Code are consistent with best practices found in most California jurisdictions and provide for the following commercial/industrial designations and allowable uses:

**Table 3-3
Commercial and Industrial Zoning Designations**

Land Use	Zoning Map Designation	Description
Neighborhood Commercial	NC	Service stations, bakery, retail stores, offices, laundries, food markets, and similar uses.
Community Commercial	CC	Retail stores, offices, trailer parks, churches, schools, auto sales, banks, markets, restaurants, and similar uses.
Community Manufacturing	C-M	Retails stores, auto sales, markets, laundries, wholesale business, offices, and similar uses.
Manufacturing and Industrial	MI	Manufacturing uses, machine shops, bulk storage, wholesale business, restaurants, assembly, and similar uses.

Source: City of Cudahy Municipal Code, 2010 General Plan Update

In addition, the Zoning Code also designates special land use zones for the Cudahy Redevelopment Area, the Regional Center Overlay, the Civic Center Overlay, and the Salt Lake Improvement District.

Despite considerable efforts over the past 10 years to introduce new commercial and retail businesses to the Atlantic Avenue corridor, the City has still experienced retail sales leakage in areas such as service stations, grocery stores,

building materials/supplies, clothing and apparel, and full service restaurants.¹ Based on data produced by the State Board of Equalization, retail sales in Cudahy actually decreased by 34.4 percent between 2005 and 2013.²

General Plan Policies and Goals

Since Cudahy is largely built out, one of the primary goals of the 2010 General Plan Update was to facilitate and promote the revitalization of existing residential, commercial, and industrial properties by addressing incompatible land uses and assembling individual properties into larger, more economically feasible parcels. Other specific land use policies focused on attracting and encouraging commercial/industrial uses that are compatible with surrounding properties, insuring adequate access and parking, addressing façade and building design consistency, providing for necessary public infrastructure improvements (i.e., street landscaping), and assisting existing businesses that generate employment opportunities.

An emphasis on job creation was also one of the cornerstones of the General Plan's Economic Development Goal. The General Plan envisioned that an Economic Development Strategy would seek to expand and diversify the local employment and tax base, encourage cooperation with other local and regional stakeholders (i.e., Chamber of Commerce), and work with local financial institutions to establish low-interest loan pools for business start-up, expansion, and retention projects. Notwithstanding this emphasis, however, Cudahy witnessed a decrease of 585 jobs in the community (16%) between 2007 and 2013 with nearly half of the loss tied to manufacturing.³ This job loss is not reflective of overall population trends that have stayed relatively level (there was an overall population decrease of just 66 persons between 2000 and 2014).⁴ Cudahy's 2014 unemployment rate was 9.4% with a labor force of 10,923.⁵

Several other General Plan policies and goals have also emphasized the City's direct involvement with promoting economic development in the community:

- Development Controls – Implement the General Plan and Zoning Code by providing development incentives, density bonuses, and incentive requirements.
- Development Review – Actively review development proposals to insure compliance with General Plan and Zoning Code requirements and to assess potential environmental issues and mitigations.
- Design Guidelines – Develop design guidelines for new development.

Economic Development Opportunities

The City's ability to implement its General Plan goals relating to economic development is largely dependent on two major factors: the amount of available City resources that can be used (time, staffing, expertise, funding, etc.) and the number of vacant and/or underutilized properties that can be assembled and developed.

Vacant Land

In 2013, the City updated the Housing Element of its General Plan. This is a State-mandated plan that addresses the manner in which a jurisdiction will support housing development within its corporate boundaries and how it will adequately meet the existing and projected housing needs of all segments of the population. This "housing need" is based on a formula administered by SCAG that seeks to allocate region-wide needs to individual jurisdictions.

¹ City of Cudahy, *Economic Development Report*

² Southern California Association of Governments (May 2015). *Profile of the City of Cudahy*.

³ Southern California Association of Governments (May 2015). *Profile of the City of Cudahy*.

⁴ Southern California Association of Governments (May 2015). *Profile of the City of Cudahy*.⁴

⁵ Gateway Cities Council of Governments, *Site Selection Tools - Cudahy*. Retrieved from <http://www.gatewaycog.org/gateway/site-selection-tools>

Covering an eight-year planning period, the Housing Element is closely linked to the General Plan's Land Use Element in terms of specifying land that can be utilized for housing development. The goals and policies of Cudahy's Housing Element include the rehabilitation of existing housing stock; development of new housing to relieve overcrowding; and the maintenance of affordable housing for low income households, special needs households, and overpaying households.

The State law governing the creation of a Housing Element requires the City to identify how much housing can be constructed to accommodate the community's allocated need. This includes a site-specific land inventory that contains appropriate zoning, development standards, and infrastructure capacity to accommodate new construction. The law also permits non-residentially zoned sites to be included in the inventory so long as the jurisdiction commences rezoning efforts early in the eight-year planning period.

The 2013 Housing Element update produced a Vacant Land Inventory identifying 27 parcels throughout the City, divided into 11 distinctive sites, which could be considered as candidates for housing development in order to address the 318-units allocated to Cudahy by SCAG. Five of these sites (18 parcels) are zoned Community Commercial, another five sites (5 parcels) are zoned High-Density Residential-Garden Overlay, and one site (4 parcels) is zoned Community Commercial & Community Manufacturing. The Housing Element suggests rezoning these sites to provide greater permissible housing densities. Although the City has established a process for granting density bonuses for particular developments, it has deferred any rezoning decisions relative to the CC and HDR zones until after a comprehensive update to the General Plan.

Redevelopment

The City's Community Development Commission ("CDC") was envisioned to spearhead the implementation of many of the General Plan's policies and goals for commercial/industrial economic development. The former Redevelopment Agency was organized in September 1975 and changed its name to the CDC in 1977. With the exception of certain land annexed from the City of Bell, the entire City of Cudahy was incorporated into the 711-acre Redevelopment Project Area. The Redevelopment Plan for the Project Area was adopted in 1977 and subsequently amended four times.

In 2011, the Governor signed into law the first of several bills that would eliminate redevelopment in California. The legislation adopted since then, along with a number of court decisions, imposed a complex mechanism for agencies to employ for "winding down" their operations and disposing of any real property acquired. This includes the preparation and submittal of a Long Range Property Management Plan ("LRPMP") in which an agency must identify the recommended disposition of all of its property within the following context:

- Retention of the property for governmental use
- Retention of the property for future development
- Sale of the property
- Use of the property to fulfill an enforceable obligation.

The former Cudahy CDC held title to 25 parcels located within the boundaries of the RDA Project Area. These were acquired with a variety of funding sources and were intended to facilitate the elimination of blight in the Project Area through the adopted Redevelopment Plan. Most of these acquisitions were intended to allow for the assembly of larger sites that could then be marketed for development. As a result, the LRPMP has grouped the 25 parcels into six different opportunity sites based on the parcels' proximity to one another (shown in **Table 3-4** and **Exhibit 3-2** below). The Successor Agency to the Cudahy CDC has recommended that these properties be retained by the City for future development consistent with the former Redevelopment Plan and Five-Year Implementation Plan.

**Table 3-4
Long Range Property Management Plan – Property Inventory**

Site No.	Vicinity Location	Site Area	APN	Zoning	Current Use
1	Elizabeth Street, east of Park Avenue	0.94 acres	6224-001-014 6224-001-015	HDR-G HDR-G	Residential - Single Family Residential - Single Family
2	Atlantic Avenue and Santa Ana Street	1.02 acres	6224-018-008 6224-018-071* 6224-018-068* 6224-018-070 6224-018-069*	HDR-G CC CC CC CC	Residential – Multi-Family Vacant Commercial Residential – Multi-Family Residential – Multi-Family
3	Santa Ana Street, west of Atlantic Avenue	1.35 acres	6224-019-014*	CC	Vacant
4	Atlantic Avenue and Cecilia Street	2.47 acres	6224-022-001 6224-022-004* 6224-002-002* 6224-022-012* 6224-022-003*	CC CC CC CC CC	Commercial Building Vacant Residential – Single Family Office Building & Shed Vacant
5	Atlantic Avenue and Patata Street	2.10 acres	6224-034-014* 6224-034-032* 6224-034-040* 6224-034-041*	CC CC CC CC	Vacant Partial Commercial Building Partial Commercial Building Partial Commercial Building
6	Atlantic Avenue and Clara Street	1.66 acres	6226-022-002 6226-022-008* 6226-022-019 6226-022-020 6226-022-023 6226-022-022* 6226-022-021 6226-022-024	CC CC CC CC CC CC CC CC	Residential – Multi-Family Retail 12-Unit Motel 51-Unit Motel Vacant Vacant Vacant Vacant

Source: City of Cudahy Successor Agency Long Range Property Management Plan

* Fourteen of the parcels listed in the LRPMP are also included in the Housing Element's Vacant Land Inventory as potential sites for housing development.

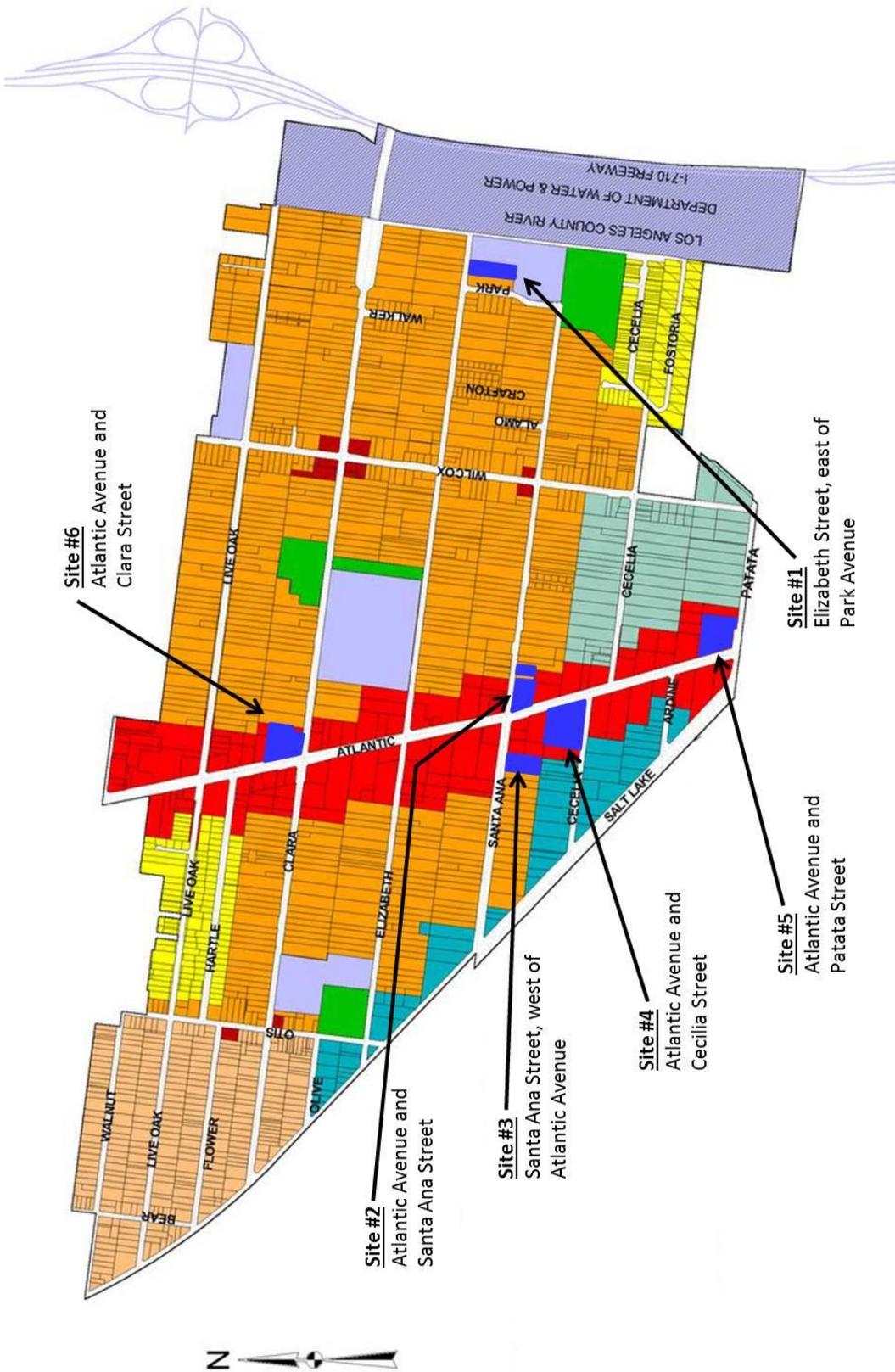


Exhibit 3-2 Location of LRPMP Opportunity Sites

Source: Successor Agency Long Range Property Management

These six sites afford the City the best opportunity to implement future policies and goals concerning economic development. However, since 14 of the 25 individual properties are also included in the Housing Element as potential housing development sites, great care must be taken to insure that all alternative land uses are evaluated and prioritized. An emphasis on mixed use commercial and industrial/manufacturing would help to address both the community’s employment and tax revenue needs.

Strategic Planning Goals and Objectives

In July 2014, the City began a Strategic Planning process that utilized a SWOT approach to assess the organization’s strengths and weaknesses and to identify the opportunities that are available as well as the threats that are faced. Understanding these factors can help to specify organizational or project goals, identify internal and external factors that can help or hinder goal achievement, match strengths and opportunities, and convert weakness and threats to strengths and opportunities.

The SWOT analysis generated the following major stakeholder observations relating to economic development:

- **Strengths** – Strong ethnic community base, strong relationships with regional elected officials and the Los Angeles Unified School District.
- **Weaknesses** – Ongoing budget problems (General Fund revenue gap, lack of revenue generators, unbalanced budget, lack of staff/organizational capacity, poor customer service, inadequate public facilities, etc.), no economic development efforts (no Chamber of Commerce or business retention programs, lack of communication and community outreach, etc.), overall community image (graffiti, Code Enforcement, trash dumping, etc.).
- **Opportunities** – Create plans for Economic Development and Revenue Generation, enhance public safety.
- **Threats** – Continuing loss of businesses, regional business competition, shrinking revenue base, deteriorating infrastructure.

Based on the general conditions of the community identified through the SWOT exercise, the following Goals have been established to address economic development in Cudahy:

**Table 3-5
Strategic Plan Goals – Economic Development**

Economic Development	
Goal 1	Re-do the Zoning Code
Goal 2	Create a Chamber of Commerce
Goal 3	Create a Business Attraction and Retention Program
Goal 4	Create a business-friendly environment
Goal 5	Create economic incentives
Goal 6	Branding the City
Revenue Generation	
Goal 1	Casino
Goal 2	Plaza de Cudahy
Goal 3	Create Business Development Program
Goal 4	1% Sales Tax
Goal 5	Hire a Grant Writer
Goal 6	Explore Fees and Permits
Source: City of Cudahy Strategic Planning Workshop Final Report (July 12, 2014)	

Other applicable goals include improving communication (i.e., create City newsletter, revamp City website, utilize e-government, make better use of social media), improving customer service, and addressing staffing issues (i.e., training, mentoring, professional development).

To date, the City has published the first newsletter/magazine, ONE; updated the City website; and has initiated the branding process.

Marketing of Economic Development Opportunities

Several of the Strategic Plan goals seek to generate greater City involvement with the attraction, promotion, and retention of businesses in the community. Currently, there is little or no direct outreach to commercial, retail, or industrial businesses. The City's "Business Assistance Program" involves the use of Community Development Block Grant funds to help offset the cost of Business License staff members who assist applicants in completing City forms. However, this service is not advertised nor marketed.

Other sources of information for people looking for business opportunities in Cudahy include:

- **Gateway Cities** - The Gateway Cities Council of Government has created an economic development website for its 31 members that include demographics, a Business Map, transportation information, labor force statistics, a Community Comparison feature, and a business site selection feature. There is currently no link from the City of Cudahy's website to the Gateway Cities website.
- **SCAG** – The Southern California Association of Governments has produced Community Profiles for its member agencies that provide statistical information about community demographics, housing, transportation, retail sales, etc. The City has provided an online link under it's "About City" page to the SCAG website for accessing Cudahy's 2015 Community Profile.

This page intentionally left blank.

4. TRANSPORTATION AND TRAFFIC

Introduction

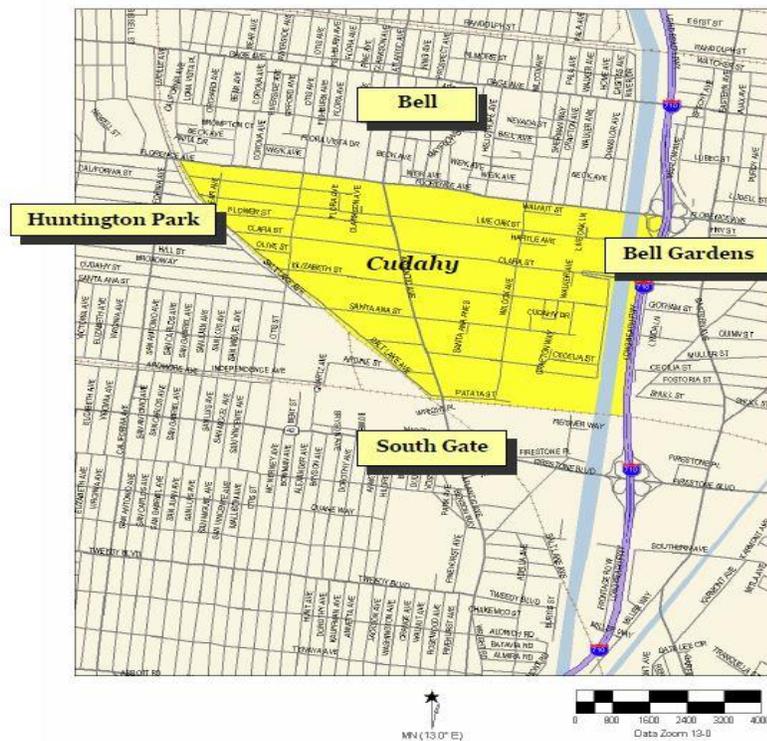
This chapter documents the 2015 transportation conditions for Cudahy. Existing conditions data was compiled from information provided by the City of Cudahy, recent plans and studies, field observations, and field data collection. The Cudahy transportation system includes:

- The existing roadway system;
- Public transit system;
- Bicycle and pedestrian transportation facilities;
- Local freight system; and
- Existing operating traffic conditions and levels of service (LOS).

Environmental Setting

Cudahy is an urban community with approximately 24,000 residents. It is located approximately 10 miles south of downtown Los Angeles. It is also located just south of a heavily industrial district in the Gateway Cities area of Los Angeles County that includes the cities of Los Angeles, Vernon, Huntington Park, Commerce, Montebello, and Santa Fe Springs. **Exhibit 4-1** provides an overview of the City of Cudahy and neighboring jurisdictions.

**Exhibit 4-1
City of Cudahy Overview**



Transportation System, 2015

Cudahy's transportation system consists of a roadway network including Atlantic Avenue, collector streets, and local streets. The Long Beach Freeway (Interstate 710) is located just east of Cudahy. The City is centrally located to provide Cudahy with convenient access to many parts of Southern California.

Access to the I-710 is provided by two major arterials located just beyond City boundaries: Florence Avenue (north of Cudahy) and Firestone Boulevard (south of Cudahy). Florence Avenue is a major roadway that directly connects to I-710, providing regional access to Cudahy and neighboring cities. As a result, Florence Avenue experiences heavy traffic congestion during peak periods. Wilcox Avenue and Atlantic Avenue provide local access to Florence Avenue, while Atlantic Avenue provides access to Firestone Boulevard to the south.

Atlantic Avenue, a major north-south arterial extending through Cudahy, largely serves as an anchor to the city's transportation system. Other key north/south roadways include Salt Lake Avenue, Wilcox Avenue, and Otis Avenue, each providing access to neighboring cities. Clara Street and Santa Ana Street are two primary east/west roadways. All of the streets in Cudahy consist of two travel lanes, with the exception of Atlantic Avenue and Santa Ana Street.

The street network within Cudahy generally follows a grid pattern; except for Salt Lake Avenue, which follows the curve of the railroad tracks. Atlantic Avenue is a regional highway that extends north to Alhambra and south to Long Beach. **Exhibit 4-2** displays the current street classifications.

Highway System

Freeways

The Long Beach Freeway (I-710) is located just east of Cudahy. Florence Avenue provides local access to I-710. I-710 serves as one of the most important freight transportation corridors in the United States, connecting the Ports of Los Angeles/Long Beach to major national freight transportation routes.

Major Highways

Major highways are designed to move large volumes of traffic through the community to other major arterial roadways or freeways. Atlantic Avenue is the only major highway in Cudahy. Florence Avenue, located to the north of the City, would also be included in this street classification.

Collector Streets

Collector Streets are designed to move traffic from local streets to major highways. The primary function of collector streets is to move traffic through the individual neighborhood onto major highways, such as Atlantic Avenue. Otis Avenue, Salt Lake Avenue, Wilcox Avenue, Clara Street, and Santa Ana Street are classified as collector streets.

Local Streets

Local streets provide access to individual parcels and generally have one travel lane in each direction with on-street parking permitted on both sides of the street. The majority of the streets have pavement widths ranging from 40 feet to 60 feet. Patata Street, Live Oak Street, and Cecelia Street fall under this classification.

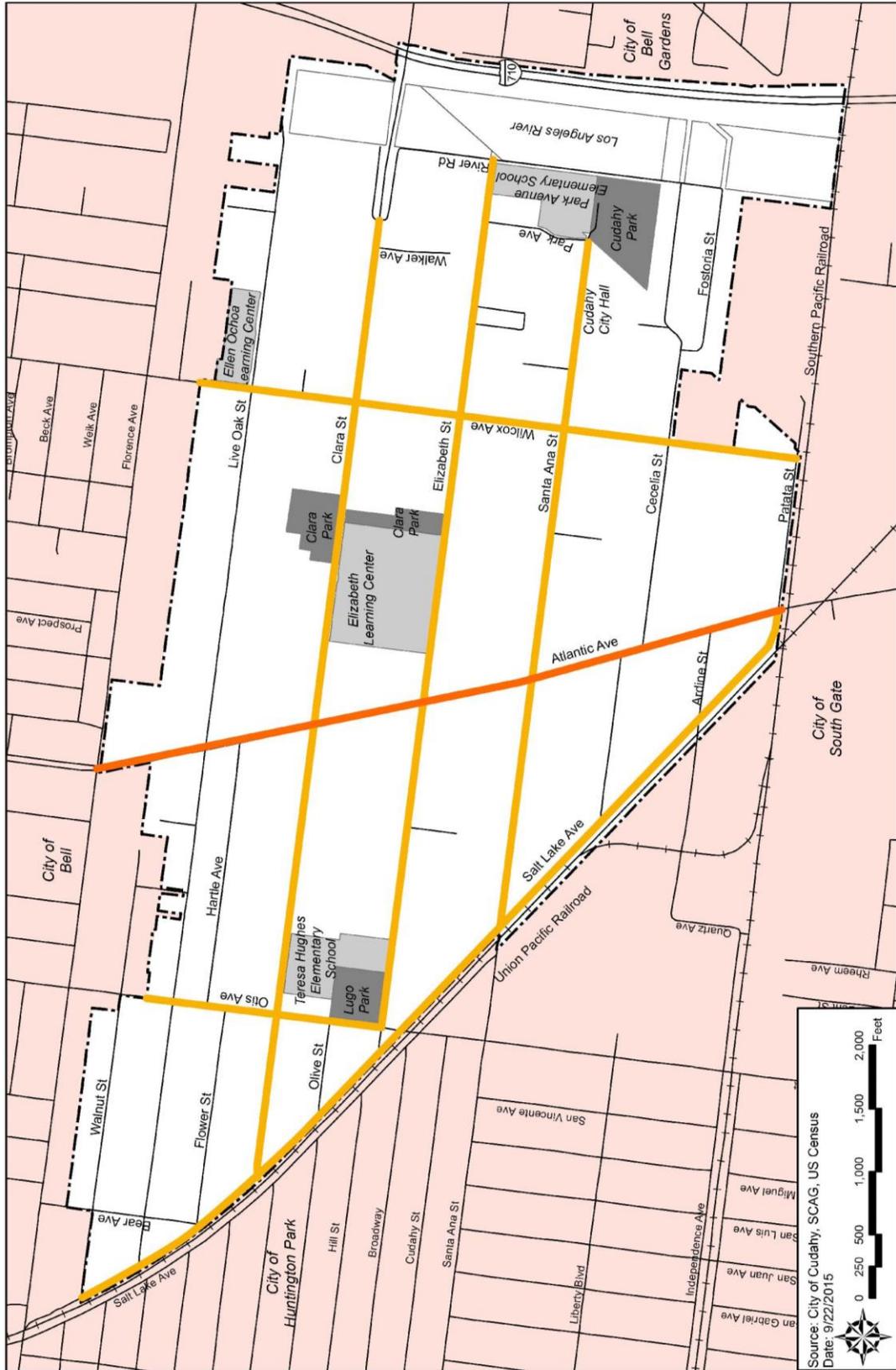


Exhibit 4-2
Street Classifications

BASE MAP FEATURES

- Cudahy Boundary
- Local Streets
- Major Highways
- Railroads
- Collector Street

Source: City of Cudahy, SCAG, US Census
Date: 9/22/2015

Public Transportation System

Several Metro bus transit lines connect Cudahy to local and regional destinations. Additionally, the City operates the Cudahy Area Rapid Transit circulator. **Table 4-1** displays bus line operational information; **Exhibit 4-3** shows the line routes within Cudahy:

Table 4-1
Bus Transit Lines in the City of Cudahy

Line(s)	Origin	Destination	Frequency (in minutes)
Metro Local 111/311	LAX City Bus Center	Norwalk	9-20 (peak), 15-60 (off peak)
Metro Local 260	Artesia Blue Line Station	Altadena	10-20 (peak), 18-60 (off-peak)
Metro Local Shuttle 611	Huntington Park (Florence & Pacific)	Cudahy (Cecelia & Atlantic)	30-60 (peak), 60 (off-peak)
Metro Local Shuttle 612	Willowbrook Station	Atlantic/Imperial	30-60 (peak), 60 (off-peak)
Metro Rapid 762	Artesia Blue Line Station	Pasadena	17-30 (peak), 30-70 (off-peak)
Cudahy Area Rapid Transit (CART)	Cudahy	Cudahy	Varies

Source: Los Angeles County Metropolitan Transportation Authority, June 2015

Bicycle System

Cudahy does not have any designated bicycle lanes. The closest designated bicycle trail to Cudahy is a Class 1 bikeway (trail dedicated exclusively for the use of bicyclists) that extends along the banks of the Los Angeles River channel. This bikeway begins at Atlantic Avenue, near the northern end of the City of Maywood and continues south to the City of Long Beach. South of Cudahy, a Class 1 bikeway along the Rio Hondo River connects with the Los Angeles River trail. Access to the Los Angeles River Trail occurs at three locations: Clara Street, Elizabeth Street, and Cecilia Street.

The City of Cudahy adopted a Safe Routes to School Plan in January 2015. The Plan guides development of pedestrian and bike infrastructure, policies, and programs around schools in Cudahy. This plan uses a combination of strategies to enhance biking and walking, including recommendations for different bikeway types, depending on the specific characteristics of each street segment. In addition to identifying physical improvements near schools, a citywide bicycle network is also defined.

Pedestrian Facilities

Pedestrian circulation and access within Cudahy is through sidewalks found throughout the City. Pedestrian crosswalks occur at signalized intersections while several streets include striped mid-block crossings, especially around public facilities such as schools, City Hall, and parks.

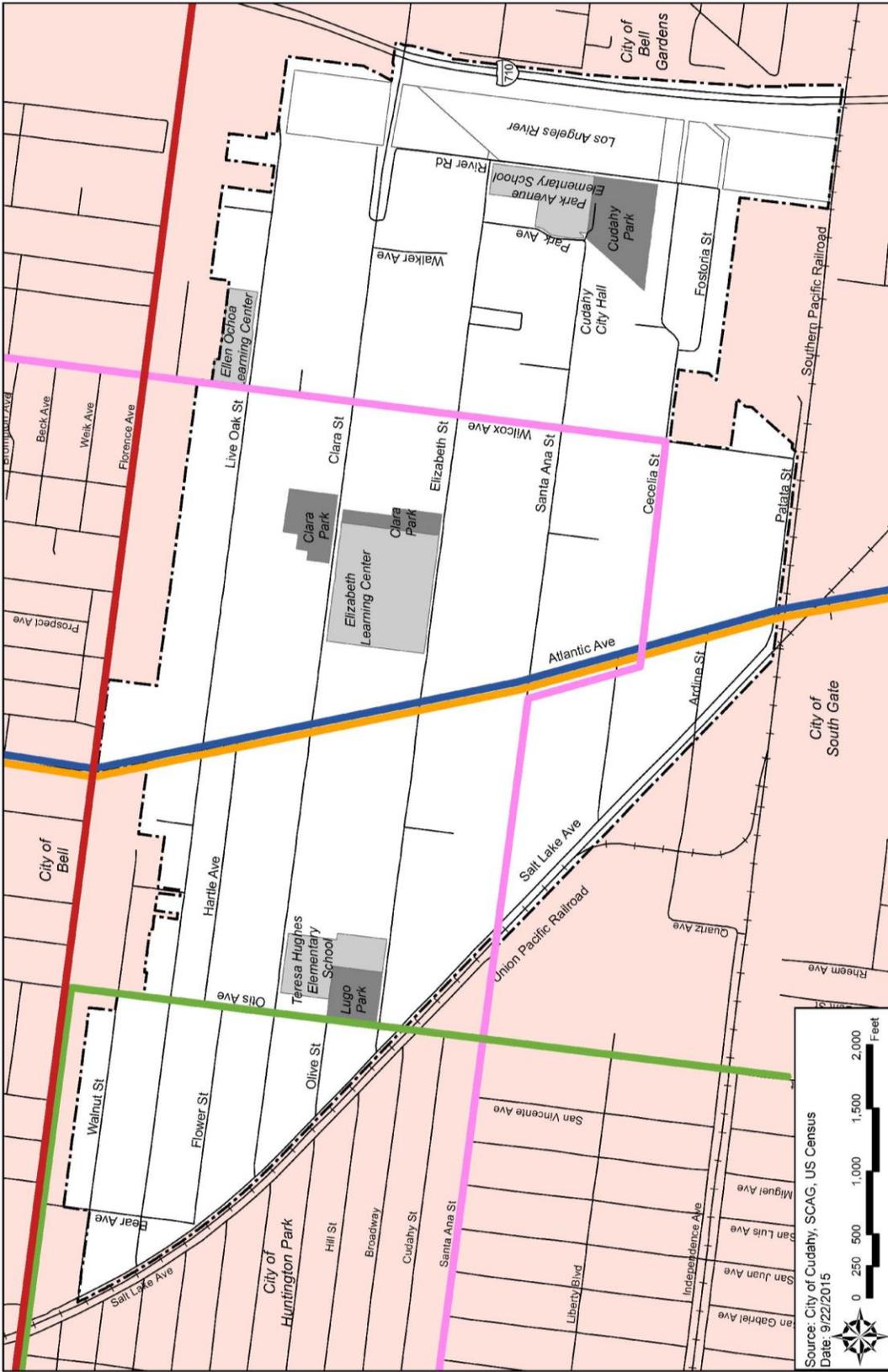


Exhibit 4-3 Transit Service

Source: City of Cudahy, SCAG, US Census
Date: 9/22/2015

BASE MAP FEATURES

- Cudahy Boundary
- Local Streets
- Railroads
- Metro Rapid 762
- Metro Local 260
- Metro Local 111/311
- Metro Local Shuttle 611
- Metro Local Shuttle 612

Public Parking

With the exception of some parts of Atlantic Avenue, all of the roadways in Cudahy include on-street parking permitted on both sides of the street, except between 3:00 AM and 6:00 AM. Several public facilities, including Cudahy Park and City Hall, also provide public parking. Off-street parking is available at schools, businesses, shopping centers, and commercial/industrial areas. Additionally, the City recently implemented a pilot program for overnight on-street parking. The program began on July 1, 2015 and will run through June 30, 2016. This pilot program has received several hundred requests for overnight parking permits. It is expected that decision makers will complete the one-year pilot program and seek input from the community on how the pilot program can be improved and options for offering overnight parking to City residents.

Freight

A number of trucking firms provide freight services for local industrial and business operations. Many of these services access Cudahy from I-710, a major freight transportation corridor in Los Angeles County.

Two rail lines pass through Cudahy, but neither serves the City. The Union Pacific Electric Railroad (along the San Pedro Branch right-of-way) extends along Cudahy's western periphery. Daily, five to six trains use the rail right-of-way between the Ports of Los Angeles and Long Beach and downtown Los Angeles. The Southern Pacific Railroad extends along the city limits on the south. Seven trains (on average) pass along this right-of-way daily. The railroad tracks cross Atlantic Avenue, just south of Patata Street.

Traffic Analysis

The following section provides a summary of the methodology applied for the existing traffic analysis and describes the results of this analysis. Fehr & Peers collected intersection counts at the following key locations within Cudahy to assess operating conditions for vehicular traffic:

- Atlantic Avenue / Live Oak Street
- Clara Street / Otis Avenue
- Clara Street / Wilcox Avenue
- Atlantic Avenue / Salt Lake Avenue

Level of service (LOS) was calculated for each of the signalized intersections using standard traffic engineering methodologies. This study employs the Intersection Capacity Utilization (ICU) method per the County's traffic impact analysis guidelines:

- Intersection Capacity Utilization (ICU) - This technique is derived from research published in the 1970's and is a planning-level analysis tool that provides intersection LOS and volume to capacity (V/C) ratios. The Los Angeles County Metropolitan Transportation Authority (Metro), through its Congestion Management Plan (CMP), uses this methodology to monitor operations of intersections under its jurisdiction. Fehr & Peers employed this methodology for the signalized intersections within Cudahy.

Table 4-2 documents the relationship between the V/C ratios and LOS for signalized intersections and describes the operating conditions experienced under each Level of Service. **Table 4-3** summarizes the intersection V/C ratio and LOS during the morning (AM) and evening (PM) peak period at each of the four intersections studied. The traffic counts and analysis reflect the following periods:

- Weekday morning peak hour (7:00 AM to 9:00 AM)
- Weekday evening peak hour (4:00 PM to 6:00 PM)

Although each city adopts its own acceptability thresholds for LOS, typically anything lower than LOS D is considered unacceptable. Based on the intersection counts at each of the four intersections, the intersection of Atlantic Avenue and Salt Lake Avenue operates at LOS E and at LOS F in both the AM and PM peak periods, respectively.

**Table 4-2
Signalized Intersection LOS Criteria**

Level of Service	Description	V/C Ratio
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0.000-0.600
B	Operations with low delay occurring with good progression and/or short cycle lengths.	0.601-0.700
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	0.701-0.800
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	0.801-0.900
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	0.901-1.000
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	Over 1.000

Source: Fehr & Peers, 2015

**Table 4-3
Intersection Level of Service**

Intersection	Traffic Control	Peak Hour	V/C (delay)	LOS
Atlantic Avenue & Live Oak Street	Signalized	AM	0.648	B
		PM	0.642	B
Otis Avenue & Clara Street	Signalized	AM	0.608	B
		PM	0.576	A
Wilcox Avenue & Clara Street	Signalized	AM	0.661	B
		PM	0.734	C
Atlantic Avenue & Salt Lake Avenue	Signalized	AM	0.936	E
		PM	1.022	F

Source: Fehr & Peers, 2015

Roadway Segment Counts

A number of factors, including number of lanes, intersection operations, presence of driveways, heavy vehicle adjustment factor, and on-street parking generally determines roadway segment capacity. The analysis below applies the segment capacities obtained from the City of Cudahy's 2010 General Plan.

The following roadway segments were analyzed:

- Atlantic Avenue
- Otis Avenue
- Clara Street
- Salt Lake Avenue
- Patata Street
- Wilcox Avenue

- Elizabeth Street
- Santa Ana Street

In accordance with the City’s 2010 General Plan Update, roadway segment counts were collected on a Tuesday and Wednesday for consecutive 24-hour periods. Count tubes deployed across the roadway collected this data.

Table 4-4 shows the daily traffic for the roadway segments. Five roadway segments analyzed operate at LOS F conditions based on daily weekday volumes. These conditions are typified by delays, unpredictable travel times for motorists, and challenging conditions for those who walk or bicycle.

**Table 4-4
Roadway Segment Levels of Service**

Roadway Segments	Daily Traffic	Capacity	VC / LOS
Atlantic Avenue	28,604	22,000	1.30 (F)
Otis Avenue	7,247	7,100	1.02 (F)
Clara Street	6,383	7,100	0.90 (D)
Salt Lake Avenue	12,308	6,100	2.02 (F)
Patata Street	3,261	6,100	0.53 (A)
Wilcox Avenue	14,401	6,100	2.36 (F)
Elizabeth Street	4,427	6,100	0.73 (C)
Santa Ana Street	9,888	7,100	1.39 (F)
Source: Fehr & Peers, 2015			

Regulatory Framework

The City adopted its current General Plan in 1992 and prepared an update to the Plan in 2010. Since that time, and in between those two efforts, several local and regional planning efforts and studies related to the City’s transportation system have followed. These include the documents described below.

Cudahy Safe Routes to School Plan (2015)

The Safe Routes to School Plan for Cudahy¹, completed in 2015, is a guide for pedestrian and bicycle infrastructure, policies, and programs around schools in Cudahy. Through implementation of this Plan, the City aims to enhance the safety and comfort of residents when walking or bicycling to and from schools. The population-dense City is home to a large student population; implementation of improvements and programs recommended in this Plan will benefit the many students who walk, bicycle, and drive to school.

Gateway Cities Council of Governments Strategic Transportation Plan Active Transportation Element (2015)

The Gateway Cities Council of Governments’ (GCCOG) Strategic Transportation Plan (STP)² recognizes the importance of walking and cycling in reducing traffic and energy consumption, and providing greater transportation options that enhance quality of life and personal health. The next step in this process was to develop a comprehensive Active Transportation Plan (ATP)³ for the entire GCCOG region. The Plan views bicycling and pedestrian infrastructure as critical elements to alleviate local and regional traffic concerns. The ATP includes policy

¹ Safe Routes to School Plan, City of Cudahy, 2015.

² Gateway Cities Strategic Transportation Plan, Metro and Gateway Cities Council of Governments, 2013.

³ Gateway Cities Draft Strategic Transportation Plan Active Transportation Element, Gateway Cities Council of Governments, 2015.

and implementation strategies for making the Gateway Cities region a great place to bicycle and walk. These include developing regional bicycle routes, access to schools, transit, and open space, and identifying support programs.

Cudahy Pedestrian Safety Assessment (2013)

The City of Cudahy commissioned a Pedestrian Safety Assessment (PSA)⁴ study to explore opportunities for improving pedestrian safety and to enhance walkability and accessibility for all pedestrians in Cudahy. The PSA focused on identifying and offering ideas for potential enhancements to the built environment and local policies, practices, and programs, with the goal of accommodating existing and future pedestrian activity within the City.

LA County Metro Active Transportation Strategic Plan (ATSP)

The Los Angeles County Metropolitan Transportation Authority (Metro)-led Active Transportation Strategic Plan (ATSP) is a countywide effort to identify strategies to increase walking, bicycling, and transit use in Los Angeles County. The Plan recommends policy and infrastructure improvements; implementation will require regional and local collaboration among various agencies and other stakeholders. The Plan will focus on improving first and last mile access to transit while proposing a regional network of active transportation facilities. The Plan will also develop a funding strategy to get them built.

LA County Metro Congestion Management Program (CMP)

The Congestion Management Program (CMP)⁵, enacted in 1990, is intended to reduce the impact of local growth on the regional transportation system. Compliance with the statutory requirements of the CMP includes monitoring LOS on the CMP Highway and Roadway network, measuring public transit operation metrics, implementing the Transportation Demand Management and Land Use Analysis Program Ordinances, and assisting local jurisdictions with meeting CMP requirements. The program recommends allocation of transportation funding based on several measurable goals: traffic congestion relief, local land use actions and their impacts on transportation, and transportation control measures to meet air quality goals.

LA County Metro West Santa Ana Branch Transit Corridor

L.A. Metro is currently studying the West Santa Ana Branch Transit Corridor project that proposes to connect Los Angeles Union Station and the City of Artesia. A portion of the corridor is adjacent to Cudahy's western boundary along Salt Lake Avenue. The proposed project includes a station north of Cudahy at Florence Avenue and south of Cudahy at Firestone Boulevard. The project does not presently include a shared use/multimodal facility along the corridor and local stakeholders are exploring this opportunity.

Southern California Association of Governments (SCAG) – Sustainable Communities Strategies / Regional Transportation Plan (SCS / RTP)

The 2012–2035 RTP/SCS proposes investing over \$524 billion over the next 25 years to improve the quality of life of the region's residents by enhancing our transportation system. However, additional strategies and projects are needed. The Strategic Plan identifies additional long-term initiatives such as zero- and/or near zero-emission transportation strategies, new operational improvements, expanded transit investments and high-speed rail system, as well as increased commitment to active transportation. Although elements of these strategies are included in the financially constrained plan, further work is needed to ensure there is regional consensus and commitment to fund the balance in subsequent RTPs.

⁴ [City of Cudahy Pedestrian Safety Assessment](#), University of California, Berkeley, 2013.

⁵ [Congestion Management Plan](#), Metro, 2010.

2015 City of Cudahy Engineering and Traffic Survey

On August 20, 2015, the City completed its *2015 City of Cudahy Engineering and Traffic Survey*. The Engineering and Traffic Survey is the basis for the establishment, revision, and enforcement of speed limits for selected streets within the City. Accordingly, on November 23, 2015, the Cudahy City Council adopted Resolution 15-56 to justify and update the posted speed limits along 25 street segments as required by the California Vehicle Code (CVC).

Key Baseline Issues

Multimodal Improvements: Opportunities and Constraints

Potential opportunities for multimodal transportation improvements include:

- Utilize information technology, including “big data,” smart phone applications, and the delivery of real-time traffic and transit information to inform residents about Cudahy’s transportation system and available options.
- Enhance connections to the LA River, including bicycle facilities (Class 1 or Class 2) and pedestrian access improvements along the streets that directly connect with the LA River Bicycle Path (Clara Street, Elizabeth Street, and Cecilia Street). This may also include connections through Cudahy Park.
- Provide bicycle and pedestrian improvements around schools, parks, and businesses. Some examples include:
 - Enhanced mid-block crossings (including flashing beacons, pedestrian recognition technology, enhanced striping)
 - Class 1 or 2 bicycle facilities and bicycle storage and parking
- Convert a portion of the right-of-way along Salt Lake Avenue, currently under study by the Metro in the West Santa Ana Branch Transit Corridor study⁶, to a bicycle/pedestrian transportation/recreational corridor.
- Multimodal connections to future development, including the West Santa Ana Branch Transit Corridor, casino, and Cudahy’s new civic center and library (options are being considered for a new civic center site or the revitalization of the current civic center site).
- Consider commercial development along Atlantic Avenue that can be developed as a “park-once” environment and provides high levels of accessibility to most residents of Cudahy and visitors.

Potential Constraints include:

- Street widening or accommodation of additional auto capacity is highly limited. A majority of the streets are classified as two-lane streets with on-street parking; additional vehicle capacity would require the removal of parking and/or the acquisition of property.
- Modifications to street configurations that involve converting travel lanes or parking are generally a contentious issue for cities, especially among local business owners and affected residents. Industrial freight traffic must be accommodated through the City.
- Any bicycle and/or pedestrian uses along the right-of-way adjacent to Salt Lake Avenue would require funding and coordination with Metro and any other relevant project stakeholders.
- Limited access points to the LA River
- Funding availability

⁶ West Santa Ana Branch Transit Corridor Technical Refinement Study, Metro, 2015.

5. UTILITIES AND SERVICE SYSTEMS

Introduction

This chapter establishes the existing conditions of Cudahy's primary infrastructure systems. The infrastructure systems include storm drain (drainage/flood control), sewer, and water. The assessment identifies the primary components within each system, identifies if there are any deficiencies within the existing system, and identifies if there are any capital improvements projects planned within Cudahy. In addition, opportunities and constraints are identified. All information is based on Los Angeles County GIS data and interactions with the various entities that manage and maintain the utilities system in Cudahy.

Environmental Setting

The City of Cudahy resides within the Los Angeles River Watershed in Los Angeles County. The Los Angeles River is a 51-mile long, largely concrete-lined channel flowing from the western San Fernando Valley to the Pacific Ocean. The Los Angeles River is directly adjacent to the east portion of Cudahy and is constructed to withstand flooding potential in the area. The primary utility infrastructure are owned and maintained by City, County, and private entities explained in more detail below.

Storm Drain

The Los Angeles County Flood Control District (LACFCD) maintains the storm drain lines within Cudahy. LACFCD encompasses more than 3,000 square miles, 85 cities, and approximately 2.1 million land parcels. It includes the vast majority of drainage infrastructure within incorporated and unincorporated areas in every watershed, including 500 miles of open channel, 2,800 miles of underground storm drains, and an estimated 120,000 catch basins.

Within Cudahy, a series of large County trunk lines run from west to east and north to south. The trunk lines all ultimately discharge to the Los Angeles River east of Cudahy. The main trunk lines include a 60" line along Florence Avenue, a 96" line along Salt Lake Avenue, a 45" line along Atlantic Avenue, an 84" line along Wilcox Avenue, and a 63" line along Otis Avenue (see **Exhibit 5-1**). These storm drains are inspected every three years to identify any capacity issues. Due to the large size of these trunk lines and their direct connection to the Los Angeles River, there are currently no capacity issues or planned capital improvements within the City of Cudahy.¹

Project specific hydraulic analysis on the existing storm drain system will be required by LACFCD for all new developments and redevelopments within Cudahy through a formal plan check process before sign off. Depending on the ages and sizes of the storm drain lines, it is typical for LACFCD to require new project implementation of detention systems to mitigate any associated increases in storm water flows.

Any new projects within Cudahy will also have to comply with the Los Angeles County MS4 permit (see Regulatory Framework section) and include storm water Low Impact Development (LID) Best Management Practices (BMPs). The City has officially adopted Ordinance No. 640 that pertains to LID strategies on projects that require Building, Grading, and Encroachment Permits. The purpose of the Ordinance is to provide an outline of LID policies for the City consistent with the requirements of the County MS4 Permit. LID BMPs associated with new projects will likely lead to increased infiltration of storm water into the ground due to the highly permeable soil within Cudahy. Alternatively, if for any reason infiltration is found to be infeasible at a project site, storm water can be captured and used on site via harvest and reuse BMPs or treated by biofiltration BMPs.

¹ Personal communication, Yvonne Taylor, Jason Liang and Eduardo Ibasan, Los Angeles County Imperial Yard.



City of Cudahy Storm Drain System
Exhibit 5-1

Some examples of existing citywide LID BMPs include the Cudahy River Park and Clara Street Park. Cudahy River Park is a gateway mini-park at River Road and Clara Street and serves as a regional storm water BMP. The park was designed to capture and treat storm water runoff from Clara Street and River Road Drive's storm drains, and to also serve as a miniature urban riparian forest rest spot for pedestrians and bicyclists on the LA River path. Untreated storm water carrying trash and pollutants, which in the past would have emptied into the Los Angeles River channel without being treated, is now diverted into the park where three infiltration basins under the park allow the water to collect and slowly soak into the soil, replenishing ground water. There is also a regional infiltration basin located at the Clara Street Park.

Sewer

The City's Public Works Department (PWD) manages the City's sanitary sewer collection system. The City's local sewers discharge into the County Districts' facilities for conveyance, treatment, and disposal. The field operation and maintenance services are fulfilled by utilizing the services provided by the Consolidated Sewer Maintenance District (CSMD) managed by the Los Angeles County Department of Public Works (County DPW). Approximately 14.2 miles of sanitary sewer collection facilities, comprised of a series of 8"-12" sewer lines, serve 26,000 customers in the City, **Exhibit 5-2.**²

The City's maintenance programs are funded through levying of an annual sewer service charge currently at \$32.5 per equivalent single-family dwelling unit otherwise called a sewage unit (s.u.). This is included in the \$40.5 per s.u. levied by the CSMD and collected with the annual tax bills of property owners in the Cudahy that are within the CSMD. The CSMD preventive maintenance activities implemented by the District within Cudahy include Sewer Line and Manhole Inspection, Gas Trap Manholes and Siphons, Drop Manholes, Sewer Line Cleaning, Vermin and Rodent Control, Sewage Pump Stations, Work Scheduling, and City Sewer Mapping System.

The City (in coordination with Los Angeles County) is responsible for ensuring that the public sewer infrastructure is correctly designed, adequately sized, and easily maintainable. The CSMD also provides a supporting role in reviewing all proposed sewer plans for new developments in Cudahy to ensure conformance with County design standards and, particularly, maintenance requirements. The City's sewer collection systems are in the CSMD; the City participates in the District's Accumulative Capital Outlay (ACO) Program. Under the ACO program, any portion of the sewer system found to be structurally deficient through routine inspection, sewer emergency response, or the Condition Assessment Program is immediately repaired as an emergency repair project, or documented in a prioritized list of future short and long-term ACO sewer rehabilitation and replacement project. However, County DPW would refer portions of the system that have sewer capacity related problems, especially hydraulic deficiencies resulting from over development or change in the zoning of any portion of the City, to the City for appropriate corrective action.

The entire sewer collection system within Cudahy is inspected by Close Circuit Television (CCTV) to assess the condition of the pipes on a ten year circle basis. The County DPW is responsible for the management and administration of the funds and program. The Sewer System Management Plan (SSMP) for the sewer maintenance districts of Los Angeles County highlights the project areas and schedules proposed and future sewer improvements. As stated in the SSMP, Cudahy's sewer system projects were completed in fiscal year 2009-2010. As of 2013, there are currently no known capacity related SSO problems in Cudahy nor any proposed improvements.³

² Sewer System Management Plan. Sewer Maintenance Districts of Los Angeles County, May 2013.

³ City of Cudahy Sewer System Management Plan, April 2011.



City of Cudahy Sewer System Management Plan (SSMP) Audit and Recertification

Per the Statewide General Waste Discharge Requirements (WDRs), public agencies (enrollees) are required to conduct an internal audit of their Sewer System Management Plan (SSMP) at least once every two years and file it with the SSMP. This audit is then uploaded to the California Integrated Water Quality System (CIWQS) website. Accordingly, the City of Cudahy, in coordination with the Los Angeles County Department of Public Works, has completed the 2105 audit.

In addition to the SSMP Bi-annual Audit, a Recertification of the City's SSMP is also required every five years. The first SSMP 5-year Recertification is due in 2016 and the City of Cudahy, in coordination with LA County DPW, is already working on this so the required Recertification will be completed on-time.

The City of Cudahy Sewer System Management Plan was approved on May 3, 2011 by the regulatory agency.

Water

The City of Cudahy is served by three water agencies including Tract 349 Mutual Water Company, Tract 180 Mutual Water Company, and Golden State Water Company. Tract 349 Mutual Water Company serves the west side of Atlantic Avenue, Tract 180 Mutual Water Company serves the east side of Atlantic Avenue, and Golden State Water Company serves the southeast portion of the City. Water for all three water companies comes from a series of groundwater wells throughout the Central Basin.

The Los Angeles County Fire Department (LA County Fire) requires any new development within each of the three water companies to conduct fire flow testing and comply with current fire flow thresholds set by the Fire Department. A developer can request the water company to conduct hydrant-flow testing for new developments to determine fire flows. These tests are valid for up to one year. Therefore, if there have not been any new developments within the City in the past year, it is likely that most of the water lines will require fire flow testing.

Fire flow requirements can range from 2,000 gallons per minute in low-density residential areas to 12,000 gallons per minute in high density commercial or industrial areas. A minimum residual water pressure of 20 pounds per square inch is required to remain in the water system while the required gallons per minute is flowing, in order to be considered adequate by County Fire Code standards.

Exhibit 5-3 illustrates the locations of the Golden State Water Company and Tract 180 Mutual Water Company water lines. Tract 349 water lines are not available in electronic format; thus, assumptions of the locations of Tract 349 Mutual Water Company lines are made based on field observations (September 23, 2015).

Tract 349 Mutual Water Company

Tract 349 Mutual Water Company (Tract 349) provides water service to the west side of Atlantic Avenue. Water lines range from 6"-12" throughout Tract 349's service area. Tract 349 has two groundwater wells for water supply within Cudahy. Water from these wells is pumped into two above ground storage tanks adjacent to the wells at 4630 Santa Ana Street and 3724 Florence Avenue. Tract 349 has plans to replace one of the existing groundwater wells. Although the location of the new well has not yet been determined, it will be located at one of the two existing well locations.⁴

Tract 349 systems do not have any current deficiencies nor planned capital improvements of the water infrastructure within Tract 349's service area. Increases in land use density from new developments/redevelopments will require fire flow tests as mandated by the LA County Fire Department.

⁴ Personal communication, Dante Arcia, Tract 349 Water Company.

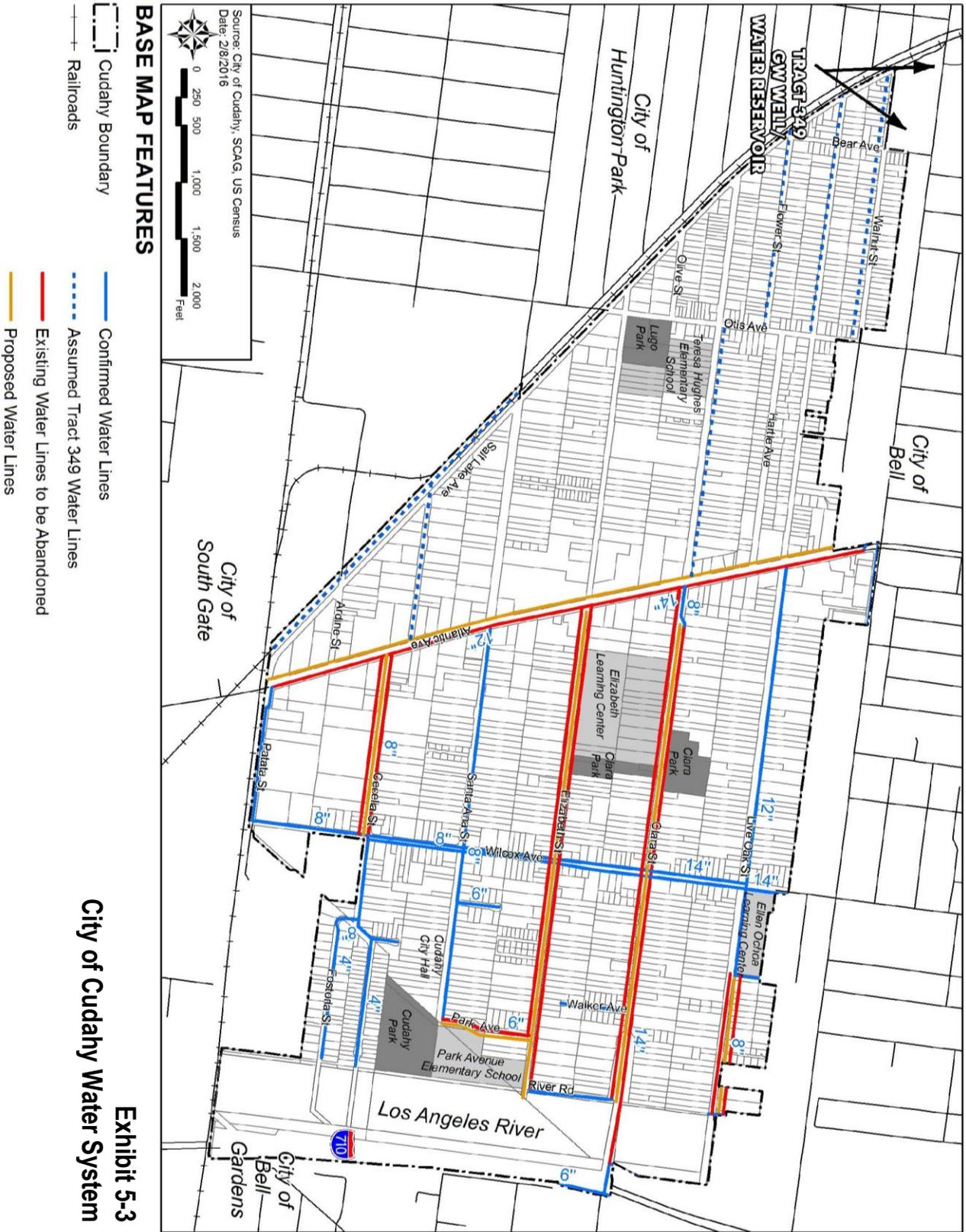


Exhibit 5-3
City of Cudahy Water System

Tract 180 Mutual Water Company

Tract 180 Mutual Water Company (Tract 180) provides water services over 463 acres to 15,000-16,000 residents⁵ in Cudahy; this comprises approximately 67 percent of the City's population. Water lines range from 4"-14" throughout Tract 180's service population.

Tract 180 has identified deficiencies within the water system along Clara Street, Elizabeth Street, Cecelia Street Park Avenue, and Atlantic Avenue, and along the east side of Live Oak Avenue. Proposed improvements include upsizing these lines to 8"-12" lines. Any 6" lines will be upsized to 8" lines. The aging water lines on Atlantic Avenue that range in size from 10"-14" will ultimately be replaced with new water lines ranging from 10"-12" in diameter.

These improvements are expected to begin in March 2016. Increases in land use density from new developments/redevelopments will require fire flow tests as mandated by the LA County Fire Department.

Golden State Water Company

Golden State Water Company (Golden State Water) provides water services to the east portion of Cudahy -- east of Wilcox Avenue. Golden State Water pumps water from groundwater and stores it in two above-ground water reservoirs/tanks outside of Cudahy. These tanks are located at 6612 South Bissel and 7026 Walker Avenue.

There have been recent complaints from residents throughout Golden State Water's jurisdiction regarding the brown-color of their tap water. A brown coloring to tap water is caused by increased levels of iron and manganese that are not detrimental to human health. Higher levels of these secondary contaminants occur more frequently when tap water comes from groundwater resources. Golden State Water has since implemented the Unidirectional Flushing (UDF) program to mitigate iron and manganese levels within the water supply.⁶

The Golden State Water lines vary in size from 4"-14". Currently, no deficiencies exist within Golden State Water's jurisdiction. Increases in land use density from new developments/redevelopments will require fire flow tests as mandated by the LA County Fire Department.

The Public Utilities Commission (PUC) establishes minimum standards for Golden State Water to be followed in the design, construction, location, maintenance, and operation of the facilities of water utilities under the General Order 103-A (September 10, 2009).⁷ Thus, the PUC controls any upgrades made to address deficiencies within the Golden State Water's jurisdiction of the City.

Currently, the existing Golden State Water system facilities serving Cudahy meet the requirements of the PUC General Order 103-A. Golden State Water has a water system capital improvement program that includes maintaining all of the facilities serving the City's customers. All proposed capital projects, including pipeline replacements are presented to the PUC during the rate case process that occurs on a three year cycle. The City of Cudahy does not have any projects in the current 2015-2017 rate case.⁸

⁵ Personal communication, George Perez, Tract 180 Water Company.

⁶ Personal communication, Ray Burk, Golden State Water Company.

⁷ Rules Governing Water Service, Including Minimum Standards for Operation, Maintenance, Design and Construction. General Order 103-A Public Utilities Commission of the State of California, Effective September 10, 2009

⁸ Personal communication, Ray Burk, Golden State Water.

Regulatory Framework

NPDES Construction General Permit

Construction associated throughout the City of Cudahy could disturb more than one acre of land surface for centralized and regional structural Best Management Practices (BMPs) (and possibly for those distributed structural BMPs larger than one acre), affecting the quality of stormwater discharges into waters of the United States. The City would therefore be subject to the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit [CGP]), as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ). The CGP regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface.

The CGP requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off-site into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area.

Every year, the City must prepare an NPDES Annual Report. The Annual Report summarizes the requirements in Orders No. 01-182 and R4-2012-0175. The Annual Report lists City activities that were performed during the previous fiscal year regarding Storm Water Management Plan. The City's Annual Report will be included in the unified Annual Storm Water Program Report. The goals of this Annual Report are to: 1) concisely document implementation of the Storm Water Quality Management Program (SQMP) during the past fiscal year; 2) evaluate program results for continuous improvement; 3) to determine compliance with Order 01-182 and R4-2012-0175; and 4) to share this information with other Permittees, municipal decision makers, and the public.⁹

Los Angeles County Municipal Separate Storm Sewer System Permit (MS4)

The City of Cudahy is a permittee under the current Municipal Separate Storm Sewer System (MS4) Permit for Los Angeles County (Order No. R4-2012-0175). The MS4 Permit became effective December 28, 2012 and contains requirements that are necessary to improve efforts to reduce the discharge of pollutants in stormwater runoff to the maximum extent practicable and achieve water quality standards.

In order to comply with the updated MS4 Permit, a "Low Impact Development (LID) Standards Manual" was developed by the County (2014) in advance of the final permit that details actions for compliance with the LID regulations, such as land development policies pertaining to LID and hydromodification for new development and significant redevelopment projects. The term "hydromodification" refers to the changes in runoff characteristics from a watershed caused by changes in land use condition. More specifically, hydromodification refers to "the change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow, and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport." The use of LID Best Management Practices (BMPs) in project planning and design is to preserve a site's predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. LID BMPs try to offset these losses by introducing structural and non-structural design components that restore these water quality functions into the project's land plan.

The City of Cudahy has officially adopted an Ordinance pertaining to Low Impact Development (LID) Strategies on Projects that require Building, Grading, and Encroachment Permits. During the November 25, 2014 Special Cudahy City Council Meeting, Ordinance No. 640, an Ordinance of the City Council of the City of Cudahy, California, adding

⁹ City Manager's Report, December 5, 2014. (http://www.cityofcudahy.com/uploads/5/3/9/9/53994499/cm_report_12-5-2014.pdf)

Chapter 20.108 pertaining to Low Impact Development (LID) Strategies on Projects that require Building, Grading, and Encroachment Permits, to Title 20 (Zoning) of the City of Cudahy Municipal Code was introduced for Second Reading and passed unanimously.

The purpose of this Ordinance is to provide an outline of Low Impact Development (LID) policies for the City of Cudahy consistent with the requirements of the MS4 Permit. Municipalities require Permittees electing to prepare a Watershed Management Program or an Enhanced Watershed Management Program under this Permit to demonstrate that there are LID ordinances in place meeting the requirements of the Order's Planning and Land Development⁶.

Key Baseline Issues

Currently, there are no major capacity issues or planned capital improvements with the storm drain or sewer infrastructure in Cudahy. The LACFCD and LA County DPW have management protocols in place to ensure long term functionality of the drainage and sewer systems within the City.

The water infrastructure deficiencies identified in Tract 180's service area are scheduled to begin water line improvements in March 2016. Currently, portions of the water line system have unknown capacity limits (i.e. Tract 349 service area). Analysis of the ages, location, and capacities of such water lines should be conducted before there are any changes in land use.

Future buildout scenarios will have to comply with drainage, sewer, and water planning processes. These include conducting hydraulic analyses of the storm drain systems through Los Angeles County Fire Department, working with LA County DPW on sewer capacity guidelines, and conducting required water line analyses (i.e. fire flows) with the respective water agencies throughout Cudahy. Many of the storm drain, sewer, and water lines in Cudahy were constructed several decades ago and may need to be replaced if increased land use densities are proposed. Project specific capacity analyses are recommended to ensure the primary utilities systems within Cudahy are maintained.

This Page Intentionally Left Blank

6. PARKS AND RECREATION

Introduction

This chapter discusses park and recreation services provided in Cudahy. The Cudahy Parks and Recreation Department operates park facilities and programming activities for Cudahy residents; citizen oversight is provided by two appointed commissions--Parks and Recreation, and Aging and Senior Citizens.

Environmental Setting

Parkland and Recreational Facilities Inventory

The City of Cudahy Parks and Recreation Department maintains and operates five public parks and recreation centers. In addition, the Department provides recreational programmatic opportunities to its residents. These parks provide a wide range of programmatic and recreational facilities including game courts, athletic fields, picnic areas, play lots, and a community center. **Exhibit 6-1** shows the location of the Cudahy parks. The individual parks and community facilities are:^{1 2 3}

- *Cudahy Park* is a 10-acre park adjacent to Cudahy City Hall, County Library, and Bedwell Hall. This park is located immediately south of the Park Avenue Elementary School between River Road and Santa Ana Street. The park includes two baseball diamonds, two tennis courts, a community recreation center, two basketball courts, barbecue pits, a concession stand, and a playground area. The park also serves as a storm drainage Best Management Practices (BMP). Bedwell Hall is a multipurpose facility with a capacity for 175 people for community events including City public hearing meetings.
- *Clara Street Park* is a 3.5-acre park located on Clara Street opposite Elizabeth Learning Center on Clara Street. Clara Park includes the Leo P. Turner Community Center, which has meeting rooms and a patio area for public use. Classes operating in the Turner Center include zumba and p90x. Turner Community Center is a facility with a capacity of 400 people, and two multipurpose rooms. Other facilities at this park include horseshoe pits and picnic areas.
- *Lugo Park*, a 2.5-acre park, is located on Elizabeth Street adjacent to the Teresa Hughes Elementary School and contains the Lugo Teen Center where cheerleading and dancing practices and free afterschool activities are held. It has one multipurpose room with a capacity of 100. This park has a baseball diamond, a gym where boxing classes are held, two playing fields for outdoor sports, and a picnic area. However, the park is closed as of December 2015 due to ongoing renovations that are slated to finish in 2016.
- *Clara Expansion Park* is 1.7-acre park south of Clara Street Park and east of the Elizabeth Learning Center. The park completed renovations and opened to the public in May 2015. The renovated park features exercise equipment, a walking path, jungle gym, basketball courts, barbecue pits and picnic areas in addition to game courts, tot lot, and small athletic field.
- *Cudahy River Park* is the City's newest park. It is 0.22-acres located south of Clara Street and west of River Road. The park is designed to serve as a link to the Los Angeles River Bicycle Trail and serves as storm drainage BMP.

¹ City of Cudahy. *City of Cudahy General Plan Update: Open Space and Recreation Element*. September 15, 2010.

² City of Cudahy, "Park Facility Locations and Hours". <http://www.cityofcudahy.com/parks.html>. Accessed 2/3/2016

³ City of Cudahy. "City of Cudahy Recreation Guide". *One Magazine* (Winter 2016): 35-38.

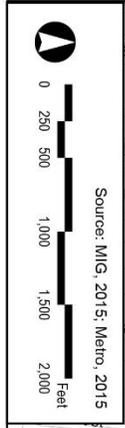
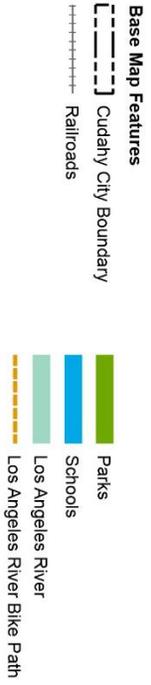


Exhibit 6-1
Parks and Recreation Facilities

The Parks and Recreation Department also maintains but does not provide recreational and programmatic activities to small ancillary landscaped spaces in the city: Triangle Park, Atlantic Median, Pocket Park, and River Bed.

Programming activities and services provided by the Cudahy Recreation and Parks Department include youth sports leagues, teen programs, and senior center. The department is budgeted in Fiscal Year 2015-2016 to fund three youth sports leagues, nine special events, and participation in 300 events and activities for youths and seniors.⁴ The nine annual events are: Valentines Dance, Easter event, book fair, July 4th fireworks, outdoor movie nights, Halloween Dance, Halloween Carnival, and a Holiday event. The three sports leagues are football, basketball, and soccer. An estimated 1,200 youths play in local sports programs. The Senior Center, located at Clara Park, provides annual events and daily activities including live karaoke, dancing, educational classes, health screenings, exercise programs, and volunteer opportunities. “Club de Oro” is another Senior Center program for occasional events such as bingo, exercise classes, excursions, and educational classes.

In 2015, there are 17.9 acres of parkland maintained by the City, as summarized in **Table 6-1**.

Table 6-1
Parkland and Recreational Facilities Inventory

Park Name	Recreational and Community Facilities	Acres
Cudahy Park	Two baseball diamonds, two tennis courts, a community recreation center, two basketball courts, barbecue pits, a concession stand, and a playground area. Bedwell Hall is a facility with a capacity for 175 people for community events including city commission public hearing meetings.	10.0
Clara Street Park	Leo P. Turner Community Center’s capacity is 400 people with two multipurpose rooms and a public use patio. Classes provided include zumba and p90x. Other facilities at this park include horseshoe pits and picnic areas.	3.50
Lugo Park	Lugo Teen Center provides for cheerleading and dancing practices and free afterschool activities. The multipurpose room has a capacity of 100 people. Lugo Park includes a baseball diamond, a gym where boxing classes are held, two outdoor sports playing fields, and a picnic area. The park is temporarily closed due to renovations that are anticipated to be complete in 2016.	2.50
Clara Park Extension	The park features exercise equipment, a walking path, jungle gym, basketball courts, barbecue pits and picnic areas in addition to rest rooms, game courts, a tot lot, and a small athletic field.	1.70
Cudahy River Park	This park has a meandering path lined with benches and Southern California native plants native. Informational boards provide insight into the drought tolerant plants and their purpose in the local ecosystem.	0.22
Total		17.92
	Source: City of Cudahy, “Park Facility Locations and Hours” http://www.cityofcudahy.com/parks.html . Accessed 2/3/2016	

According to the California Department of Finance, Cudahy’s 2015 population is 24,270.⁵ Based on 17.92 acres of parkland and the estimated population of 24,270, the City currently provides approximately 0.74 acres of parkland per 1,000 residents.

Cudahy’s small size with a dense population serves as a constraint in satisfying one benchmark of parkland assessment -- parkland acreage per population. Cudahy excels in providing parks and recreational facilities within walking distance to most of its residents.

⁴ City of Cudahy. City Budget Fiscal Year 2015-2016. http://www.cityofcudahy.com/uploads/5/3/9/9/53994499/fy_15-16_adopbed_budget.pdf. [Accessed 2/3/2016].

⁵ California Department of Finance. *E-1 Population Estimates for Cities, Counties, and the State – January 1, 2015*. <http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/view.php> [Accessed November 2015].

Schools and Recreation Facilities

Local schools have game courts reserved for student use since these facilities are not typically open after school hours. Together, existing school facilities within the City comprise a total of 42.79 acres as shown in **Table 6-2**.

Table 6-2
Schools Inventory

School Name	Acres
Jaime Escalante Elementary School	4.58
Teresa P Hughes Elementary School	6.90
Park Avenue Elementary School	6.77
Ochoa Learning Center	9.42
Elizabeth Learning Center	19.70
Opportunities for Learning (Charter)	
Total	42.79
Source: MIG, 2015	

In 2015, the City and the Los Angeles Unified School District (LAUSD) do not have a joint-use agreement that allows residents to use the schools' recreation areas. While the City desires joint use and planning agreements with LAUSD, due to their limited resources, the City is unable to contribute funds to joint use projects. LAUSD continues to work with the City of Cudahy to make school facilities available to the community.

Bikeways and Trails

Adjacent to the Los Angeles River, Los Angeles County maintains the Los Angeles River Bicycle Path, a Class 1 bike path. The bike path passes through Cudahy as it extends to the Angeles National Forest and to the Pacific Coast Highway in Long Beach. Within Cudahy are three access points to the Los Angeles River Bike Path. In addition to the Los Angeles River Bike Path, a Class 3 bike lane is located on Florence Avenue, just north of Cudahy. The Florence Avenue bike lane is maintained by the Los Angeles County Department of Parks and Recreation.

Projected Parkland Needs

The amount of parkland currently provided does not meet the City's stated standard of four acres per 1,000 residents (Cudahy General Plan's Open Space and Recreation Element). In order to meet the City's goal, a total of 97.08 acres of parkland would need to be provided for its population of 24,270. The City would remain deficient with respect to the stated parkland goal even with the LAUSD school sites included in the City's parkland inventory as joint-use facilities. Combining the City's parks and potential joint-use school space would only equal 60.71 acres.

The City is currently renovating Lugo Park; it is adding a new synthetic soccer field, restrooms, and concession stands. The City is also part of an ongoing Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment, a study initiated by the Los Angeles County Parks and Recreation Department that began in 2015. The Parks Needs Assessment will be used to identify community-specific needs, determine priority projects, and assist in future park planning. The results of the assessment could be used to leverage external funding. The assessment will include the following:

- City and County parks including community parks, neighborhood parks, pocket parks, and tot lots
- City and County recreational facilities including swimming pools, recreation centers, gyms, and skate parks
- Regional parks
- School recreation facilities with joint use agreements
- Trail corridors along flood control channels

- Separately owned public trail rights-of-way outside of parks

The Parks Needs Assessment will conclude in mid-2016.

Regulatory Framework

The Quimby Act (Government Code Section 66477)

The Quimby Act (Government Code Section 66477), enacted in 1975, created a framework that allows cities and counties to provide parks for growing communities. The Quimby Act authorizes jurisdictions to adopt ordinances that require parkland dedication or payment of in-lieu fees as a condition of approval of residential subdivisions. The Quimby Act also specifies acceptable uses and expenditures of such funds, such as allowing developers to set aside land, donate conservation easements, or pay direct fees for park improvements. The City of Cudahy has adopted a local ordinance implementing the provisions of the Quimby Act. The ordinance requires payment of fees in-lieu of parkland dedication if all or any of the local park space obligations for a residential subdivision is not satisfied by the provision of local park space. A base fee equal to the local park space obligation, less the amount of park space, if any, times the median fair market value per acre of the land in public parks of three or more acres in the multi-family residential (R-3) zone within the City if such land were not used for or zoned for park or recreational purposes. An additional fee, equaling fifty percent (50%) of the base fee, shall also be assessed for park and recreational facility development. The City of Cudahy currently has \$60,000 in its Quimby Fund per its adopted 2015-2016 budget.

State Public Park Preservation Act 1971

The Public Park Preservation Act of 1971 (California Public Resources Code, Sections 5400-5409) states that any jurisdiction acquiring parkland for non-park purposes shall either pay compensation that is sufficient to acquire substantially equivalent substitute parkland, or provide substitute parkland of comparable characteristics.

Cudahy General Plan

The City's current General Plan addresses parks and recreation issues primarily in the Open Space and Recreation Element. The principles and standards within the Element encourage the provision of parkland and recreation facilities. As stated previously, the Element establishes four acres of parkland per 1,000 residents as a standard.

Key Baseline Issues

- In 2015, the City has a 79-acre parkland deficiency. Providing additional parkland will be challenging because of the City's small size, lack of vacant land, and dense population. Little to no space is available within the City for conversion to open space and recreation uses. As such, the City must be creative in providing for additional park and recreational uses. Alternatively, the City can consider other benchmarks for providing park and recreational services suitable for its geographically constrained context provided by the National Recreation and Park Association (NRPA).
- If the City is able to enter into joint-use recreation facility agreements, some of the immediate need for parkland and recreational facilities will be met. However, establishing joint-use facility agreements can be a lengthy process.

This page intentionally left blank.

7. PUBLIC SERVICES

Introduction

This chapter discusses the provision of four public services: fire and emergency services, police protection, schools, and libraries in Cudahy in 2015. In December 2015, the City is recruiting candidates for the Public Safety and Services Manager position, who will be tasked to coordinate community preservation and enforcement functions, parking control duties, and law enforcement contract administration within the Community Development Department.

Environmental Setting

City of Cudahy Public Safety Commission

The City's five-member Public Safety Commission provides oversight of public safety programs including law enforcement, code enforcement, community services, emergency preparedness, and fire services. The Public Safety Commission's purpose is to provide recommendations to the City Council to make Cudahy a safer place to live and to improve the quality of life for its residents. During the Commission's monthly meetings, the Los Angeles Sheriff's Department, City Code Enforcement staff, and Volunteers on Patrol provide a report to the Commission.

Fire Protection and Emergency Services

Los Angeles County Fire Department

The Los Angeles County Fire Department provides fire suppression and emergency medical services to Cudahy.¹ As of 2014, LA County Fire was responsible for just over 4 million residents spread out in over 1.2 million housing units across an area of 2,305 square miles (5,970 km²). Each day, LA County firefighters respond to over 700 incidents from 170 fire stations throughout the Department's service area. Last year, 1,400 calls were received daily, for an annual more than 450,000 calls.

While the City of Cudahy is serviced by the LA County Fire Department, the fire stations are not located within Cudahy. As shown in **Exhibit 7-1**, the four LA County Fire Stations serving Cudahy are located in Huntington Park, Bell, and South Gate.

The fire emergency response time in Cudahy is 3 minutes per the 2010 General Plan Update Environmental Impact Report.

LA County Fire Department Station 39

LA County Fire Department Station 39, located at 7000 S. Garfield Avenue, Bell Gardens, serves a minuscule area of Cudahy, the eastern side of I-710, which has no permanent Cudahy residents or businesses.

¹ City of Cudahy. City of Cudahy Website: Emergency Services. <http://www.cityofcudahy.com/community-resources.html> [Accessed November 2015].

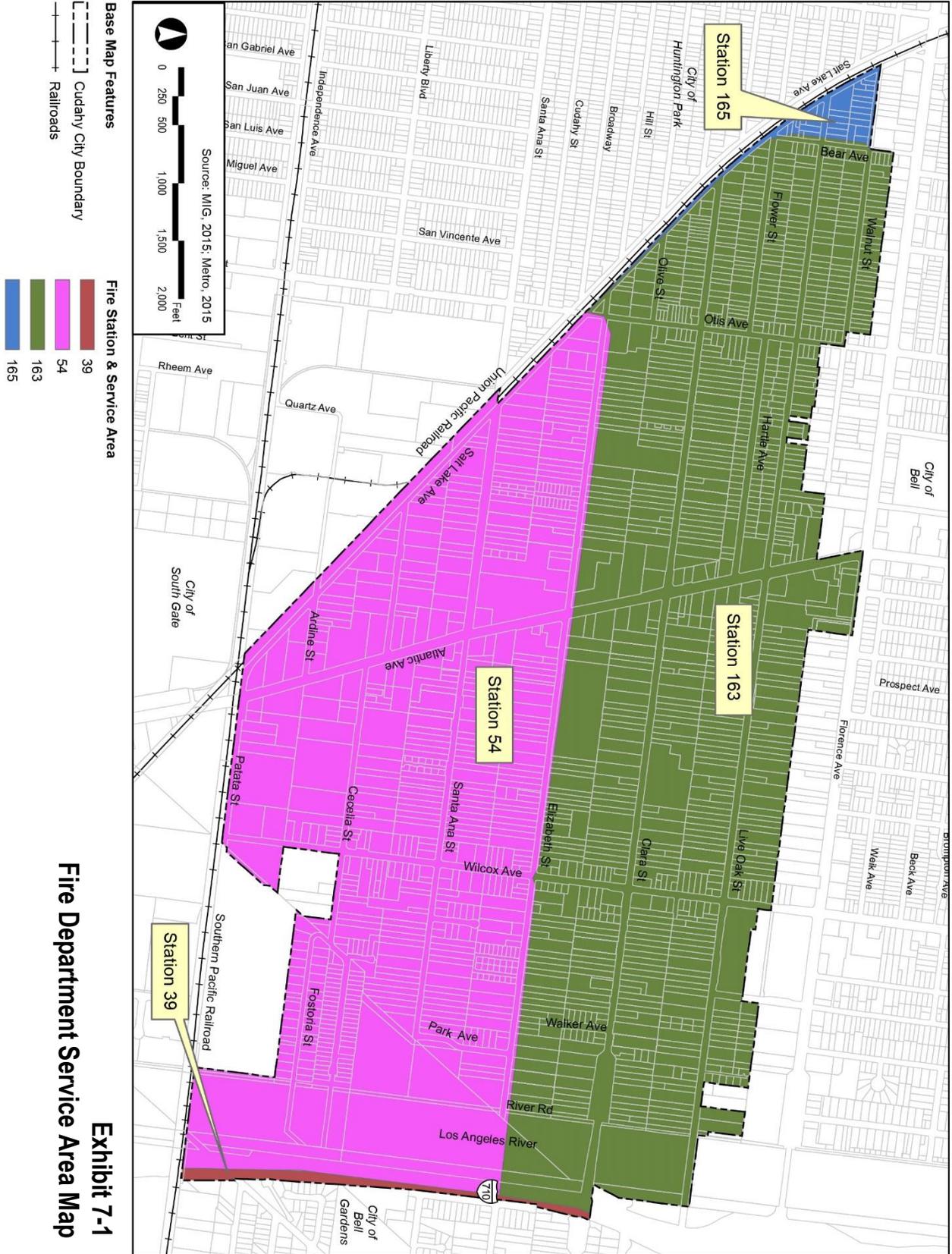


Exhibit 7-1
Fire Department Service Area Map

LA County Fire Department Station 54

LA County Fire Department Station 54, located at 4867 Southern Avenue, South Gate, is approximately 0.45 miles south of Cudahy. A captain, administrative and suppression personnel, an engineer, and firefighter/paramedic staff Station 54. The facility is equipped with two engines, a squad car, and two ambulances.

LA County Fire Department Station 163

LA County Fire Department Station 163, located at 6320 Pine Avenue, Bell, is approximately 0.63 miles north of Cudahy. The captain, administrative and suppression personnel, an engineer, and firefighter/paramedic staff Station 163. The facility is equipped with two engines and a squad car.

LA County Fire Department Station 165

LA County Fire Department Station 165, located at 3255 Saturn Avenue, Huntington Park, is approximately 0.56 miles northwest of Cudahy. The captain, administrative and suppression personnel, an engineer, and firefighter/paramedic staff Station 163. The facility is equipped with an engine and paramedic.

Police Protection

The Los Angeles County Sheriff's East Los Angeles (ELA) Division serves Cudahy. The Sheriff's ELA Division headquarters is located at 5019 East Third Street, Los Angeles, approximately 4.15 miles north of Cudahy. This station's "headquartered" staff includes patrol officers, detectives, traffic officers, and administrative personnel. The ELA Station serves a population of approximately 126,064 residents over 7.48 square miles.² The East Los Angeles Station is staffed with 56 patrol deputies. The ELA Station responded to over 100,000 calls for service in 2014.

Summary of Police Services³

Below is a summary of law enforcement services provided by the Los Angeles County Sheriff Department: Services include:

- Nine deputy sheriffs are assigned to patrol services. A field sergeant is included as part of ELA Station field supervision to cover Cudahy. The City is not invoiced for the field sergeant.
- One service area deputy and one service area sergeant are contracted to Cudahy.
- Other services include:
 - Reserve Deputy Sheriff Program:
Reserve Deputy Sheriffs supplement the Los Angeles County Sheriff's Department's law enforcement manpower at ELA Station. Like full-time deputies, Reserve Deputies are professionally trained and duly sworn law enforcement personnel and perform general law enforcement duties, including crime prevention and investigation, responding to calls, traffic control, and enforcement of laws.
 - Deputy Explorer Program:
Under the supervision of a full time deputy sheriff, Deputy Explorers actively participate in community affairs and non-hazardous law enforcement activities. Deputy Explorers assist deputy sheriffs in report writing, bicycle licensing, public fingerprinting, assist in "Operation Kid Print," crowd assistance at parades and civic events, anti-crime campaigns, search missions, and statistical computations.
 - Volunteer Program:
The ELA Station's has a very active Civilian Volunteer Program. Fifty-six volunteers currently volunteer their time to assist Sheriff's Station Personnel and their community in different programs, projects and events.

² Los Angeles County Sheriff's Department. *LASD News*. <http://shq.lasdnews.net/content/uoa/ELA/AboutUs-EastLosAngeles.pdf> [Accessed December 8, 2015].

³ Email response by Lt. Samuel Arellano of LA Sheriff Dept., sent Dec. 20, 2015 to Bryan Fernandez, MIG, Inc.

Specialized Enforcement / Investigations:

- Special Enforcement Bureau - SWAT Team and high-risk warrant service
- Emergency Operations Bureau - Disaster Response and Planning
- Safe Streets Bureau - Gang enforcement, saturation patrol, and investigations
- Homicide Investigations
- Aero Bureau (Helicopter Service) - Emergency response, including rescue Air-5
- Mental Evaluation Team - Specialists in resolving incidents with the mentally ill
- Specialized Investigations - Surveillance teams, vice, forgery/fraud, and narcotics
- Arson/Explosives - Bomb disposal/bomb/arson investigations
- Child Abuse Investigations – Special Victims Bureau
- Canine Service
- Cargo Criminal Apprehension Team – Cargo Theft Investigations
- High Tech Crimes Taskforce
- Forgery/Fraud Detail
- Los Angeles County Joint Regional Intelligence Center

Community Law Enforcement Partnership Program

The purpose of this program is to fight gangs, drugs and violence, in addition to providing support to stations through the Volunteers on Patrol program. It also assists in planning and executing special events, such as sheriff's station grand openings, town hall meetings, and Neighborhood Watch meetings.

Response Time and Performance

The Sheriff's Department classifies calls in three categories with a threshold for response times:

- EMERGENCY, 10 minute threshold with an average response time of 3.7 minutes.
- PRIORITY, 20 minute threshold with an average response time of 5.4 minutes.
- ROUTINE, 60 minute threshold with an average response time 24.9 minutes.

In 2015, the ELA Station responded to 14,432 calls of which 4,772 calls were for service and 9,660 were deputy generated field observations.

Public Safety Profile and Trends

Cudahy has seen a dramatic decrease in crime in 2015:

- crime against persons decreased by 6.78%
- property crimes decreased 10.14%
- Part 1 crimes decreased 9.6% year to date

The largest gangs in Cudahy are 18th Street and Clara Street. According to the Sherriff Department, criminal gang activity has been minimal; however, an increase of graffiti has occurred.

Uniformed Volunteers or Volunteers on Patrol

These citizens are the eyes and ears of the Department in the community. They volunteer to perform non-hazardous patrol duties, including traffic control, searching for missing children, and conducting residential vacation checks. The VOP also provides monthly reports the Public Safety Commission.

Community-Oriented Policing Strategy (C.O.P.S.)

Cudahy in partnership with the Sheriff's Department also engages in Community-Oriented Policing Strategy (C.O.P.S.) with the citizens of Cudahy. C.O.P.S. seeks to increase engagement between the Sheriff's Department and Cudahy residents and businesses to promote a more collaborative approach to public safety, including neighborhood watch. The City is the recipient of a \$100,000 C.O.P.S grant.⁴ As a result, the City approved the addition of a Service Area Deputy, and held its first Neighborhood Watch meeting on September 22, 2015.⁵

Schools

Schools Inventory

Students in Cudahy may be assigned to the following public schools, all of which are operated by the Los Angeles Unified School District. No tertiary educational facility is within Cudahy. Due to the city's small size, many students are assigned to schools located outside of Cudahy. The schools in **bold** are located within Cudahy's boundary.

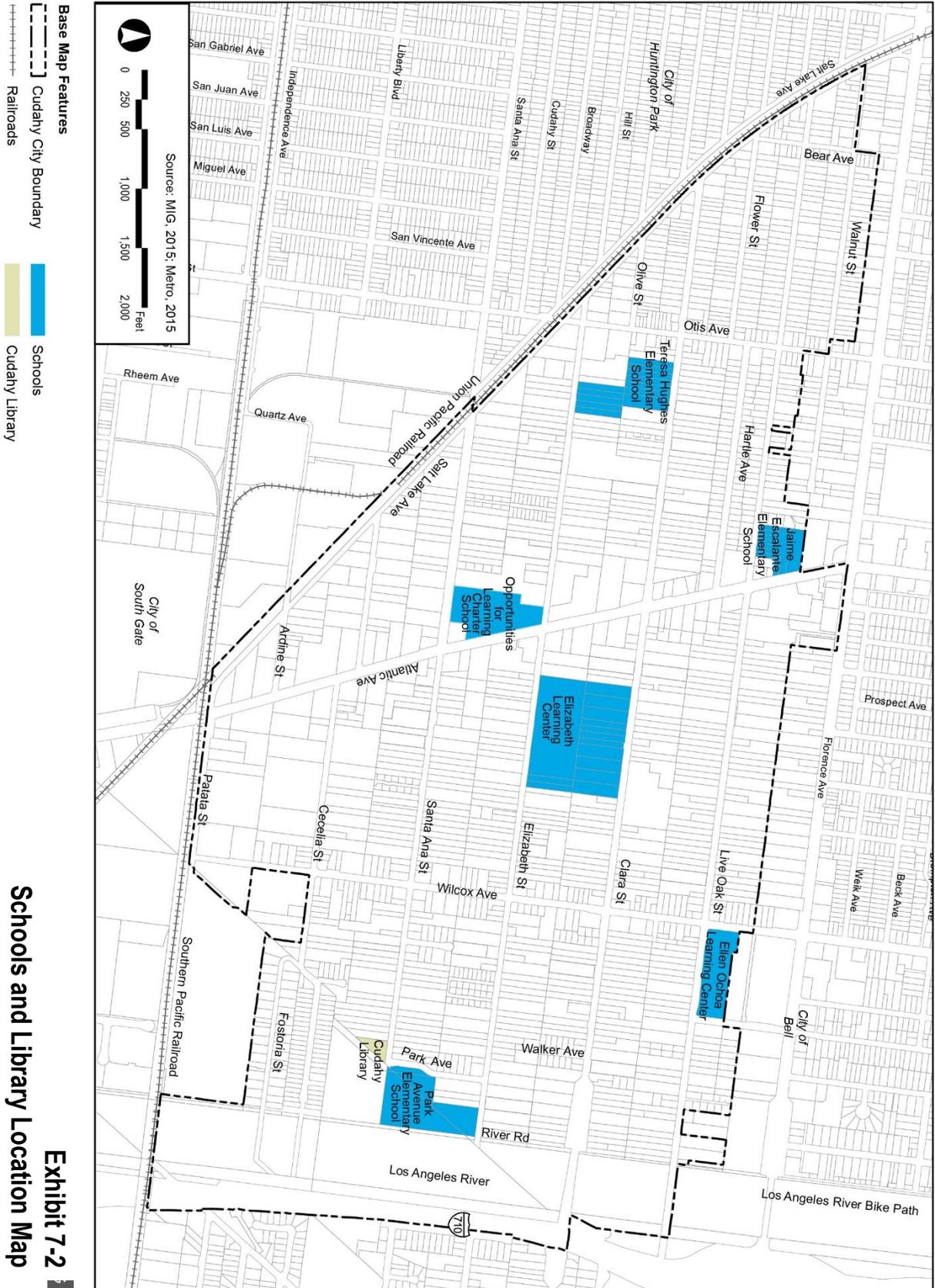
- Bell Senior High
- Corona Avenue Elementary
- **Elizabeth Learning Center**
- **Jaime Escalante Elementary School**
- Martha Escutia Cal State Preschool Program
- Martha Escutia Primary Center
- **Teresa P Hughes Elementary**
- Legacy Senior High
- Magnolia Science Academy Bell @ South Region MS #2A
- Maywood Academy Senior High
- Nueva Vista Elementary
- **Ellen Ochoa Learning Center**
- **Opportunities for Learning (OFL) Charter School**
- Orchard Academies 2B
- Orchard Academies 2C
- **Park Avenue Elementary**
- Woodlawn Avenue Elementary

Three of the Cudahy schools are elementary schools (Teresa P Hughes, Park Avenue, and Jaime Escalante). The remaining Cudahy schools are referred to as span schools in that they serve multiple grade levels, and one is a charter school. Jaime Escalante Elementary School opened in 2010; there are no known plans to construct additional LAUSD educational facilities in Cudahy. The schools have game courts reserved for the use by students since these facilities are not typically open after school hours.

Enrollment numbers in Cudahy public schools have decreased since the 2010-2011 school year. Three of the schools are designated by the State as Critically Overcrowded Schools (COS), which allows LAUSD to be eligible for an Overcrowding Relief Grant originating from the State. Schools are considered COS if they have a pupil population density equal to or greater than 175% of the state's recommended population density.

⁴ City of Cudahy. City of Cudahy Website: City Documents. *City of Cudahy City Budget 2015-2016*. http://www.cityofcudahy.com/uploads/5/3/9/9/53994499/fy_15-16_adopted_budget.pdf [Accessed December 14, 2015].

⁵ Los Angeles County Sheriff's Department. *LASD News*. <http://shq.lasdnews.net/pages/PageDetail.aspx?id=2801> [Accessed December 14, 2015].



**Table 7-1
Cudahy Schools Enrollment**

School	Location	Critically Overcrowded School	Enrollment
<i>LAUSD Schools</i>			
Ellen Ochoa Learning Center	5017 Live Oak Street	No	1,413 (2014-2015) 2,117 (2009-2010)
Teresa P Hughes Elementary	4242 Clara Street	Yes	884 (2014-2015) 1,028 (2009-2010)
Park Avenue Elementary	820 Park Avenue	Yes	552 (2014-2015) 576 (2009-2010)
Jamie Escalante Elementary	443 Live Oak Street	N/A	621 (2014-2015) 597 (2010-2011, first year open)
Elizabeth Learning Center	4811 Elizabeth Street	Yes	1,804 (2014-2015) 2,117 (2009-2010)
<i>Charter Schools</i>			
Opportunities for Learning	7955 Atlantic Avenue	N/A	128
Source: Murillo, Didier; Planning Technician, City of Cudahy; California Department of Education, Data Reporting Office (CalPADS, DataQuest - Statewide Enrollment by Ethnicity)			

Libraries

The City of Cudahy is served by the County of Los Angeles Public Library System.⁶ The Cudahy Public Library is located at 5218 Santa Ana Street, Cudahy. The Cudahy Library is 4,396 square feet in size and provides a broad array of services including Spanish books and literature, homework help, rentable videos and audio books, 12 public computers, free wireless internet, and access to the County library's online publication, eBooks, and research database. The library is open Tuesday through Saturday, and closed Sundays and Mondays. As of 2015, the County Public Library's Capital Improvement Plan does not include any specific expansion plan of facilities or services for the Cudahy Library.

Regulatory Framework

Insurance Services Office

The Insurance Services Office (ISO) provides rating and statistical information for the insurance industry in the United States. The ISO evaluates a community's fire protection needs and services and assigns each community a Public Protection Classification (PPC) rating. Insurance rates are based upon the community's rating. For planning purposes, the ISO recommends that developed portions of a community should have a first-due engine company within 1.5 miles and a ladder-service company within 2.5 miles.

National Fire Protection Association

The National Fire Protection Association recommends that fire departments respond to fire calls within six minutes of receiving the request for assistance 90 percent of the time. These time recommendations are based on the demands created by a structural fire. It is critical to attempt to arrive and intervene at a fire scene prior to the fire spreading beyond the room of origin. Total structural destruction typically starts within eight to ten minutes after ignition. Response

⁶ County of Los Angeles Public Library. Cudahy Public Library Website. <http://www.colapublib.org/libs/cudahy/index.php> [Accessed December 8, 2015].

time is generally defined as one minute to receive and dispatch the call, one minute to prepare to respond in the fire station or field and four minutes (or less) travel time.

Cudahy General Plan

The Cudahy General Plan Safety Element includes objectives to avoid and prevent damage to property or loss of life through implementation of codes, ordinances, special conditions, and emergency action.⁷ The General Plan policies are:

Fire Hazards

Safety Element Policy 1.4. The City of Cudahy will increase awareness of the hazards of fire and ways to prevent fire.

Safety Element Policy 1.6. The City of Cudahy will request that Fire Department and local law enforcement officials comment on proposed large developments during the environmental review process.

Safety Element Policy 2.2. The City will provide for the highest quality of fire, police, and health protection possible, within reasonable economic limits, for all Cudahy residents.

Crime and Defensible Space

Safety Element Policy 3.3. The City of Cudahy will encourage the development of neighborhood watch programs and inform residents and businesses of ways to prevent crime.

Safety Element Policy 3.4. The City of Cudahy will promote crime prevention through public information and awareness programs.

The Cudahy General Plan Land Use Element includes goals and policies for the provision of public service agencies to residents and businesses in order to enhance the living environment. The General Plan policies are:

Public Services

Land Use Element Goal 6. The City of Cudahy will provide adequate public services and infrastructure to serve existing and future developments.

Land Use Element Policy 6.1. The City of Cudahy will cooperate with the Los Angeles Unified School District to make adequate school services to meet anticipated growth in the area available.

Land Use Element Policy 6.5. The City of Cudahy will monitor the availability and adequacy of public services (water distribution, water quality, fire, police, waste disposal, and library services) in the City to ensure services are not overburdened by future demand.

Land Use Element Policy 6.6. The City of Cudahy will regularly conduct an analysis of existing infrastructure and public service capacities to assess the need for capital improvements and service improvements.

Land Use Element Policy 6.8. The City of Cudahy will cooperate with the Los Angeles County Library to provide library services to area residents.

⁷ City of Cudahy. General Plan. Safety Element.

Leroy F. Green School Facilities Act

California Government Code Section 65995 (The Leroy F. Green School Facilities Act of 1998) sets base limits and additional provisions for school districts to levy development impact fees and to help fund expanded facilities to house new pupils that may be generated by the development project. Sections 65996(a) and (b) state that such fees collected by school districts *provide full and complete school facilities mitigation* under CEQA. These fees may be adjusted by the District over time as conditions change.

Key Baseline Issues

General Plan Issues

- Contracting public services to Los Angeles County departments provides a financial benefit to the City in maintaining core public services. However, County departments provide services to dozens of cities and communities covering thousands of square miles. The City's small size reduces the effectiveness of raising its own particular interests in countywide departments. Finding avenues to promote local and community based provisions of public services such as community policing and volunteer firefighting would help keep services prioritize local interest. The City should pursue strategies to have County departments provide consistent monitoring of service performance within Cudahy, and to have the departments engage the City in ongoing discussions of service needs assessments to fill in public service gaps and enhancements.
- Police and fire stations are not located within City boundaries. Fire and police stations serve as important loci of civic identity and may, perhaps, improve services; the City should pursue to have County Sheriff and Fire Department facilities locate within Cudahy.

This page intentionally left blank.

Introduction

“Sound” is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. “Noise” is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance and - in the extreme - hearing impairment.

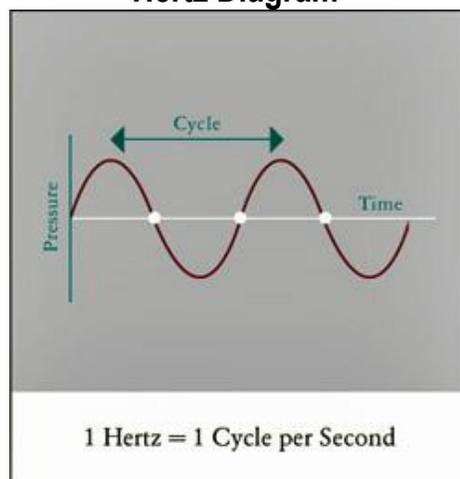
The Production of Sound

Sound has three properties: amplitude and amplitude variation of the acoustical wave (loudness), frequency (pitch), and duration of the noise. Despite the ability to measure sound, human perceptibility is subjective, and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.”

Measuring Sound

Sound pressure levels are described in logarithmic units of ratios of sound pressures to a reference pressure, squared. These units are called bels. To provide a finer description of sound, a bel is subdivided into 10 decibels, abbreviated dB. Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70dB when it passes an observer, two cars passing simultaneously would not produce 140 dB. In fact, they would combine to produce 73 dB. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by three dB. Conversely, halving the traffic volume or speed will reduce the traffic noise level by three dB. A three dB change in sound is the beginning at which humans generally notice a barely perceptible change in sound.

**Exhibit 8-1
Hertz Diagram**



Sound pressure level alone is not a reliable indicator of loudness. The frequency or pitch of a sound also has a substantial effect on how humans will respond. While the intensity of the sound is a purely physical quantity, the loudness or human response depends on the characteristics of the human ear. Human hearing is limited not only to

the range of audible frequencies but also in the way it perceives the sound pressure level in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 Hertz (Hz) and 5,000 Hz, and perceives both higher and lower frequency sounds of the same magnitude with less intensity. Hertz is a unit of frequency that defines any periodic event. In the case of sound pressure, a Hertz defines one cycle of a sound wave per second. To approximate the frequency response of the human ear, a series of sound pressure level adjustments is usually applied to the sound measured by a sound level meter.

The adjustments, or weighting network, are frequency dependent. Of all the various scales available for measuring noise, the A-weighted sound pressure level (identified as dBA) is the scale of measurement that is most useful in community noise measurement. The A-scale approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. A range of noise levels associated with common indoor and outdoor activities is shown in **Exhibit 8-2**.

**Exhibit 8-2
Activity-Based Noise Levels**

Common Outdoor Activities	Common Indoor Activities	A - Weighted Sound Level dBA	Subjective Loudness	Effects of Noise
Threshold of Pain		140	Intolerable or Deafening	Hearing Loss
Near Jet Engine		130		
		120		
Jet Fly-Over at 1000 ft	Rock Band	110		
Loud Auto Horn		100	Very Noisy	Speech Interference
Gas Lawn Mower at 3 ft		90		
Diesel Truck at 50 ft, at 50 mph	Food Blender at 3 ft	80	Loud	
Noisy Urban Area, Daytime	Vacuum Cleaner at 10 ft	70		
Heavy Traffic at 300 ft	Normal Speech at 3 ft	60	Moderate	Sleep Disturbance
Quiet Urban Daytime	Large Business Office	50		
Quiet Urban Nighttime	Theater, Large Conference Room (Background)	40	Faint	No Effect
Quiet Suburban Nighttime	Library	30		
Quiet Rural Nighttime	Bedroom at Night, Concert Hall (Background)	20	Very Faint	
	Broadcast/Recording Studio	10		
Lowest Threshold of Human Hearing	Lowest Threshold of Human Hearing	0		

Standards for Noise Equivalent

Noise consists of pitch, loudness, and duration; therefore, a variety of methods for measuring noise have been developed. According to the California General Plan Guidelines for Noise Elements, the following are common metrics for measuring noise:¹

¹ California Governor’s Office of Planning and Research. General Plan Guidelines. 2003

L_{eq} (Equivalent Energy Noise Level): The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over given sample periods. L_{eq} is typically computed over 1-, 8-, and 24-hour sample periods.

CNEL (Community Noise Equivalent Level): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 PM to 10:00 PM and after addition of ten decibels to sound levels in the night from 10:00 PM to 7:00 AM.

L_{dn} (Day-Night Average Level): The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of ten decibels to sound levels in the night after 10:00 PM and before 7:00 AM.

CNEL and L_{dn} are utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night. L_{eq} is better utilized for describing specific and consistent sources because of the shorter reference period.

Federal and State agencies have established noise and land use compatibility guidelines that use averaging approaches to noise measurement. The State Department of Aeronautics and the California Commission on Housing and Community Development have adopted the community noise equivalent level (CNEL). The County of Los Angeles utilizes the CNEL measurement scale for its community noise/land use compatibility standards (see discussion of existing General Plan noise level standards below).

Vibration and Groundborne Noise

Vibration is the periodic movement of mass over time. It is described in terms of frequency and amplitude. Unlike sound, there is no standard way of measuring and reporting amplitude. Vibration is described in units of velocity (inches per second [in/sec]), and is discussed in dB units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) which describes particle movement over time (in terms of physical displacement of mass). For purposes of this analysis, PPV will be used to describe all vibration for ease of reading and comparison.

In general, earthborne vibrations associated with transportation and construction activities attenuate rapidly with distance from the source. Caltrans has taken vibration measurements throughout California and provides data in the *Transportation Related Earthborne Vibrations Technical Advisory (TAV-02-01-R9601)*. Vibration of trucks is characterized by peaks considerably higher than those generated by automobiles. These peaks last often a fraction of a second and drop-off quickly with distance. In general, more trucks will show up as more peaks, not necessarily higher peaks. Caltrans' truck traffic vibration data suggest that at distances greater than 130 feet from the road, the vibration levels are below the threshold of perception.

Temporary, Periodic, and Ambient Noise Levels

Noise can be produced from different sources and for different time periods, resulting in varying noise levels over time. Ambient noise levels, for the purpose of this analysis, are developed using 24-hour average noise level measurements taken throughout the planning area resulting in a general description of the noise environment. Periodic noise levels are characterized by regular increases in noise levels due to reoccurring activities such as the passing of railcars or periods just before and after peak-hour traffic along roadways. Temporary noise levels result from one-time activities that result in increased noise levels, such as construction activities or special events.

Environmental Setting

The following discussion describes the existing noise environment in Cudahy. Existing ambient and periodic noise levels are defined through measurement of noise levels associated with arterial and freeway traffic, airport operations, and commercial/industrial uses.

A community noise survey, conducted on November 24, 2015, established the baseline ambient noise levels for transportation and non-transportation noise generators throughout Cudahy. Locations were monitored utilizing an American National Standards Institute (ANSI Section S14 1979, Type 1) Larson Davis model LxT sound level meter. This meter was used to monitor existing ambient noise levels in the project area. The noise meter was programmed in “slow” mode to record noise levels in A-weighted form. The microphone height was set at five feet. Seven short-term (15-minute) representative measurements were conducted to provide a baseline. Short-term measurement locations are shown on **Exhibit 8-3** and presented in **Table 8-1**.

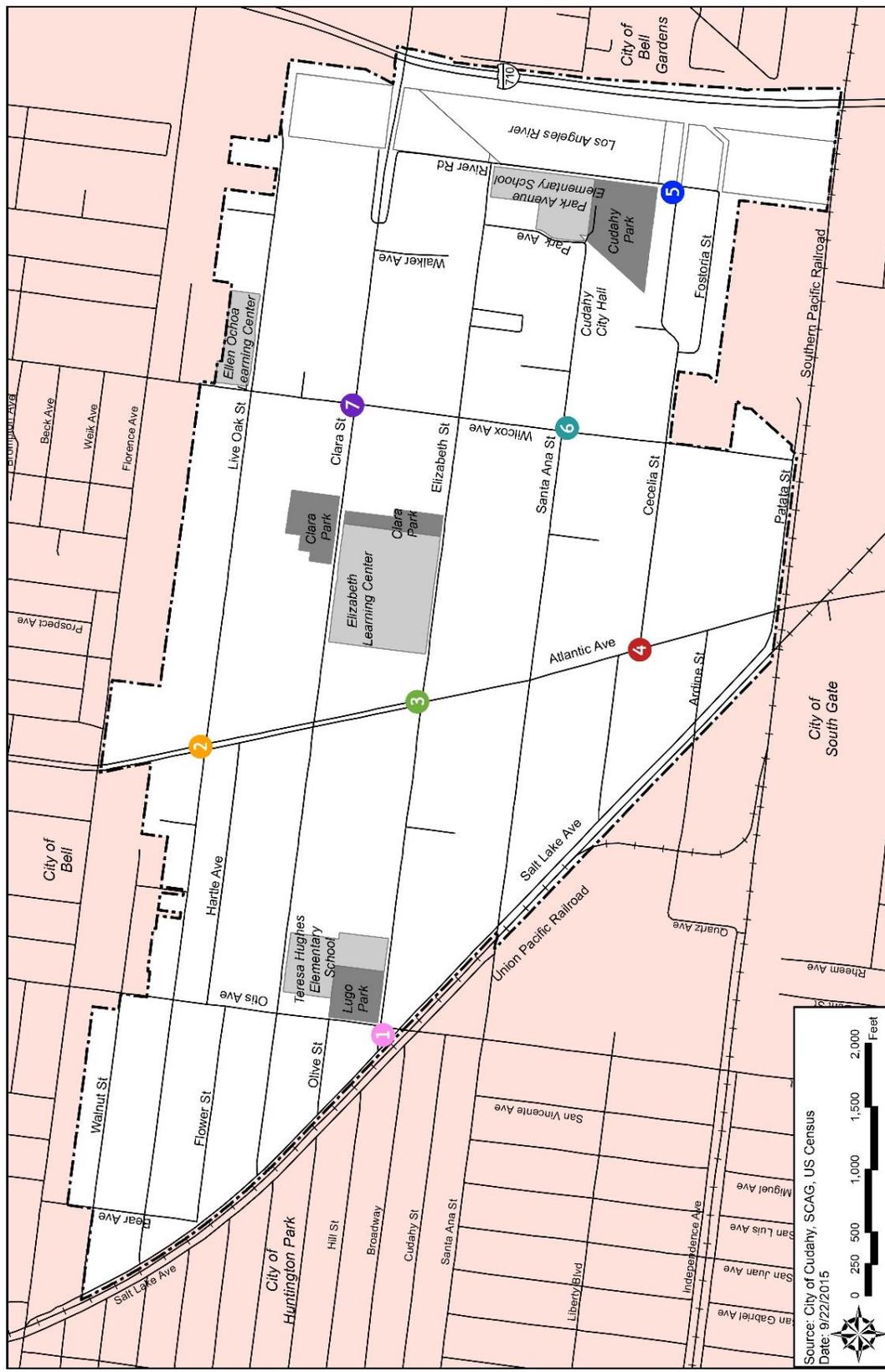


Exhibit 8-3
Noise Measurement Locations

BASE MAP FEATURES

- Cudahy Boundary
- Street Centerlines
- Railroads
- Noise Measurement Locations
- Noise Measurement Locations

Source: City of Cudahy, SCAG, US Census
Date: 9/22/2015

0 250 500 1,000 1,500 2,000 Feet

**Table 8-1
Ambient Noise Measurements**

Name	Associated Land Use	Description	Existing Ambient Noise Levels (dBA L_{eq})
1	Industrial, Community Center	Northwest corner of Otis Street and Elizabeth Street	65.8
2	Commercial	Northeast corner of Atlantic Avenue and Live Oak Street	80.2
3	Commercial, Medical Clinic	Southwest corner of Atlantic and Elizabeth Street	70.6
4	Commercial, Industrial, Residential	Northwest corner of Atlantic and Cecilia Street	71.6
5	Residential	Southwest corner of River Road and Cecilia Street	62.1
6	Commercial, Residential	Southeast corner of Wilcox Avenue and Santa Ana Street	69.2
7	Commercial	Southeast corner of Wilcox Street and Clara Street	70.1

Roadways

The level of traffic noise depends on three key factors: 1) traffic volumes, 2) the speed of traffic, 3) the type or “mix” of vehicles using a particular roadway, and 4) pavement conditions. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Traffic, therefore, represents a primary contributor to the ambient noise levels in a community and also results in periodic noise level increases based on daily traffic fluctuations.

Traffic noise - including automobiles, trucks, and other motor vehicles - is the most pervasive source of noise in Cudahy. The roadway network consists of the Interstate 710 Freeway (I-710), regional arterials, and local public roads.

Railway Noise and Vibration

Train noise is a combination of different noise sources, such as propulsion mechanisms, machinery and auxiliary equipment, wheel-rail interaction, and vehicle-body vibrations. Train noise is a unique noise source that constitutes a single pass-by event per train resulting in periodic noise level increases. Heavy diesel trains operate in intervals of a few minutes due to the operational limitations, so the pass-by events occur in larger time intervals. Heavy diesel freight trains that operate with diesel locomotives operate at relatively low speeds.

At low speeds such as 40 miles per hour (mph), mechanisms that are part of the propulsion system are the dominant source of perceptible noise. Propulsion noise tends to dominate the noise spectrum at relatively low frequencies. Diesel train propulsion noise sources frequency bands are near 1,000 Hz at an average height of approximately 10 feet above the rail line. Rail-wheel interaction is the source of the rolling noise radiated by steel wheels and vehicle-body vibrations. This noise source spectrum peaks in the two kHz to four kHz frequency range, and the source is close to the track bed with a height of approximately two feet above the rails.

Two freight railways operate along Cudahy's boundaries. One freight line is located west of Salt Lake Avenue, along Cudahy's western boundary, and the other is located south of Patata Street, along Cudahy's southern boundary. Two freight stations are located at the Patata Street and Salt Lake Avenue intersection.

Train vibration levels are significantly higher than vibration from trucks. Research by Caltrans suggests that at distances greater than 30 feet, train track vibration levels do not result in architectural damage and at distances greater than 240 feet the vibration level is below the level of perception.

Airplane and Airport Noise

Cudahy is not located within two miles of any airport. Long Beach Municipal Airport is located approximately nine miles south of Cudahy, Hawthorne Municipal Airport is located approximately eight miles west of Cudahy, and the Los Angeles International Airport is located approximately 12 miles west of Cudahy.

According to noise contour maps for Long Beach Municipal Airport, Hawthorne Municipal Airport, and Los Angeles International Airport, the ultimate 65 dBA CNEL noise contour for the airport does not encroach into Cudahy.² Field observations of several westbound passenger planes flying overhead show that a typical plane fly-over event is audible throughout Cudahy.

Non-Transportation Noise Sources

Non-transportation related noise generators are commonly called “stationary,” “fixed,” “area,” or “point” sources of noise. Industrial processing, mechanical equipment, pumping stations, and heating, ventilating, and air conditioning (HVAC) equipment are examples of fixed location, non-transportation noise sources within Cudahy. Some non-transportation sources are not stationary but are typically assessed as point or area sources due to the limited area in which they operate, such as truck deliveries.

Industrial and commercial land uses produce noise of various types, intensities, and frequencies depending on the nature of the business. Industrial uses often produce additional noise due to the use of heavy machinery. Commercial uses such as large retail complexes can raise localized noise levels due to high volumes of traffic and increased outdoor activities (such as special events). Both industrial and commercial uses may include loading and unloading of trucks in loading docks and generally increase truck traffic in the area. Commercial uses are scattered throughout Cudahy but industrial and heavy industrial is concentrated in the southern portion of the city.

Intermittent or temporary neighborhood noise from amplified music, public address systems, barking dogs, landscape maintenance, and stand-by power generators can be disturbing to residents but are difficult to attenuate and control.

Regulatory Framework

Standards applicable to the proposed project include those set forth by the Federal Transit Authority, the Federal Railroad Administration, the Federal Aviation Administration, the State of California Department of Health Services' Noise/Land Use Compatibility Criteria, Title 24 of the State of California Code of Regulations, and the City of Cudahy General Plan Noise Element and Municipal Code (Section 20.88.020). A summary of the pertinent portions of each of these is presented below.

² Los Angeles County General Plan. Revised Draft, Figure 11.1: Airport Noise Contours Map. March 2015

Federal

Federal Noise Control Act of 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control established the Federal Noise Control Act of 1972, which implements programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. The EPA published information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the L_{dn} should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In addition, the Levels of Environmental Noise identified five dBA as an "adequate margin of safety" for a noise level increase relative to a baseline noise exposure level of 55 dBA L_{dn} (i.e., there will not be a noticeable increase in adverse community reaction with an increase of five dBA or less from this baseline level). The EPA did not promote these findings as universal standards or regulatory goals with mandatory applicability to all communities, but rather as advisory exposure levels below which there would be no risk to a community from any health or welfare effect of noise.

In 1981, EPA administrators determined that subjective issues such as noise will be better addressed at more localized levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated federal agencies, allowing more individualized control for specific issues by designated federal, state, and local government agencies.

Federal Transit Administration (FTA)

The Federal Transit Administration (FTA) has developed methodology and significance criteria to evaluate incremental noise impacts from surface transportation modes (i.e., on road motor vehicles and trains) as presented in Transit Noise Impact and Vibration Assessment (FTA Guidelines). These incremental noise impact criteria are based on EPA findings and subsequent studies of annoyance in communities affected by transportation noise. The FTA extended the EPA's five dBA incremental impact criterion to higher ambient levels. As baseline ambient levels increase, smaller and smaller increments are allowed to limit expected increases in community annoyance. For example, in residential areas with a baseline ambient noise level of 50 dBA CNEL, a less-than-five dBA increase in noise levels will produce a minimal increase in community annoyance levels, while at 70 dBA CNEL, only one dBA increase could be accommodated before a significant annoyance increase will occur.

Vibration Standards

The FTA provides guidelines for maximum-acceptable vibration criteria for different types of land uses. Groundborne vibration and noise levels associated with various types of construction equipment and activities are summarized in **Table 8-2**. **Table 8-3** shows the Federal Transit Administration's maximum acceptable vibration standard for human annoyance in residences where people normally sleep is 80 VdB (less than 70 vibration events per day).

Table 8-2
Reference Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV at 25 ft (in/sec) at 25 Feet	Approximate Vibration Level (VL) at 25 Feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 (upper range)	105
	0.170 (typical)	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
Slurry wall	0.017 in rock	75
Vibratory roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Notes: PPV is the peak particle velocity. Pile driver amplitude varies greatly based on equipment type and size.
Source: Federal Transit Administration. Transit Noise and Vibration Impact Assessment. 2006.

Table 8-3
Groundborne Vibration and Noise Impact Criteria

Land Use Category	Groundborne Vibration Impact Levels (VdB)		Groundborne Noise Impact Levels (dBA)	
	Frequent Events ¹	Infrequent Events ²	Frequent Events ¹	Infrequent Events ²
Category 1: Buildings where low ambient vibration is essential for interior vibrations	65 VdB ³	65 VdB ³	N/A	N/A
Category 2: Residences and buildings where people normally sleep	72 VdB	80 VdB	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use	75 VdB	83 VdB	40 dBA	48 dBA

¹ Frequent Events – more than 70 vibration events per day
² Infrequent Events – fewer than 70 vibration events per day
³ This criterion limit is based on levels that are acceptable for more moderately sensitive equipment such as optical microscopes.
Source: United States Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Assessment, 1995

The FTA and Caltrans have compiled the data from numerous studies related to vibration and have developed standards for human perception and building damage. The FTA's maximum acceptable vibration standard for human annoyance is 78 VdB at nearby vibration-sensitive land uses.³ The Caltrans maximum vibration level standard is 0.2 in/sec PPV for the prevention of structural damage to typical residential buildings.⁴

³ Federal Transit Administration. *Transit Noise and Vibration Impact Assessment*. 2006

⁴ California Department of Transportation. *Transportation and Construction Vibration Guidance Manual*. Division of Environmental Analysis. September 2013

Federal Aviation Administration (FAA) Standards

Enforced by the FAA, Title 14, Part 150 prescribes the procedures, standards and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs. Title 14 also identifies those land uses that are normally compatible with various levels of exposure to noise by individuals. It provides technical assistance to airport operators, in conjunction with other local, state, and federal authorities, to prepare and execute appropriate noise compatibility planning and implementation programs. The FAA establishes a 65 dBA CNEL as the noise standard associated with aircraft noise.

State of California

California Environmental Quality Act (CEQA)

CEQA requires lead agencies to consider noise impacts. Under CEQA, lead agencies are directed to assess conformance to locally established noise standards or other agencies' noise standards; measure and identify the potentially significant exposure of people to or generation of excessive noise levels; measure and identify potentially significant permanent or temporary increases in ambient noise levels; and measure and identify potentially significant impacts associated with air traffic.

California Noise Control Act of 1973

Sections 46000 – 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards (CCR Title 24)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for multi-family residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of 45 dBA or below [California's Title 24 Noise Standards, Chap. 2-35].

California Department of Transportation

According to the Caltrans vibration manual, large bulldozers, vibratory rollers (used to compact earth), and loaded trucks utilized during grading activities can produce vibration, and depending on the level of vibration, could cause annoyance at uses within the project vicinity or damage structures. Caltrans has developed a screening tool to determine if vibration from construction equipment is substantial enough to impact surrounding uses.

The Caltrans vibration manual establishes thresholds for vibration impacts on buildings and humans. These thresholds are summarized in **Tables 8-4** and **8-5**.

**Table 8-4
Vibration Damage Potential Threshold Criteria**

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50
Source: Caltrans 2013		

**Table 8-5
Vibration Annoyance Potential Threshold Criteria**

Human Response	PPV Threshold (in/sec)	
	Transient	Continuous
Barely perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.90	0.10
Severely perceptible	2.00	0.40
Source: Caltrans 2013		

State of California Department of Health Services

The California Department of Health Services establishes noise criteria for various land uses, Noise/Land Use Compatibility Criteria. The City of Cudahy has incorporated the State standards in the current General Plan Noise Element.

Local

The 2010 Noise Element's main purpose and the associated noise mitigation program is to address noise control planning. The Noise Element adopted the State of California recommended land use compatibility standards below.⁵

⁵ City of Cudahy Noise Element, Exhibit 8-3: State of California Recommended Land Use Compatibility Standards. September 2010

Exhibit 8-4 State of California Recommended Land Use Compatibility Standards

Land Use Categories		Community Noise Equivalent Level (in dBA, CNEL)					
		<55	60	65	70	75	80>
Residential	Single-family, Duplex, Multiple-family	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Mobile Homes, Mixed Use	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Commercial	Hotel, Motel, Other Lodging	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	General Commercial, Retail	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Office	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Industrial	Business Park, Research & Development	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Manufacturing, Warehousing	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Institutional	Hospitals, Schools, Libraries	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Churches, Civic Uses	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Recreation and Open Space	Public Parks	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Golf Course, Natural Habitat	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Commercial Recreation	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
			CLEARLY COMPATIBLE	Ambient noise levels are not significant enough to require special construction and/or noise mitigation.			
			NORMALLY COMPATIBLE	Most land uses will not be affected by ambient noise. Some form of design measures and/or mitigation may be required for noise sensitive land uses.			
			CLEARLY INCOMPATIBLE	Noise sensitive land uses should not be located in these areas unless mitigation is employed to reduce interior noise levels.			
			NORMALLY INCOMPATIBLE	Noise sensitive land uses should not be located in these areas due to excessive and continuous high ambient noise.			

City of Cudahy Municipal Code

Noise Standard

Cudahy Municipal Code Section 20.88.020 (Noise) sets forth the allowable exterior noise levels for the various land uses as summarized in **Table 8-6**. Interior noise for residential uses shall not exceed 45 dBA during daytime hours (between 7:00 AM and 10:00 PM) or 35 dBA during nighttime hours (between 10:00 PM and 7:00 AM).

**Table 8-6
Maximum Exterior Noise Levels**

Receiving Land Use Category	Nighttime 10:00 PM – 7:00 AM	Daytime 7:00 AM – 10:00 PM
	Noise Level dBA	
Residential (Except Multifamily)	45	65
Multifamily Residential and Mobile Home Parks	50	65
Commercial (All "C" Zones)	60	65
Light Industrial Zones	70	70
Heavy Industrial Zones	70	70

Source: Cudahy Municipal Code Section 20.88.020, Table 20.88-1

Vibration Standard

Pursuant to Section 20.88.030 (Vibration) of the Cudahy Municipal Code, no vibration shall be detectable beyond the site from which the vibration is emanating. Within industrial districts, levels of vibration shall not exceed those summarized in **Table 8-7** below.

Table 8-7
Maximum Vibration in Industrial Districts

Frequency	Vibration Displacement (inches)	
	Steady State	Impact
Under 10	0.005	0.0010
10 – 19	0.0044	0.0008
20 – 29	0.0033	0.0006
30 – 39	0.0002	0.0004
40+	0.0001	0.0002

Source: Cudahy Municipal Code Section 20.88.030, Table 20.88-3

Key Baseline Issues

- Roadway traffic is the most significant source of noise affecting sensitive land uses in Cudahy. Noise from the I-710 and arterials such as Atlantic Avenue, Salt Lake Avenue, and Santa Ana Street are the most significant sources of traffic noise.
- In addition to traffic noise on local roadways, freight rail is located at the southern and western boundaries and are significant sources of noise to the residential uses along Cudahy's western boundary.
- Noise generated by industrial facilities and other stationary sources contribute to the ambient noise environment in their immediate vicinities.

This page intentionally left blank.

Introduction

This chapter identifies the issues associated with geologic, environmental, and human-caused hazards. Hazards discussed in the report include hazardous materials, seismicity, geologic, flooding, fire, and airport hazards.

Environmental Setting

Hazardous Materials and Wastes

Defining Hazardous Materials and Wastes

Hazardous materials and wastes are found everywhere. Hazardous materials range from simple household paint to highly toxic industrial chemicals. Hazardous wastes range from used motor oil to post-production manufacturing wastes. The primary difference between hazardous materials and hazardous wastes is that hazardous materials are produced for specific uses whereas hazardous wastes are the byproducts of various processes.

Hazardous materials are classified based on the form of hazard(s) they pose, namely flammable, combustible, poisonous, and/or radioactive. Hazardous wastes are classified by the United States Environmental Protection Agency (EPA) through a listing process. Listed wastes are those wastes that the EPA has formally found to be hazardous. Characteristic wastes are those that have not formally been listed but exhibit hazardous features. Universal wastes are common hazardous wastes that are not industry specific but can be found in many types of land uses. Mixed wastes are those that are both hazardous and radioactive. Hazardous wastes are also classified by the type of hazard(s) they pose, similar to hazardous materials. Hazardous wastes may be ignitable, corrosive, reactive, toxic, or radioactive.

Transport of Hazardous Materials and Wastes

According to the 2010 General Plan Public Safety Element, transportation routes present some risk for hazardous material spills. The Long Beach Freeway, east of the city, is a major route that is available to vehicles carrying hazardous materials. Aside from accidental spill, hazardous materials present fire and explosion hazards during transport. Transporters of hazardous wastes are required to be certified by the Department of Transportation and manifests keep track of hazardous materials during transport. City streets used for the transport of hazardous and toxic substances in and through Cudahy include the designated truck routes of Florence Avenue, Atlantic Avenue, and Salt Lake Avenue.

Railroads are also used for the transport of hazardous materials and wastes. The Union Pacific railroad runs west of the city and the Southern Pacific railroad runs along the alignment of Patata Street south of Cudahy. Trains could be subject to spills, derailment, and the related hazards of fire and explosion. Although only five to seven trains pass on each track daily, the City and local enforcement officials have established emergency response procedures for potential hazardous materials incidents.

Five oil and gas pipelines are located in and near Cudahy. Chevron has three lines in the eastern section of Cudahy and Arco has two lines along Salt Lake Avenue west of the city. Rupture of these lines due to earthquake, groundshaking, or other causes will result in gas and oil leakage in the area. Explosion and hazardous materials contamination may occur if any of these lines are damaged.

CERCLA and Superfund Sites

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), adopted in 1980, was developed to remove contamination of water, air, and land resources from past chemical disposal practices. This Act, also known as the Superfund Act, contains a list of sites referred to as Superfund sites. CERCLA collects taxes from the chemical and petroleum industries that are placed in trust funds to clean abandoned or uncontrolled hazardous waste sites. Response actions authorized by CERCLA include short term response that require immediate attention and long term response to sites where hazardous substance release is not immediately life threatening. The United States Environmental Protection Agency (EPA) Superfund Information System currently includes two hazardous or potentially hazardous sites being assessed pursuant to CERCLA within Cudahy, which are listed in **Table 9-1**. The location of sites being assessed pursuant to CERCLA and other listed sites are illustrated in **Exhibit 9-1**.^{1 2}

**Table 9-1
CERLA Sites**

Name	Address	Non-NPL Status
Park Avenue Elementary School/Gonzales Property/B.H. Steepleton Landfill	5310 Elizabeth Street	Other Cleanup Activity: State-Lead Cleanup
Vloedman Dump	5240 East Santa Ana Street	NFRAP-Site does not qualify for the NPL based on existing information
Source: EPA 2015		

CERCLIS and the National Priorities List

The EPA also maintains the CERCLIS Comprehensive Environmental Response Compensation and Liability Information System list. This list contains sites that are either proposed to be or on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The NPL is a list of the worst hazardous waste sites that have been identified by Superfund. Sites are only put on the list after they have been scored using the Hazard Ranking System (HRS), and have been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money. The HRS uses a structured analysis approach to scoring sites. This approach assigns numerical values to factors that relate to risk based on conditions at the site. The factors are grouped into three categories:

- likelihood that a site has released or has the potential to release hazardous substances into the environment;
- characteristics of the waste (e.g. toxicity and waste quantity); and
- people or sensitive environments (targets) affected by the release.

Four pathways can be scored under the HRS:

- ground water migration (drinking water);
- surface water migration (drinking water, human food chain, sensitive environments);
- soil exposure (resident population, nearby population, sensitive environments); and
- air migration (population, sensitive environments).

¹ United States Environmental Protection Agency. Superfund Site Information: Cudahy. <http://cumulis.epa.gov/supercpad/cursites/srchsites.cfm> [November 12, 2015]

² United States Environmental Protection Agency. EnviroMapper: 90201. <http://www2.epa.gov/emefdata/em4ef.home> [November 12, 2015]

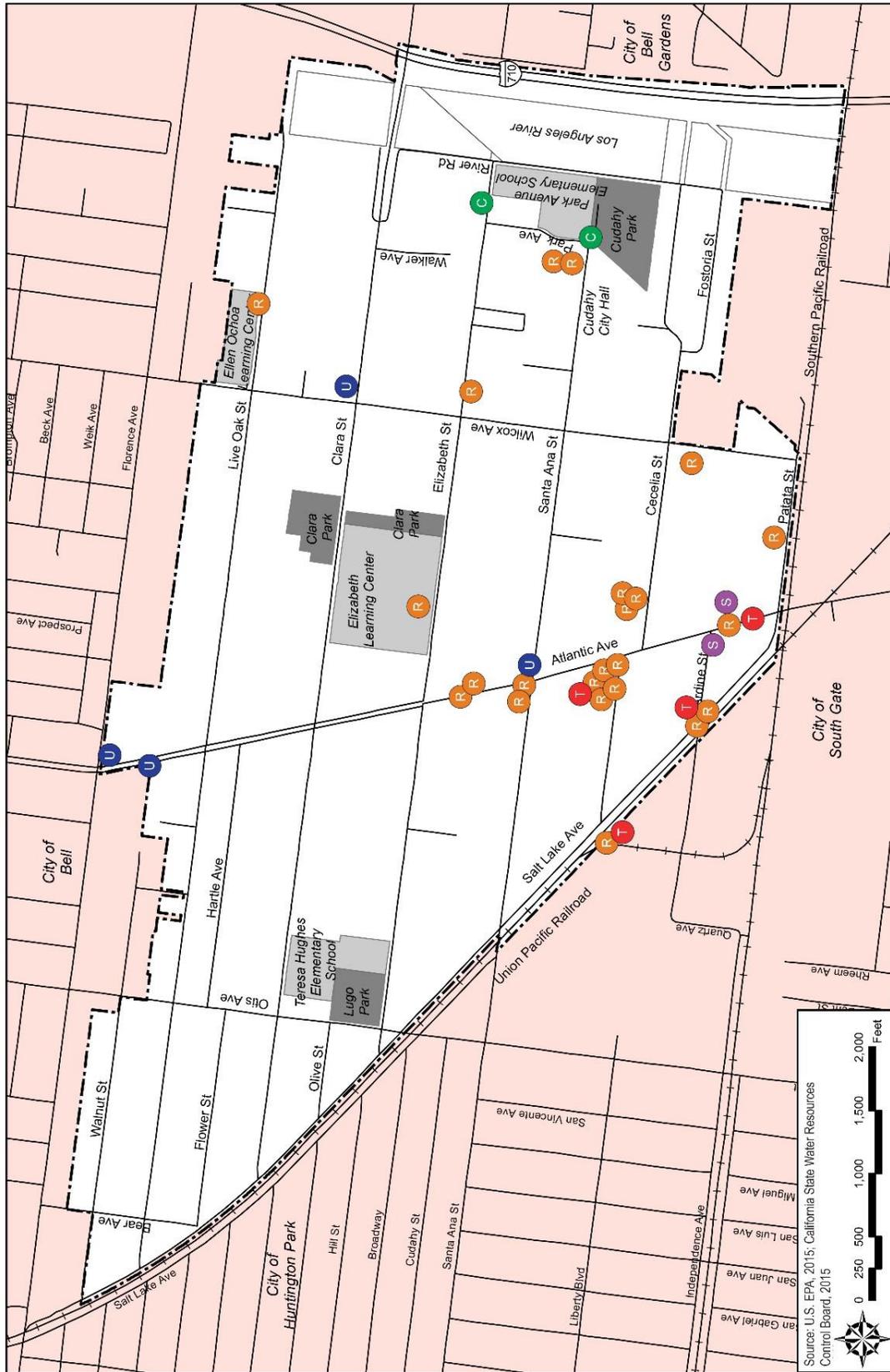
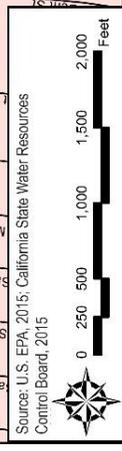


Exhibit 9-1 Hazardous Facilities and Sites

- SWRCB Site Cleanup Programs
- Sites being assessed pursuant to CERCLA
- TRI Facilities

- BASE MAP FEATURES**
- Cudahy Boundary
 - Leaking Underground Storage Tanks (Open Cases)
 - RCRA Facilities



After scores are calculated for one or more pathways, they are combined using a root-mean-square equation to determine the overall site score. Listing on the NPL makes a site eligible for funding of long-term site remediation. There are no NPL sites within Cudahy.³

RCRA and Hazardous Waste Generators

The Resources Conservation and Recovery Act (RCRA) is a federal law that regulates the generation, management, and transportation of waste material. Hazardous waste management, specifically, includes the following:

- Treatment: Any process that changes the physical or chemical composition of the waste to make it less harmful to the environment.
- Storage: The holding of hazardous waste for a temporary period of time.
- Disposal: The permanent final location of the hazardous waste into or on the land.

RCRA approaches hazardous wastes from a cradle-to-grave approach, meaning that all hazardous wastes are tracked and strictly regulated from generation to disposal. Hazardous waste generators are required to report use or transport of hazardous wastes to the EPA. Hazardous waste generators range from small producers such as dry cleaners and automobile repair facilities to larger producers such as hospitals and manufacturing operations. Specifically, the EPA categorizes Small Quantity Generators (SQG) as those facilities that produce between 100 and 1,000 kilograms (kg) of hazardous waste per month. Facilities producing less than 100 kg of hazardous waste per month are not subject to RCRA. Large Quantity Generators (LQG) produce 1,000 kg or more hazardous waste per month. LQG and SQG facilities are subject to the storage and transportation requirements of RCRA. As of November 12, 2015, 23 active hazardous waste handlers are located in Cudahy including three LQG and two hazardous waste transportation facilities. **Table 9-2** lists active SQG, LQG, and transporter facilities within Cudahy.⁴

EPCRA and the Toxic Release Inventory

The federal Emergency Planning and Community Right-To-Know Act (EPCRA) was enacted to inform communities and residents of chemical hazards in their area. Businesses are required to report the locations and quantities of chemicals stored on-site to both state and local agencies. This Act requires the Environmental Protection Agency to maintain and publish a list of toxic chemical releases and other waste management activities reported by certain industry groups and federal facilities. This list, known as the Toxic Release Inventory (TRI), gives the community more power to hold companies accountable for their chemical management.

Section 3131 of the EPCRA requires manufacturers to report releases of more than 600 designated toxic chemicals into the air, soil, or water. Off-site transfers of waste for treatment or disposal are also required to be reported.

³ United States Environmental Protection Agency. EnviroFacts, Query: Cudahy. <http://www2.epa.gov/enviro/cerclis-search> [November 12, 2015]

⁴ United States Environmental Protection Agency. EnviroFacts, Query: Cudahy. <http://www3.epa.gov/enviro/> [November 12, 2015]

**Table 9-2
RCRA Facilities**

Name	Address	Type
Alvarez Trucking	4843 Cecilia Street	SQG
Atlantic Motors Auto	8100 Atlantic Avenue	Unspecified
Bell Number 3 Middle School	5071 Live Oak Street	SQG
Chois Mobil	8029 Atlantic Avenue	SQG
Coast Paper Box Co	4650 Ardine Street	SQG
Commando Plastics Corp	8250 Salt Lake Avenue	SQG
Custom Chemical Formulators, Inc	4630 Cecelia Street	SQG
Day-Glo Color Corp	4615 Ardine Street	LQG
Elizabeth Learning Center	4811 Elizabeth Street	LQG
General Inspections Labs, Inc	8427 Atlantic Avenue	LQG
Grahams Auto Electric Svc	8216 Atlantic Avenue	Unspecified
Irineo Ramirez Balderas Primos Trucking	5147 Santa Ana Street	Transporter
K-Mart No 3337	8017 Atlantic Avenue	SQG
Mooney Machine Manufacturing	4925 Cecelia Street	SQG
Ouad Service, Inc	4727 Cecelia Street	SQG
Park Avenue Elementary	8020 Park Avenue	SQG
Photomax One Hour	7910 Atlantic Avenue	SQG
Piazza Trucking	4841 Cecelia Street	SQG
Rebuilt Metalizing	8232-1/2 Atlantic Avenue	SQG
Richard Hatch Automotive	8214 Atlantic Avenue	SQG
S/M Printing, Inc	4901 Patata Street	SQG
Sanchez Trucking	5023 Elizabeth Street	Transporter
Western Diesel Electric	8135 Atlantic Avenue	SQG
Source: EPA 2015		

On-site disposal or release of chemicals include emissions to the air, discharges to bodies of water, disposal at the facility to land, and disposal in underground injection wells. Off-site disposal or release of chemicals is a discharge of a toxic chemical to the environment that occurs as a result of a facility transferring a waste containing a TRI chemical off-site for disposal or other release. Certain other types of transfers are also categorized as off-site disposal or other release because the outcome of transferring the chemical off-site is the same as disposing of it or releasing it on-site.

Facilities required to report, per EPCRA, include industrial uses that manufacture, process, or use significant amounts of chemicals. Reporting must include the types and amounts of chemicals that are released each year into the air, water, and land or transferred off-site. Listing as a TRI facility doesn't necessarily mean that releases are harmful to humans or the environment. As of January 28, 2010, four TRI facilities were located in Cudahy. Summary data have been included in **Table 9-3**.⁵

⁵ United States Environmental Protection Agency. EnviroFacts, Query: Cudahy. <http://www3.epa.gov/enviro/> [November 15, 2015]

**Table 9-3
TRI Facilities**

Name	Address	Last Release Date
Commando Plastics Corp	8250 Salt Lake Avenue	1990
Custom Chemical Formulators, Inc	4630 Cecelia Street	1989
Day-Glo Color Corp	4615 Ardine Street	2014
M. Stephens Manufacturing, Inc	8420 Atlantic Avenue	1995
Source: EPA 2015		

Cortese List

The provisions in California Government Code Section 65962.5 are commonly referred to as the Cortese List. The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the CEQA. As this statute was enacted over 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and in some cases the information to be included in the Cortese List does not exist. Those agencies and tracking activities that still exist are detailed below.

Hazardous Waste and Substances Sites and Facilities

The California Department of Toxic Substances (DTSC) is charged with reporting of hazardous waste facilities, hazardous waste sites, and hazardous waste disposal on public lands. A hazardous waste facility processes and disposes of hazardous wastes. A hazardous waste site is a contaminated site requiring monitoring and cleanup. According to DTSC, there are no hazardous waste and substance sites within Cudahy.⁶

Site Cleanup Programs

The California State Water Resources Control Board is also required to report site contamination. The primary difference between DTSC and SWRCB site reporting is that DTSC reports pursuant to the Health and Safety Code while SWRCB reports pursuant to the Water Code. Further distinction is made because DTSC reports specifically on hazardous waste sites while SWRCB reports on hazardous materials and other contaminants that may affect soil and/or water resources. Two active site cleanup programs occur within Cudahy; these are listed in **Table 9-4**.⁷

**Table 9-4
SWRCB Site Cleanup Programs**

Name	Address	Affected Media	Contaminants
General Inspection Laboratories, Inc	8427 Atlantic Avenue	Unspecified	Unspecified
On Atlantic, LLC	8411 Atlantic Boulevard	Other Groundwater (Uses other than drinking water), Soil, Soil Vapor	Tetrachloroethylene, Trichloroethylene
Source: SWRCB 2015			

⁶ California Department of Toxic Substances Control. EnviroStor. http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm [November 12, 2015]

⁷ State Water Resources Control Board. GeoTracker, Advanced Search: Cudahy, 90201. <https://geotracker.waterboards.ca.gov/search.asp> [November 12, 2015]

Leaking Underground Storage Tanks

SWRCB is required to report on all leaking underground storage tanks (LUSTs). The most common type of LUSTs are leaking underground fuel tanks (LUFTs). There are currently three active LUST assessments in progress within Cudahy, as summarized in **Table 9-5**.⁸

Table 9-5
Leaking Underground Storage Tanks

Name	Address	Affected Media	Contaminants
ARCO #3043	7200 Atlantic Avenue	Aquifer Used for Drinking Water Supply	Gasoline
BC Food Market	5001 Clara Street	Unspecified	Unspecified
Okeh Caterers	7301 Atlantic Avenue	Aquifer Used for Drinking Water Supply	Gasoline
Former Porter's Super Service	8100 Atlantic Avenue	Soil	Gasoline

Source: SWRCB 2015

Solid Waste Disposal Sites

The SWRCB is charged with reporting on solid waste disposal facilities that are resulting in the migration of hazardous substances from the site. According to the SWRCB GeoTracker database, there are no solid waste disposal sites located within Cudahy.⁹

Active Water Board Orders

The Santa Ana RWQCB is required to compile a list of active Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) that concern the discharge of wastes that are hazardous materials. There are no Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) within Cudahy.¹⁰

Geologic and Seismic Hazards

Geographic Context

Cudahy is located in southeastern Los Angeles County, west of I-710 and the Los Angeles River. Cudahy is surrounded by the cities of Bell to the north, South Gate to the south, Bell Gardens to the east, and Huntington Park to the west.

Topography

The Los Angeles River borders Cudahy on the east along with the I-710. Cudahy is generally flat with a slight slope to the southeast toward the Los Angeles River. The elevation ranges from approximately 140 feet in the northwest corner to approximately 110 feet in the southeast corner.

⁸ State Water Resources Control Board. GeoTracker, Advanced Search: Cudahy, 90201. <https://geotracker.waterboards.ca.gov/search.asp> [November 12, 2015]

⁹ State Water Resources Control Board. List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit. <http://www.calepa.ca.gov/SiteCleanup/CorteseList/CurrentList.pdf> [November 12, 2015]

¹⁰ California Environmental Protection Agency. Cortese List, List of 'active' CDO and CAO. <http://www.calepa.ca.gov/SiteCleanup/CorteseList/CDOCAOList.xls> [November 12, 2015]

Geologic Units

Cudahy is located within the South Gate Quadrangle. The geologic map of the South Gate Quadrangle shows that the entire city is covered by alluvial sediments of Quaternary age. Older alluvial fan sediments of Pleistocene age are associated with the Montebello Hills and Dominguez Hills. Elsewhere across most of the quadrangle are the younger alluvial fan sediments of Holocene and late Pleistocene age. These deposits consist of varying proportions of sand, gravel, silt, and clay.¹¹

Soils

The National Cooperative Soil Survey provides soil type descriptions, spatial distribution, physical, chemical and drainage properties, and related development limitations. Soils characteristics are based on observations of slope, length, drainage patterns, floral activity, and bedrock types. Soils profiles note color, texture, size and shape of aggregates, amount and type of rock fragments, plant root distribution, reaction, and other identifying features. According to the United States Department of Agriculture Natural Resource Conservation Service, there is no soil survey data available for Cudahy (Los Angeles County, California, Southeast Part CA696).¹²

The NRCS Soil Survey identifies a variety of soil characteristics that may affect development. The soil characteristics include development limitations for typical land uses such as single-family residences or dwellings, commercial structures, trenching, and roadways. Definitions of each of these land uses, as defined by the Soil Survey, are provided herein. The Soil Survey does not provide limiting factors for larger uses such as heavy industrial or public institutions; however, it can be assumed that limitations effecting small commercial structures would be applicable to larger structures as well.

Dwellings: For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of two feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about seven feet. Limitations on residential structures are based on the ability of the soil to support the building load without movement and properties that affect excavation and construction costs. Load supporting properties are affected by flooding, depth to saturation, and shrink-swell potential. Depth to bedrock and the other factors also impact excavation.

Small Commercial: A small commercial building is defined as a structure less than three stories high and without a basement. Foundations are assumed to consist of spread footings of reinforced concrete built on undisturbed soil of two feet or at a depth of maximum frost penetration, whichever is deeper. Limitations on small commercial structures are based on the ability of the soil to support the building load without movement and properties that affect excavation and construction costs. Load supporting properties are affected by flooding, depth to saturation, and shrink-swell potential. Depth to bedrock and the other factors also impact excavation.

Trenching: Known as *shallow excavations*, this land use represents trenches and holes dug to a maximum depth of five to six feet for such purposes as graves, utility lines, and open ditches. Limitations on shallow excavations are based on the ease of digging and the resistance to sloughing. The depth of bedrock or cemented pan and soil density influence the ease of digging, filling, and compacting. Slope influences the ease of machinery use.

Roads: Roads are defined by having a subgrade of cut or fill soil materials, a base of gravel, crushed rock, or soil material stabilized by lime or cement, and a surface of flexible material (i.e. asphalt), rigid material (i.e. concrete), or gravel with a binder. Limitations affecting roadways and streets are based on ease of excavation and grading and the traffic-supporting capacity of the soil. Ease of excavation and grading are impacted by depth to bedrock or cemented

¹¹ Department of Conservation. Seismic Hazard Zone Report 034. South Gate 7.5 Minute Quadrangle. 1998

¹² USDA NRCS. Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> [Accessed on December 1, 2015]

pan, depth to saturation, flooding, and slope. Traffic supporting capacity is affected by soil strength, shrink-swell potential, potential frost action, and depth to saturation.

Limitations that can affect the ease of construction or post-construction performance of a building include corrosivity, slope, depth of bedrock or cemented pan, flooding, shrink-swell potential, caving potential, subsurface saturation, frost action, strength, and bulk density. Limitations that have not been discussed above are summarized below.

Bulk Density: Soils horizons with low bulk densities have low strength and could be subject to collapse if wetted to field capacity or above. Foundations constructed on soils with low bulk densities may require special designs.

Corrosion: Corrosion to uncoated steel and concrete is based on a number of soil properties including drainage class, soil texture, pH and other chemical components. Corrosion of steel results in dissolving and weakening of the structure, thereby impacting underground utilities. Concrete corrosion impacts foundations and other surface concrete applications.

Linear Extendibility: Linear extendibility, or shrink and swell, is the expression of the volume difference of natural soil between saturated and dry soils. Moderate to very high shrinking and swelling can damage buildings, roads, and other structures. A high degree of shrinkage can also damage plant roots.

Earthquake

The outer layer of the Earth (lithosphere) acts as a rigid shell located on the asthenosphere, a hot, highly viscous, plastic-like layer. The lithosphere is fractured and divided into a number of sections called *plates* that are constantly moving over the asthenosphere. In areas where plates are moving apart, the asthenosphere rises and spreads, creating a new lithosphere. As the new lithosphere cools, it becomes rigid and eventually subducts under an adjacent plate, creating deep oceanic trenches. It is near these trenches, where plates are pushing together, that most continental mountain ranges form. Plate tectonics forms the basis for earthquakes and surface ruptures that impact Southern California.¹³

Faulting and Fault Hazards

Where two plates meet, the plates are deformed by stresses within the Earth. The ground bends and upon reaching a certain limit, breaks and snaps into a new position, known as faulting. The vibrations that occur from the faulting process are known as earthquakes. In California, the most prominent fault is the San Andreas, located at the boundary between the Pacific Plate (to the west) and the North American Plate (to the east). The San Andreas is the main fault in a series of faults spanning over 800 miles and extending at least 10 miles into the Earth.¹⁴ The majority of large earthquakes in California have been accompanied by surface rupture. Surface rupture refers to the actual fracturing of the ground surface along the fault trace. This fracturing can either involve a sideways or horizontal displacement (lateral) or a vertical displacement. Surface fault rupture is not a significant hazard in Cudahy because the nearest fault trace is more than six miles away.

Strong Groundshaking

Los Angeles County has approximately 50 active and potentially active faults, twenty-one of which are major active faults (an active fault is defined as a fault that has exhibited movement during the past 10,000 years). The presence of these faults has caused at least one earthquake every four years. Cudahy and its neighboring cities are highly

¹³ Louie, John Ph. D and Anderson, J. University of Nevada, Department of Geological Sciences and Engineering. *Plate Tectonics, the Cause of Earth Quakes*. May 11, 2001

¹⁴ Shulz, Sandra S. and Robert E. Wallace. United States Geological Service. *The San Andreas Fault*. June 24, 1997

susceptible to these earthquakes. A major earthquake occurring along any of the major fault traces in the region would be capable of producing strong ground shaking effects in Cudahy. All of Cudahy lies within a seismically active region and is subject to strong groundshaking from earthquakes generated along one or more of the several regional faults listed in **Table 9-6**. Strong ground shaking is considered to be the most pervasive and potentially dangerous geologic hazard in Cudahy due to its widespread impact and sometimes devastating destruction of structures and critical infrastructure. The estimated maximum magnitudes listed in **Table 9-6** are values associated with the Richter Scale that measures the amount of energy released by an earthquake. Each increase in magnitude represents a tenfold increase in the total energy of the earthquake.

**Table 9-6
Potential Seismic Sources**

Fault	Estimated Maximum Magnitude	Location from Plan Area (Miles, Direction)
Newport-Inglewood	6.0-7.4	6, west
Whittier-Elsinore	6.0-7.2	17, east
Sierra Madre	6.0-7.0	29, north
Norwalk	6.25	10, east
San Andreas	8.0	30, north
Source: City of Cudahy 2010 General Plan Public Safety Element		

Ground Failure and Deformation

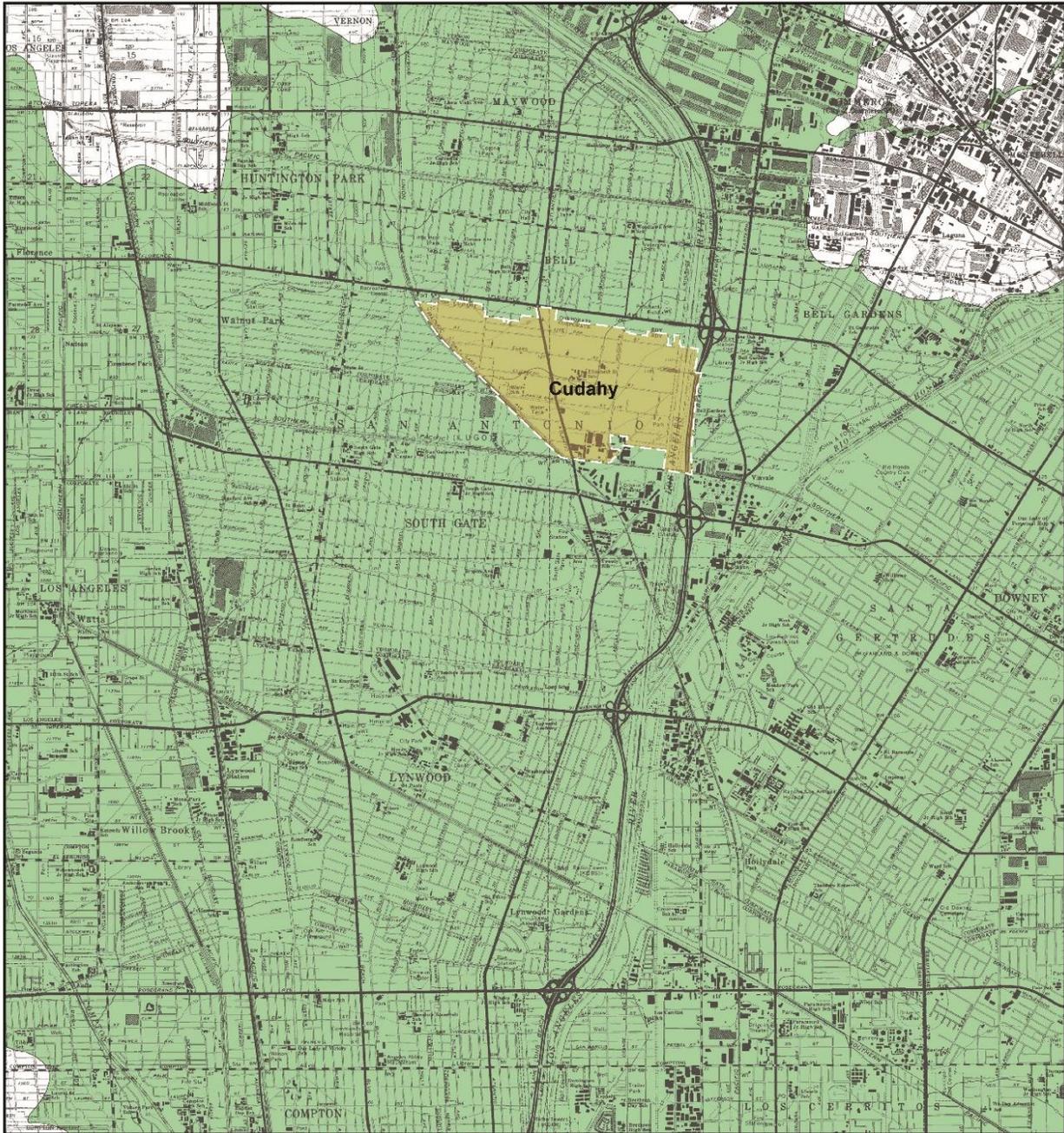
Various types of ground failure can occur as a result of earthquake shaking; some of the ground failures can cause substantial damage to the built environment. Ground failure types include settlement, collapse, subsidence, expansion, liquefaction, and slope failure. The most destructive are liquefaction and slope failure. Areas prone to liquefaction and other ground deformation hazards are illustrated in **Exhibit 9-2**.

Liquefaction

Liquefaction may occur in areas where relatively loose, sandy soils mix with high groundwater levels (less than 50 feet) during long duration, high seismic groundshaking. Earthquakes can cause water pressure to increase in loose sediments, leading to the sediments losing strength and behaving like a liquid. A variety of ground deformation can occur as a result of liquefaction, leading to structural and infrastructure damage. Typical effects of liquefaction include:¹⁵

- Loss of Bearing Strength: The ground liquefies and loses its ability to support structures.
- Lateral Spreading: The ground slides down a gentle slope or toward stream banks sitting on a buried liquefied layer.
- Sand Boils: Sand-laden water is ejected from a buried liquefied layer and report at the surface to form a sand volcano, generally coinciding with fracturing and settlement of the ground around the boil.
- Flow Failure: The ground moves down a steep slope, generally displacing large amounts of earth and disrupting substantial amounts of internal material.
- Ground Oscillation: Deformation of a surface soil layer riding on a buried liquefied layer.
- Flotation: Light, buried structures such as pipelines and underground storage tanks float to the surface due to the loss of soil density.
- Settlement: Settling of soils due to underlying densification after reconsolidation of liquid ground at the conclusion of groundshaking.

¹⁵ United States Geological Survey. *San Francisco Bay Region Geology and Geologic Hazards. About Liquefaction.* geomaps.wr.usgs.gov/sfgeo/liquefaction/aboutliq.html [Accessed on November 30, 2015]



Source: California Department of Conservation, Division of Mines and Geology, Seismic Hazard Zones Map of the South Gate Quadrangle

 **Cudahy Boundary**

 **Liquefaction Zone**
 Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. Liquefaction Zones are areas where historic occurrence of liquefaction, or local geological geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Exhibit 9-2 Geologic Hazards



Cudahy is located on alluvial soils deposited by the nearby Los Angeles River before it was channelized. The primary factors that govern an area's susceptibility to liquefaction are age and type of sedimentary deposit, penetration resistance, and depth to groundwater. Recent deposits are more susceptible to liquefaction since age and compaction increase with soil depth, thus, lessening liquefaction potential.

The youngest sediments in the region occur in the flood plain areas of the Los Angeles, San Gabriel, and Santa Ana Rivers, which have been responsible for periodic flooding in the past 150 years. Cudahy is underlain by late Holocene (past 1,000 years) alluvium consisting of silt, gravel, sand, and clay and is characterized by soils that were flooded historically by the Los Angeles River. These soils are highly susceptible to the effects of liquefaction because they are not highly cemented. In addition, the groundwater is at relatively shallow depths ranging from 10 to 30 feet. In a comprehensive study of the earthquake risk in Southern California, Cudahy was found to be in an area with high to moderate risk for liquefaction. Past studies of the area classified the city with a very high potential due to perched groundwater. Pumping and subsequent overdrafting has caused the water table to lower, thereby reducing the risk of liquefaction. Cudahy's liquefaction potential is shown in **Exhibit 9-2**. Areas with a high potential for liquefaction have groundwater levels at 10 feet or less below the ground surface. Areas with moderate liquefaction potential have groundwater levels at 10 to 30 feet below the surface. All of Cudahy is located within a zone of required investigation for liquefaction hazards.

Settlement

Seismic settlement occurs when seismic groundshaking causes one type of soil or rock to settle more than another type. Settlement is more likely to occur in areas of alluvium, like that underlying the majority of Cudahy. Settling can damage structures and infrastructure by unevenly depressing soils underlying building foundations.

Collapse

Collapsible soils consist of loose, dry, low-density materials that collapse and compact with the addition of water or excessive loading. Such soils are typical in areas of young alluvial fans, debris flow sediments, and aeolian deposits. Collapse occurs when subsurface soils are excessively saturated at levels deeper than those reached by an average rainfall and the clay bonds holding the soil grains together are eliminated. Collapse can result in cracked foundations, floors, and walls. Collapse could occur within Cudahy in any area dominated by young alluvial sediments and could be exacerbated by human activities such as excessive irrigation.¹⁶

Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface due to subsurface movement of earth materials. More than 80 percent of identified subsidence in the United States is caused through overdrafting of groundwater. Drainage of organic soils, underground mining, natural compaction, and thawing of permafrost can also cause subsidence. Similar to collapse and settlement, subsidence causes large areas of land to sink, thereby potentially damaging foundations, walls, and floors. No instances of subsidence have been recorded within Cudahy.¹⁷

Expansion

Expansive soil and rock are characterized by the shrinking and swelling of clayey material as the materials dry or become wet. Shale is the most common parent rock associated with expansive soils.¹⁸ This swelling and shrinking places stress on buildings and infrastructure. Problems associated with expansive soils include foundation damage, jammed doors and windows, ruptured pipelines, and heaving and cracking of sidewalks and roads. According to the United States Department of Agriculture Natural Resource Conservation Service, there is no soil survey data available for the City of Cudahy (Los Angeles County, California, Southeast Part CA696).¹⁹

¹⁶ Association of Environmental & Engineering Geologists. Geologic Hazards: Expansive and Collapsible Soils. <http://www.aegweb.org/?page=ExpansiveSoil> [Accessed on November 30, 2015]

¹⁷ United States Geological Survey. Fact Sheet 165-00. *Land Subsidence in the United States*. December 2000

¹⁸ *Parent rock* is the rock type from which the soil eroded.

¹⁹ USDA NRCS. Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> [Accessed on December 1, 2015]

Slope Stability and Landslides

Landslides pose serious risk to human life and property, particularly when considering fast-moving and unexpected debris flows. The potential for landslides within Cudahy is low since the topography of Cudahy is relatively low.

The California Geological Survey classifies landslides into a two-part designation that defines both the type of material that failed and the type of movement. The failed materials are defined as either rock or soil. Rock is defined as hard or firm bedrock that was intact and in place prior to the slope movement. Soil is defined as unconsolidated or poorly cemented rock or aggregate particles. Soil is further differentiated by its texture as debris (coarse fragments) or earth (fine fragments). Complex slope movements can involve both rock and soil failure and a combination of movements whereas composite failures are representative of one material and one movement. Landslide movements are categorized as falls, topples, spreads, slides, or flows, as follows:²⁰

- Fall: Masses of soil or rock that dislodge from steep slopes and free-fall, bounce, roll downslope.
- Topple: Movement by the forward pivoting of a mass around an axis below the displacement mass.
- Spreads: Movement by horizontal extension and shear or tensile fractures (lateral spreads caused by liquefaction are discussed above).
- Slides: Displacement of masses of materials along one or more discrete planes. Rotational sliding rotates backwards and rotates around an axis parallel to the ground surface. Transitional sliding moves parallel to the ground surface.
- Flows: Movement as a deforming, viscous mass without a discrete failure plane.

Flood Hazards

Flooding can lead to property damage and personal injury. No major bodies of water or watershed areas are located near Cudahy. Thus, hazards from a 100-year or 500-year flood are negligible. The National Flood Insurance has designated Cudahy as an area with no special flood hazard. The Los Angeles River is east of the city and has been constructed to withstand flooding potential in the area. Failure of the river channel is unlikely but storm water overflow may occur.

Under the direction of the Federal Emergency Management Agency (FEMA) through the National Flood Insurance Program (NFIP), flood-prone areas have been mapped throughout the country. The most common flood hazard zone in the NFIP is Zone A, indicating that the area is subject to 100-year flooding. This means that under the strongest storm anticipated within a 100-year span, the area will flood. This can also be interpreted as being subject to a one percent annual chance of flooding. Another common flood zone is Zone X, indicating that the area is not subject to flooding. Zone D indicates that flood potential for the area has not been determined but is possible. Zone AE is designated to those areas subject to 100-year floods and also have had base flood elevations (BFE) established. BFE indicates the anticipated height of floodwaters during the 100-year storm event. This becomes important when developing in the floodplain fringe because FEMA regulations limit development within the floodplain fringe that would raise BFEs by more than one foot.

According to the FEMA Flood Insurance Rate Maps for the City of Cudahy (Map Panel No. 06037C1810F and 06037C1805F), the eastern half of the city closest to the Los Angeles River is located within Zone X (Shaded). Zone X (Shaded) indicates areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. The western portion of the city is located within Zone X (Unshaded), which indicates areas outside the 0.2% annual chance floodplain (**Exhibit 9-3**).

²⁰ California Geological Survey. Landslides. www.consrv.ca.gov/cgs/geologic_hazards/landslides/Pages/Index.aspx [Accessed on December 1, 2015]

- BASE MAP FEATURES**
-  Cudahy Boundary
 -  Areas With 0.2% Annual Chance of Flood (500 Year Flood Zone)
 -  Areas Outside the 0.2% Annual Chance Flood (500 Year Flood Zone)

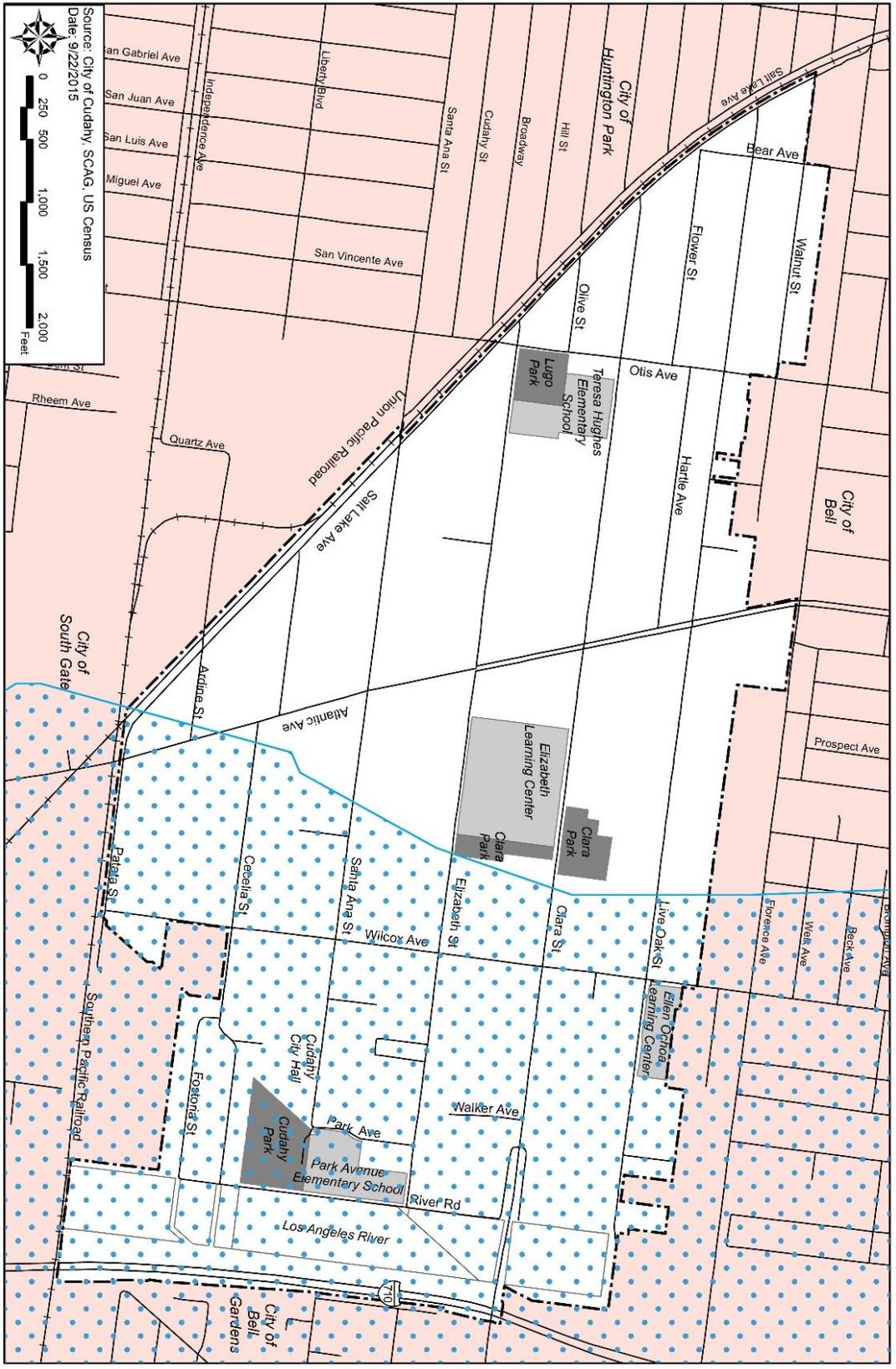


Exhibit 9-3
FEMA Flood Zones

Dam and Levee Failure

Large areas downstream of the Hansen and Sepulveda Dams are at risk of inundation in the event of dam failure. All of Cudahy is within the inundation areas of the Hansen and Sepulveda Dams. The Hansen and Sepulveda Dams are operated by the Army Corps of Engineers and were constructed primarily for flood control. The flood hazards associated with dam failure will affect most areas south of the dams including Cudahy. The Hansen Dam is located on the northern edge of San Fernando Valley, 4 miles west of Sunland. It provides flood protection to all cities downstream and improves the use of the Los Angeles River Channel. The inundation area of the Hansen Dam include areas along the Tujunga Creek, the City of Los Angeles, cities in south central Los Angeles, and areas along the Los Angeles and San Gabriel Rivers. The City of Cudahy is 26.1 miles south of the dam but dam failure will affect the entire city. Flood waters will arrive approximately 18 hours after failure with a maximum depth of 1 foot at around 21 hours after failure.²¹

The Sepulveda Dam is located on the Los Angeles River near the intersection of the Ventura and San Diego Freeways near Van Nuys. The probable maximum flood from the Sepulveda Dam is expected to last 4 days with a total volume of 163,200 acre-feet. The flood will affect areas along the Los Angeles River, and the cities of Los Angeles, Huntington Park, South Gate, Cudahy, Lynwood, Maywood, Bell, Commerce, and Bell Gardens. Cudahy is approximately 26.8 miles from the dam and the flood will arrive at the 10 hours after failure. A maximum flood elevation of two feet is expected approximately 113 hours after failure.²²

Seiche and Tsunami

Seiche is the process by which water sloshes outside its containing boundaries, generally due to an earthquake. Seiche can result in localized flooding that can result in property damage or personal injury. This could occur within an open reservoir, lake, or other large waterbody. A tsunami is a large wave that generates in the ocean, generally from an earthquake, and builds intense strength and height before impacting a coast. Tsunami can result in significant property damage and loss of life due to the intense, destructive nature of the wave and the often-sudden occurrence with little chance for warning. Seiche and tsunamis will not affect the Cudahy because of it is 15 to 20 miles from the Pacific Ocean and because there are no significant bodies of water within or near the city.

Mud and Debris Flows

A mudflow (or debris flow) is a rapidly moving slurry of water, mud, rock, vegetation and debris. Larger debris flows are capable of moving trees, large boulders, and even cars. This type of failure is especially dangerous, as it can move at speeds in excess of 10 miles per hour, is capable of crushing buildings, and can strike with very little warning. As with soil slips, the development of debris flows is strongly tied to exceptional storm periods of prolonged rainfall. Ground failure occurs during an intense rainfall event, following saturation of the soil by previous rains. Even relatively small amounts of debris can cause damage from inundation and/or impact. The majority of Cudahy is flat and therefore, not susceptible to mud and debris flows.

Fire Hazards

According to the California Department of Forestry and Fire Protection, Cudahy is not located within a Very High Fire Hazard Severity Zone (VHFHSZ).²³ Fire hazard zoning is developed through modeling efforts based on vegetation, topography, weather, crown fire potential, and ember production and movement. Note that *crown fire* denotes fire that advances independently from the surface fire. Fire hazard zoning does not account for risk, which is the measure of potential for damage. Fire hazard mapping is used in building codes for areas located within the Wildland Urban Interface (WUI) and requirements for defensible space clearing.

²¹ Leighton and Associates. Los Angeles County Safety Element., Technical Appendix. 1990.

²² Leighton and Associates. Los Angeles County Safety Element., Technical Appendix. 1990.

²³ California Department of Forestry and Fire Protection. Fire and Resource Assessment Program. Local Responsibility Area. September 2011.

Airport Hazards

The Hawthorne Municipal Airport is located approximately nine miles to the southwest of Cudahy. The Compton/Woodley Airport is located approximately six miles to the southwest. The El Monte Municipal Airport is located approximately 12 miles to the northwest. The Fullerton Municipal Airport is located approximately 13 miles to the southeast. The Los Angeles International Airport is located approximately 13 miles to the west. Cudahy is not located within any public or private airport's planning area.

Regulatory Framework

Hazardous Materials and Wastes

California Code of Regulations (Title 22)

Title 22 contains all applicable state and federal laws governing hazardous wastes in the State. Title 22 is more stringent and broader in its coverage of wastes than Federal law. Title 26 deals with toxic-related regulations.

The generation, transport, and disposal of asbestos and asbestos-containing materials are regulated under Title 22 of the California Code of Regulations. Asbestos is a fibrous mineral that was commonly used in household products and building materials prior to the 1980s. When asbestos fibers become airborne and are inhaled, they pose a serious health risk. Exposure to asbestos can lead to varying forms of lung cancer. The primary non-industrial source of asbestos exposure is the demolition or remodeling of buildings that were constructed with asbestos containing materials. Other materials of concern when demolition or remodeling occurs includes lead based paints and mercury containing products.

Hazardous Materials Transportation Act

United States Code part 49, Section 5101 et al. sets the basic statutory requirements for federal hazardous materials transportation law. The law provides the federal government with the authority to designate hazardous materials. Designation may occur for explosive, radioactive, infectious, flammable, combustible, toxic, oxidizing, and corrosive materials as well as compressed gases. The law covers various aspects of hazardous materials transportation, as follows:

- Hazardous materials classification
- Hazard communication
- Packaging requirements
- Operational rules
- Training and security
- Registration

Hazardous Materials Disclosure Program

State and federal law require all businesses handling more than a specified amount of hazardous or extremely hazardous materials to submit a Hazardous Materials Business Plan to the local Certified Unified Program Agency (CUPA). The CUPA for the City of Cudahy is the Los Angeles County Fire Department, Health Hazardous Materials Division (HHMD).

The HHMD requires a business plan to be prepared, submitted, and implemented by any business handling hazardous materials or a mixture containing a hazardous material. These businesses include, but are not limited to:

- All hazardous waste generators, regardless of quantity generated

- Any business that uses, generates, processes, produces, treats, stores, emits, or discharges a hazardous material in quantities at or exceeding:
 - 55 gallons or more of a liquid;
 - 500 pounds or more of a solid; or
 - 200 cubic feet (compressed) of gas at any one time in the course of a year.
 - Any business that handles, stores, or uses Category (I) or (II) pesticides, as defined by the Federal Insecticide, Fungicide and Rodenticide Act, regardless of amount
 - Any business that handles Department of Transportation Hazard Class 1 explosives

In addition, businesses are required to submit an amendment to their business plan within 30 days of any of the following events:

- A 100 percent or more increase in the quantity of a previously disclosed hazardous material
- Any handling of a previously undisclosed hazardous material subject to inventory requirements:
 - Change of business address;
 - Change of ownership; or
 - Change of business name.

These required business plans are used by responding agencies in the event of a release to allow for a quick and accurate evaluation of each situation. Businesses handling hazardous materials are required to verbally report any release or threatened release if there is a reasonable belief that the release poses a significant present or potential hazard to human health and safety, property, or the environment. In addition, if a release involves a hazardous substance listed in Title 40 of the Code of Federal Regulation in an amount equal to or exceeding the reportable quantity, a notice must be filed with the California Office of Emergency Services within 15 days.

The HHMD is responsible for conducting compliance inspections of regulated facilities in Los Angeles County.

Hazardous Waste Control Law

This State statute sets regulations for the handling, transport, and disposal of hazardous waste. California law exceeds federal RCRA regulations by requiring source reduction planning and includes more extensive coverage of activities and wastes.

Los Angeles County Fire Department Health Hazardous Materials Division

The Health and Hazardous Materials Division (HHMD) is a division of the Fire Department's Prevention Services Bureau, and includes the following sections and units: inspection sections, emergency operations sections, special operations section, and the administration/planning section.

In 1997, HHMD became a Certified Unified Program Agency (CUPA) to administer the following programs within Los Angeles County: The Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the California Accidental Release Prevention Program (Cal-ARP), the Aboveground Storage Tank Program and the Underground Storage Tank Program.

National Incident Management System (NIMS)

In 2003, the Homeland Security Presidential Directive-5 was issued. It directs the Secretary of Homeland Security to develop and administer National Incident Management System (NIMS). While most emergency situations are handled locally, when there is a major incident, help may be needed from other jurisdictions, the state, and the federal government. The NIMS provides a consistent nationwide template to establish federal, state, tribal and local governments, private sector, and nongovernmental organizations to work together effectively and efficiently to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size or complexity, including acts

of catastrophic terrorism. NIMS benefits include a unified approach to incident management; standard command and management structures; and emphasis on preparedness, mutual aid and resource management.

Standardized Emergency Management System

The vast majority of emergencies are mitigated by local agencies with no need for additional assistance. However, when a major incident occurs the first few moments are critical in terms of reducing loss of life and property. First responders must be sufficiently trained to understand the nature and the gravity of the event to minimize the confusion that inevitably follows catastrophic situations. The first responder must then put into motion relevant mitigation plans to further reduce the potential for loss of lives and property damage and to communicate with the public. According to the state's Standardized Emergency Management System (SEMS), local agencies have primary authority regarding rescue and treatment of casualties and making decisions regarding protective actions for the community. This on-scene authority rests with the local emergency services organization and the incident commander.

The SEMS law intent is to improve the coordination of state and local emergency response in California. It requires all California jurisdictions to participate in the establishment of a standardized statewide emergency management system.

Depending on the type of incident, several different agencies and disciplines may be called in to assist with emergency response. Agencies and disciplines that can be expected to be part of an emergency response team include medical, health, fire and rescue, police, public works, and coroner. The challenge is to accomplish the work at hand in the most effective manner while maintaining open lines of communication between the different responding agencies to share and disseminate information, to coordinate efforts.

Emergency response in every California jurisdiction is handled in accordance with SEMS, with individual City agencies and personnel taking on their responsibilities as defined by the City's Emergency Plan. This document describes the different levels of emergencies, the local emergency management organization, and the specific responsibilities of each participating agency, government office, and City staff. The Los Angeles County Chief Executive Office, Office of Emergency Management manages the Emergency Operation Center (EOC) during disasters and coordinates other agencies in the implementation of SEMS.

The framework of the SEMS system is the following:

- Incident Command System – a standard response system for all hazards that is based on a concept originally developed in the 1970s for response to wildland fires;
- Multi-Agency Coordination System – coordinated effort between various agencies and disciplines, allowing for effective decision-making, sharing of resources, and prioritizing of incidents;
- Master Mutual Aid Agreement and related systems – agreement between cities, counties and the State to provide services, personnel and facilities when local resources are inadequate to handle an emergency;
- Operational Area Concept – coordination of resources and information at the county level, including political subdivisions within the county; and
- Operational Area Satellite Information System – a satellite-based communications system with a high-frequency radio backup that permits the transfer of information between agencies using the system.

The SEMS law requires the following:

- Jurisdictions must attend training sessions for the emergency management system;
- All agencies must use the system to be eligible for funding for response costs under disaster assistance programs; and
- All agencies must complete after-action reports within 120 days of each declared disaster.

Los Angeles County Office of Emergency Management

The Office of Emergency Management is responsible for organizing and directing the preparedness efforts of the Emergency Management Organization of Los Angeles County. OEM is the day-to-day Los Angeles County Operational Area coordinator for the County. The emergency response plan for the unincorporated areas is the Operational Area Emergency Response Plan (OAERP), which is prepared by OEM. The OAERP strengthens short and long-term emergency response and recovery capability, and identifies emergency procedures and emergency management routes in Los Angeles County.²⁴

City of Cudahy Emergency Plan

The City has an Emergency Plan that outlines responsibilities and procedures to follow in the event of an emergency or city-wide disaster. It discusses the potential emergency situations in Cudahy and outlines responsibilities for emergency preparedness and emergency response. Specific emergency functions and operations, available resources (fire stations, emergency shelters, hospitals and clinics, resource persons, etc.), and mutual aid agreements are also provided. The City shall regularly update and implement its Multi-Hazard Functional Plan for Emergency Operations. This is an ongoing activity by the Emergency Services Coordinator, with funding from the General Fund. In order to keep City staff informed of their responsibilities, annual reviews and drills shall be performed.²⁵

Geologic and Seismic Hazards

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Special Studies Zones Act was signed into law in 1972 (renamed the Alquist-Priolo Earthquake Fault Zoning Act in 1994). The Act's primary purpose is to mitigate the fault rupture hazard on human life and property by limiting the potential for siting human occupancy structures across an active fault trace.

The Act requires the State Geologist (Chief of the California Geological Survey) to delineate Earthquake Fault Zones along faults that are "sufficiently active and well defined." These faults show evidence of Holocene surface displacement along one or more of their segments (sufficiently active) and are clearly detectable by a trained geologist as a physical feature at or just below the ground surface (well defined). The boundary of an Earthquake Fault Zone is generally about 500 feet from major active faults, and 200 to 300 feet from well-defined minor faults. The Act dictates that cities and counties withhold development permits for sites within an Earthquake Fault Zone until geologic investigations demonstrate that the sites are not threatened by surface displacements from future faulting.

Alquist-Priolo maps are distributed to all affected cities and counties for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within these zones. Projects include all land divisions and most structures for human occupancy. State law exempts single-family wood-frame and steel-frame dwellings that are less than three stories and are not part of a development of four units or more. However, local agencies can be more restrictive. Applicable faults and boundaries of the State-delineated fault zones are shown on Exhibit 9-2.

Seismic Hazards Mapping Act

The Alquist-Priolo Earthquake Fault Zoning Act addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. Recognizing this, in 1990, the State passed the Seismic Hazards Mapping Act (SHMA), which addresses non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction and seismically induced landslides. The California Geological Survey (CGS) is the principal state agency charged with

²⁴ Los Angeles County. Chief Executive Office. Office of Emergency Management. <http://lacoa.org/aboutoem.html> [Accessed November 30, 2015]

²⁵ City of Cudahy General Plan. Section 6: Public Safety Element. 2010.

implementing the Act. Pursuant to the SHMA, the CGS is directed to provide local governments with seismic hazard zone maps that identify areas susceptible to liquefaction, earthquake-induced landslides and other ground failures. The goal is to minimize loss of life and property by identifying and mitigating seismic hazards. The seismic hazard zones delineated by the CGS are referred to as “zones of required investigation.” Site-specific geological hazard investigations are required by the SHMA when construction projects fall within these areas.

The CGS, pursuant to the 1990 SHMA, has been releasing seismic hazards maps since 1997, with emphasis on the large metropolitan areas of Los Angeles, Orange, and Ventura counties; funding for this program limits the geographic scope of the studies to these three counties in Southern California. Cudahy is located within the South Gate Quadrangle Seismic Hazard Zone Map. According to the Seismic Hazard Zone Map, all of Cudahy is in a zone of required investigation for liquefaction.²⁶

California Building Code

The California Building Standards Law states that every local agency enforcing building regulations must adopt the provisions of the California Building Code (CBC) within 180 days of its publication; however, each jurisdiction can require more stringent regulations issued as amendments to the CBC. The publication date of the CBC is established by the California Building Standards Commission and the code is known as Title 24 of the California Code of Regulations. In the past, the CBC was modeled on the Uniform Building Code (UBC); however, beginning with the 2007 version, the CBC is now modeled after the International Building Code (IBC). It should be emphasized that the building codes provide minimum requirements to prevent major structural failure and loss of life.

The City of Cudahy adopted the 2013 CBC through Chapter 15.04 (Building Code) of the Municipal Code. The 2013 CBC bases its seismic design criteria on *maximum considered ground motion* through maps prepared by the USGS for the National Seismic Hazard Mapping Program (see Section 1613). Chapter 18 (Soils and Foundations) and Appendix J (Grading) of the 2013 CBC has also been adopted by the City to establish grading and foundation standards. Standards include requirements for excavation, fill, footings, retaining walls, and pier and pile foundations. Pursuant to the CBC, soils reports are required to be submitted prior to issuance of grading permits.

Real Estate Disclosure Act

Since June 1, 1998, the Natural Hazards Disclosure Act has required that sellers of real property and their agents provide prospective buyers with a *Natural Hazard Disclosure Statement* when the property being sold lies within one or more State-mapped hazard areas. If a property is located in a Seismic Hazard Zone as shown on a map issued by the State Geologist, the seller or the seller's agent must disclose this fact to potential buyers. The law specifies two ways that this disclosure can be made. One is to use the Natural Hazards Disclosure Statement as provided in Section 1102.6c of the California Civil Code. The other way is to use the Local Option Real Estate Disclosure Statement as provided in Section 1102.6a of the California Civil Code. The Local Option Real Estate Disclosure Statement can be substituted for the Natural Hazards Disclosure Statement only if the Local Option Statement contains substantially the same information and substantially the same warning as the Natural Hazards Disclosure Statement.

Unreinforced Masonry Laws

Enacted in 1986, the Unreinforced Masonry Law (Section 8875 et seq. of the California Government Code) required all cities and counties in Seismic Zone 4 (zones near historically active faults) to identify potentially hazardous unreinforced masonry (URM) buildings in their jurisdictions, establish a URM loss reduction program, and report their progress to the State by 1990. The owners of such buildings were to be notified of the potential earthquake hazard these buildings pose.

²⁶ Department of Conservation. Seismic Hazard Zone Map. South Gate Quadrangle. March 25, 1999.

Los Angeles County General Plan Safety Element

Los Angeles County's Safety Element, adopted as part of the General Plan in October 2015, provides general information on seismic and geotechnical hazards in the County, including Cudahy. County land use policies and decisions based on natural hazards apply to Cudahy. The LA County's Safety Element includes policies that 1) discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones; 2) prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive fault study that addresses the potential for fault rupture has been completed; 3) require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards; and 4) support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

Cudahy General Plan Safety Element

The Cudahy General Plan Safety Element includes policies designed to prevent significant impacts to life and property potentially caused by geologic hazards. For instance, Safety Element Policy 1.1 requires the City to complete geologic studies prior to the construction of critical facilities (hospitals, schools, fire stations, etc.). In addition, Safety Element Policy 1.2 states that the City of Cudahy will conduct an inventory of substandard structures and utilize the Uniform Building Code abatement process to eliminate or abate these hazards.

Cudahy Municipal Code

The City of Cudahy adopted the 2013 California Building Code as amended by Title 26 of the 2014 Los Angeles County Building Code through Title 15 Buildings and Construction, Chapter 15.04 of the Cudahy Municipal Code. Adoption of the 2013 California Fire Code as amended by Title 32 of the 2014 Los Angeles County Fire Code was through Title 8 Health and Safety, Chapter 8.04 of the Cudahy Municipal Code.

Flood Hazards

Cudahy Municipal Code

The Cudahy Municipal Code, Title 16 Floodplain Regulations, includes provisions for flood hazard reduction such as standards of construction for areas with special flood hazard areas.

Key Baseline Issues

Hazardous Materials and Wastes

- The United States Environmental Protection Agency (EPA) Superfund Information System currently includes two hazardous or potentially hazardous sites being assessed pursuant to CERCLA within Cudahy, which are listed in Table 9-1. The location of sites being assessed pursuant to CERCLA and other listed sites are illustrated in Exhibit 9-1.
- There are no NPL sites within Cudahy.
- As of November 12, 2015, 23 active hazardous waste handlers are located in Cudahy including three LQG and two hazardous waste transportation facilities. Table 9-2 lists active SQG, LQG, and transporter facilities within Cudahy.
- As of January 28, 2010, four TRI facilities were located in Cudahy. Summary data have been included in Table 9-3.
- Two active site cleanup programs occur within Cudahy; these are listed in Table 9-4.
- There are currently four active LUST assessments in progress within the city, as summarized in Table 9-5.

-
- There are no solid waste disposal sites located within Cudahy and there are no Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) within the city.

Geologic Hazards

- According to the United States Department of Agriculture Natural Resource Conservation Service, soil survey data is not available for Cudahy (Los Angeles County, California, Southeast Part CA696).
- Surface fault rupture is not a significant hazard in Cudahy because the nearest fault trace is more than six miles from the City.
- All of Cudahy lies within a seismically active region and is subject to strong groundshaking from earthquakes generated along one or more of the several regional faults listed in Table 9-6.
- All of Cudahy is located within a zone of required investigation for liquefaction hazards (Exhibit 9-2).
- The potential for landslides within Cudahy is low since the topography is relatively flat.
- No instances of subsidence have been recorded within Cudahy.

Flood Hazards

- According to the FEMA Flood Insurance Rate Maps for the City of Cudahy (Map Panel No. 06037C1810F and 06037C1805F), the eastern half of Cudahy closest to the Los Angeles River is located within Zone X (Shaded). Zone X (Shaded) indicates areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 floor or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. The western portion of Cudahy is located within Zone X (Unshaded) which indicates areas in which flood hazards are determined to be outside the 0.2% annual chance floodplain (Exhibit 9-3).
- All of Cudahy is within the inundation areas of the Hansen and Sepulveda Dams.
- Seiche and tsunamis will not affect the city of Cudahy because it is 15 to 20 miles from the Pacific Ocean and because there are no significant bodies of water within or near Cudahy.
- The majority of Cudahy is flat and therefore, not susceptible to mud and debris flows.

Fire Hazards

- According to the California Department of Forestry and Fire Protection, the city of Cudahy is not located within a Very High Fire Hazard Severity Zone (VHFHSZ).

Airport Hazards

- The City of Cudahy is not located within the planning area of any public or private airport.

10. GREENHOUSE GAS EMISSIONS

Introduction

This section analyzes greenhouse gas (GHG) emissions and the contribution to global climate change.

Defining Climate Change

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

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

Climate change is intimately tied to the Earth's greenhouse effect. The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it keeps the planet approximately 60° F warmer than without it. Emissions from human activities since the beginning of the industrial revolution (approximately 150 years) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature. Human activities that enhance the greenhouse effect are detailed below.

Greenhouse Gases

The greenhouse effect is caused by a variety of "greenhouse gases". Greenhouse gases (GHGs) occur naturally and from human activities. Greenhouse gases produced by human activities include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Since the year 1750, it is estimated that the concentrations of carbon dioxide, methane, and nitrous oxide in the atmosphere have increased over 39 percent, 158 percent, and 18 percent, respectively, primarily due to human activity.¹ The primary GHGs are discussed below.²

¹ United States Environmental Protection Agency. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011*. April 12, 2013

² United States Environmental Protection Agency. Greenhouse Gas Emissions. <http://www.epa.gov/climatechange/ghgemissions/gases.html> [August 2014]

Carbon Dioxide. CO₂ is emitted and removed from the atmosphere naturally. Animal and plant respiration involves the release of carbon dioxide from animals and its absorption by plants in a continuous cycle. The ocean-atmosphere exchange results in the absorption and release of CO₂ at the sea surface. Carbon dioxide is also released from plants during wildfires. Volcanic eruptions release a small amount of CO₂ from the Earth's crust.

Human activities that affect carbon dioxide in the atmosphere include burning of fossil fuels, industrial processes, and product uses. Combustion of fossil fuels is the largest source of carbon dioxide emissions in the United States, accounting for approximately 85 percent of all equivalent emissions. The largest of these sources is electricity generation and transportation because of the fossil fuels used. When fossil fuels are burned, the carbon stored in them is released into the atmosphere entirely as CO₂. Emissions from onsite industrial activities also emit carbon dioxide such as cement, metal, and chemical production and use of petroleum produced in plastics, solvents, and lubricants.

Methane. Methane (CH₄) is emitted from human activities and natural sources. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, soils, and wildfires. Human activities that cause methane releases include fossil fuel production, animal digestive processes from farms, manure management, and waste management. It is estimated that 50 percent of global methane emissions are human generated. Wetlands are the primary natural producers of methane in the world because the habitat is conducive to bacteria that produce methane during decomposition of organic material. Methane is produced from landfills as solid waste decomposes. Methane is a primary component of natural gas and is emitted during its production, processing, storage, transmission, distribution, and use. Decomposition of organic material in manure stocks or in liquid manure management systems also releases methane. Releases from animal digestive processes are the primary source of human-related methane.

Nitrous Oxide. Anthropogenic (human) sources of nitrous oxide include agricultural soil management, animal manure management, sewage treatment, combustion of fossil fuels, and production of certain acids. N₂O is produced naturally in soil and water, especially in wet, tropical forests. The primary human-related source of N₂O is agricultural soil management due to use of synthetic nitrogen fertilizers and other techniques to boost nitrogen in soils. Combustion of fossil fuels (mobile and stationary) is the second leading source of nitrous oxide, although parts of the world where catalytic converters are used (such as California) have significantly lower levels than those areas that do not.

High Global Warming Potential Gases. High global warming potential (GWP) gases (or fluorinated gases) are entirely manmade and are mainly used in industrial processes. HFCs, PFCs, and SF₆ are high GWP gases. These types of gases are used in aluminum production, semiconductor manufacturing, electric power transmission, magnesium production and processing, and in the production of hydrochlorofluorocarbon-22 (HCFC-22). High GWP gases are also used as substitutes for ozone-depleting gases like chlorofluorocarbons (CFCs) and halons. Use of high GWP gases as substitutes for ozone-depleting substances is the primary use of these gases in the United States.

Water Vapor. It should be noted that water vapor is also a significant GHG in the atmosphere; however, concentration of water vapor in the air is primarily dependent on air temperature and cannot be influenced by humans.

GHGs behave differently in the atmosphere and contribute to climate change in different ways. Some gases have more potential to reflect infrared heat back towards the earth while some persist in the atmosphere longer than others. To equalize the contribution of GHGs to climate change, the Intergovernmental Panel on Climate Change (IPCC) devised a weighted metric to compare all greenhouse gases to carbon dioxide.³ The weighting depends on the lifetime of the gas in the atmosphere and its radiative efficiency. As an example, over a time horizon of 100-years, emissions of nitrous oxide will contribute to climate change 298 times more than the same amount of emissions of carbon dioxide while emissions of HFC-23 will contribute 14,800 times more than the same amount of carbon dioxide. These differences define a gas's GWP. **Table 10-1** identifies the lifetime and GWP of select GHGs. The lifetime of the GHG represents how many years the GHG will persist in the atmosphere. The GWP of the GHG represents the GHG's relative potential to induce climate change as compared to carbon dioxide.

³ Intergovernmental Panel on Climate Change. Changes in Atmospheric Constituents and in Radiative Forcing (Working Group I). Forth Assessment Report. 2007

**Table 10-1
Global Warming Potential (GWP) of Greenhouse Gases (GHG)**

GHG	Lifetime (yrs)	GWP
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC-14	50,000	7,390
PFC-116	10,000	12,200
Sulfur Hexafluoride	3,200	22,800

Source: IPCC 2007

Carbon Sequestration

Carbon sequestration is the process by which plants absorb CO₂ from the atmosphere and store it in biomass like leaves and grasses. Agricultural lands, forests, and grasslands can all sequester carbon dioxide, or emit it. The key is to determine if the land use is emitting carbon dioxide faster than it is absorbing it. Young, fast-growing trees are particularly good at absorbing more than they release and are known as a *sink*. Agricultural resources often end up being sources of carbon release because of soil management practices. Deforestation contributes to carbon dioxide emissions by removing trees, or carbon sinks, that will otherwise absorb CO₂. Forests are a crucial part of sequestration in some parts of the world, but not much in the United States. Another form of sequestration is geologic sequestration. This is a manmade process that results in the collection and transport of CO₂ from industrial emitters (i.e. power plants) and injecting it into underground reservoirs.

Climate Change and California

Specific, anticipated impacts to California have been identified in the 2009 California Climate Adaptation Strategy prepared by the California Natural Resources Agency (CNRA) through extensive modeling efforts.⁴ General climate changes in California indicate that:

- California is likely to get hotter and drier as climate change occurs with a reduction in winter snow, particularly in the Sierra Nevadas
- Some reduction in precipitation is likely by the middle of the century
- Sea-levels will rise up to an estimated 55 inches
- Extreme events such as heat waves, wildfires, droughts, and floods will increase
- Ecological shifts of habitat and animals are already occurring and will continue to occur

It should be noted that changes are based on the results of several models prepared under different climatic scenarios; therefore, discrepancies occur between the projections. The potential impacts of global climate change in California are detailed below.

Public Health and Welfare

Concerns related to public health and climate change includes higher rates of mortality and morbidity, change in prevalence and spread of disease vectors, decreases in food quality and security, reduced water availability, and

⁴ California Natural Resources Agency. 2009 California Climate Adaptation Strategy.

increased exposure to pesticides. These concerns are all generally related to increase in ambient outdoor air temperature, particularly in summer.

Higher rates of mortality and morbidity could arise from more frequent heat waves at greater intensities. Health impacts associated with extreme heat events include heat stroke, heat exhaustion, and exacerbation of medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Climate change will result in degradation of air quality promoting the formation of ground-level pollutants, particularly ozone. Degradation of air quality will increase the severity of health impacts from criteria and other air pollutants. Temperature increases and increases in carbon dioxide are also expected to increase plant production of pollens, spores, and fungus. Pollens and spores could induce or aggravate allergic rhinitis, asthma, and obstructive pulmonary diseases. Precipitation projections suggest that California will become drier over the next century due to reduced precipitation and increased evaporation from higher temperatures. These conditions could result in increased occurrences of drought. Surface water reductions will increase the need to pump groundwater, reducing supplies and increasing the potential for land subsidence.

Precipitation changes are also suspected to impact the Sierra snowpack (see “Water Management”). Earlier snow melts could coincide with the rainy season and could result in failure of the flood control devices in that region. Flooding can cause property damage and loss of life for those affected. Increased wildfires are also of concern as the state “dries” over time. Wildfires can also cause property damage, loss of life, and injuries to citizens and emergency response services.

Sea-level rises will also threaten human health and welfare. Flood risks will be increased in coastal areas due to strengthened storm surges and greater tidal damage that could result in injury and loss of property and life. Gradual rising of the sea will permanently inundate many coastal areas in the state.

Other concerns related to public health are changes in the range, incidence, and spread of infectious, water-borne, and food-borne diseases. Changes in humidity levels, distribution of surface water, and precipitation changes are all likely to shift or increase the preferred range of disease vectors (i.e. mosquitoes). This could expose more people and animals to potential for vector-borne disease.

Biodiversity and Habitat

Changes in temperature will change the livable ranges of plants and animals throughout the state and cause considerable stress on these species. Species will shift their range if appropriate habitat is available and accessible if they cannot adapt to their new climate. If they do not adapt or shift, they face local extirpation or extinction. As the climate changes, community compositions and interactions will be interrupted and changed. These have substantial implications on the ecosystems in the state. Extreme events will lead to tremendous stress and displacement on affected species. This could make it easier for invasive species to enter new areas, due to their ability to more easily adapt. Precipitation changes will alter stream flow patterns and affect fish populations during their life cycle. Sea level rises could impact fragile wetland and other coastal habitat.

Water Management

Although disagreement among scientists on long-term precipitation patterns in the state has occurred, it is generally accepted by scientists that rising temperatures will impact California’s water supply due to changes in the Sierra Nevada snowpack. Currently, the state’s water infrastructure is designed to both gather and convey water from melting snow and to serve as a flood control device. Snowpack melts gradually through spring warming into early summer, releasing an average of approximately 15 million acre-feet of water. The state’s concern related to climate change is that due to rising temperatures, snowpack melt will begin earlier in the spring and will coincide with the rainy season. The combination of precipitation and snowmelt will overwhelm the current system, requiring tradeoffs between water storage and flood protection to be made. Reduction in reserves from the Sierra Nevada snowpack is troublesome for California and particularly for Southern California. Approximately 75% of California’s available water supply originates

in the northern third of the state while 80% of demand occurs in the southern two-thirds. Also, there is concern that rising temperatures will result in decreasing volumes from the Colorado River basin. Colorado River water is important to Southern California because it supplies water directly to Metropolitan Water District of Southern California. Water from the Colorado River is also used to recharge groundwater basins in the Coachella Valley.

Agriculture

California is the most agriculturally productive state in the US resulting in more than 37 billion dollars in revenue in 2008. California is the nation's leading producer of nearly 80 crops and livestock commodities, supplying more than half of the nation's fruit and vegetables and over 90 percent of the nation's production of almonds, apricots, raisin grapes, olives, pistachios, and walnuts. Production of crops is not limited to the Central Valley but also occurs in Southern California. Strawberries and grapes are grown in Ventura, Los Angeles, Orange, San Bernardino, and Riverside Counties. Cherries are grown in Los Angeles and Riverside County. Anticipated impacts to agricultural resources are mixed when compared to the potentially increased temperatures, reduced chill hours, and changes in precipitation associated with climate change. For example, wheat, cotton, maize, sunflower, and rice are anticipated to show declining yields as temperatures rise. Conversely, grapes and almonds will benefit from warming temperatures. Anticipated increases in the number and severity in heat waves will have a negative impact on livestock where heat stress will make livestock more vulnerable to disease, infection and mortality. The projected drying trend and changes in precipitation are a threat to agricultural production in California. Reduced water reliability and changes in weather patterns will impact irrigated farmlands and reduce food security. Furthermore, a drying trend will increase wildfire risk. Overall, agriculture in California is anticipated to suffer due to climate change impacts.

Forestry

Increases in wildfires will substantially impact California's forest resources that are prime targets for wildfires. This can increase public safety risks, property damage, emergency response costs, watershed quality, and habitat fragmentation. Climate change is also predicted to affect the behavior or plant species including seed production, seedling establishment, growth, and vigor due to rising temperatures. Precipitation changes will affect forests due to longer dry periods, moisture deficits, and drought conditions that limit seedling and sapling growth. Prolonged drought also weakens trees, making them more susceptible to disease and pest invasion. Furthermore, as trees die due to disease and pest invasion (i.e. the Bark Beetle invasion of the San Bernardino Forest), wildfires can spread more rapidly.

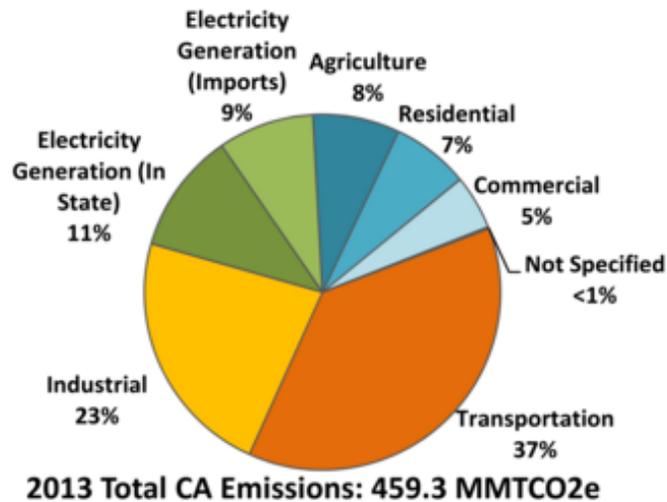
Transportation and Energy Infrastructure

Higher temperatures will require increased cooling, raising energy production demand. Higher temperatures also decrease the efficiency of distributing electricity and could lead to more power outages during peak demand. Climate changes will impact the effectiveness of California's transportation infrastructure as extreme weather events damage, destroy, and impair roadways and railways throughout the state causing governmental costs to increase as well as impacts to human life as accidents increase. Other infrastructure costs and potential impacts to life will increase due to the need to upgrade levees and other flood control devices throughout the state. Infrastructure improvement costs related to climate change adaptation are estimated in the tens of billions of dollars.

Environmental Setting

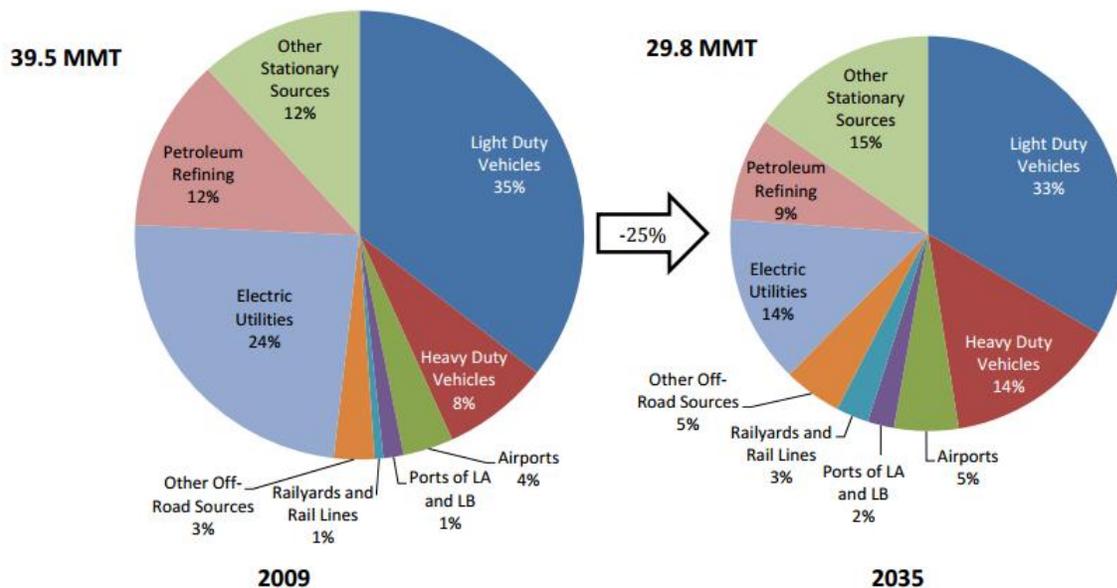
Emissions of GHG contributing to global climate change are attributable in large part of human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs (37%), followed by the industrial sector (23%). **Exhibit 10-1** summarizes statewide GHG emissions according to sector. California produced 459.3 million metric tons of CO₂ equivalent (MTCO₂E) in 2013. According to the CARB business as usual forecast, California is projected to produce 509.4 million MTCO₂E by the year 2020 under business as usual conditions.

Exhibit 10-1 California GHG Emissions Inventory by Sector



Cudahy is a member of the Gateway Cities Council of Governments (GCCOG), which is a California joint powers authority made up of 27 cities and the County of Los Angeles. The Gateway Cities Air Quality Action Plan focuses on existing air quality and near-term air quality improvements. According to the GCCOG, total Gateway Cities GHG emissions in 2009 were 39.5 million MTCO₂E per year and are projected to decrease by approximately 25%, to 29.8 million MTCO₂E per year by 2035. **Exhibit 10-2** summarizes total Gateway Cities GHG emissions by source. The primary source of GHG emissions is light-duty vehicles followed by electric power generation.

Exhibit 10-2 Gateway Cities GHG Emissions by Source



Regulatory Framework

Executive Order S-3-05

Executive Order S-3-05 was issued by California Governor Arnold Schwarzenegger on June 1, 2005 and established targets for the reduction of greenhouse gas emissions at the milestone years of 2010, 2020, and 2050. Statewide GHG emissions must be reduced to 1990 levels by year 2020 and by 80% beyond that by year 2050. The Order requires the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate with other State departments to identify strategies and reduction programs to meet the identified targets. A Climate Action Team (CAT) was created and is headed by the Secretary of CalEPA who reports on the progress of the reduction strategies. The latest CAT *Biennial Report to the Governor and Legislature* was completed in April 2010.⁵ CAT also works in 11 subgroups to support development and implementation of the Scoping Plan (see “California Global Warming Solutions Act”).

Executive Order B-30-15

Executive Order B-30-15 was issued by California Governor Edmund G. Brown Jr. on April 29, 2015 to establish a California greenhouse gas reduction target of 40% below 1990 levels by 2030. This is meant as an interim target to ensure the state meets its ultimate goal of 80% below 1990 levels by 2050.

California Global Warming Solutions Act

The California State Legislature adopted the California Global Warming Solutions Act in 2006 (AB32). AB32 establishes the caps on statewide greenhouse gas emissions proclaimed in Executive Order S-3-05 and establishes a regulatory timeline to meet the reduction targets. The timeline is as follows:

⁵ California Climate Action Team. Biennial Report. April 2010

January 1, 2009	Adopt Scoping Plan
January 1, 2010	Early action measures take effect
January 1, 2011	Adopt GHG reduction measures
January 1, 2012	Reduction measures take effect
December 31, 2020	Deadline for 2020 reduction target

As part of AB32, CARB had to determine what 1990 GHG emissions levels were and projected a business-as-usual (BAU) estimate for 2020 to determine the amount of GHG emissions that will need to be reduced. BAU is a term used to define emissions levels without considering reductions from future or existing programs or technologies. 1990 emissions are estimated at 427 million metric tons of carbon dioxide equivalent (MMT_{CO2E}) while 2020 emissions (after accounting for the economic downturn in 2008 and implementation of Pavley 1 vehicle emissions reductions and the State Renewable Portfolio Standard identified in Air Resources Board Scoping Plan below) are estimated at 507 MMT_{CO2E}; therefore, California GHG emissions must be reduced 80 MMT_{CO2E} (507 – 427 = 80) by 2020, a reduction of approximately 16% below BAU. Emissions are required to be reduced an additional 80 percent below 1990 levels by 2050.

The California Air Resources Board (ARB) is responsible for implementation of AB32. Nine discrete early action measures and 35 additional measures were adopted in October 2007 and are now enforceable. The discrete early actions include a low carbon fuel standard, landfill methane capture regulations, reductions in HFCs from mobile air conditioning systems, fluorinated gas emissions from semiconductor manufacturing, sulfur hexafluoride from some industrial processes, high GWP gases in consumer products, and emissions from diesel auxiliary engines on ships at California ports, improved fuel efficiency in heavy-duty diesel vehicles, and new tire pressure regulations. The early action programs form part of California’s comprehensive strategy for achieving the GHG reduction targets.

Sustainable Communities and Climate Protection Act

In January 2009, California Senate Bill (SB) 375 went into effect known as the Sustainable Communities and Climate Protection Act.⁶ The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce greenhouse gas emissions and other air pollutants. SB 375 tasks ARB to set greenhouse gas reduction targets for each of California’s 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy (APS) may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In the SCAG region, sub-regions can also elect to prepare their own SCS or APS. In August 2010, ARB released the proposed GHG reduction targets for the MPOs to be adopted in September 2010. The proposed reduction targets for the SCAG region were 8% by year 2020 and 13% by year 2035. The 8% year 2020 target was adopted in September 2010 and tentatively adopted the year 2035 until February 2011 to provide additional time for SCAG, ARB, and other stakeholders to account for additional resources (such as state transportation funds) needed to achieve the proposed targets. In February 2011, the SCAG president affirmed the year 2035 reduction target and SCAG staff updated ARB on additional funding opportunities. Currently, ARB is working on updating the year 2035 reduction target while continuing to support MPOs to meet their existing 2020 targets.

Air Resources Board Scoping Plan

The Air Resources Board (ARB) Scoping Plan is the comprehensive plan to reach the GHG reduction targets stipulated in AB32. The key elements of the plan are to expand and strengthen energy efficiency programs, achieve a statewide

⁶ Southern California Association of Governments. Senate Bill 3.75 Fact Sheet. www.scag.ca.gov/sb375/factsheets.htm [October 7, 2010]

renewable energy mix of 33%, develop a cap-and-trade program with other partners in the Western Climate Initiative (includes seven states in the United States and four territories in Canada), establish transportation-related targets, and establish fees.⁷ The Scoping Plan measures are identified in **Table 10-2**. Note that the current early discrete actions are incorporated into these measures. ARB estimates that implementation of these measures will reduce GHG emissions in the state by 174 MMTCO₂E by 2020; therefore, implementation of the Scoping Plan will meet the 2020 reduction target. In a report prepared on September 23, 2010, ARB indicates that 40% of the reduction measures identified in the Scoping Plan have been secured.⁸ The cap-and-trade program began on January 1, 2012 after ARB completes a series of activities that deal with the registration process, compliance cycle, and tracking system; however, covered entities will not have an emissions obligation until 2013.⁹ ARB is currently working on the low carbon fuel standard where public hearings and workshops are currently being conducted. In August 2011, the Scoping Plan was reapproved by the ARB Board with the program's environmental documentation.

The ARB has prepared the First Update to the Scoping Plan (Update) with a draft made available for public review on February 10, 2014. The Update to the Scoping Plan builds upon the 2008 Scoping Plan with new strategies and recommendations. The Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The Update defines ARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in Executive Orders S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. It also evaluates how to align the State's long-term GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. A draft Environmental Analysis (EA) was released for a 45-day public review period on March 14, 2014. After considering public comments and Board direction, the final First Update, summary of comments received on the draft EA, and ARB's responses to those comments were released on May 15, 2014. The First Update to the Scoping Plan was approved by the Board on May 22, 2014.

⁷ California Air Resources Board. Climate Change Scoping Plan. December 2008

⁸ California Air Resources Board. AB 32 Climate Change, Scoping Plan Progress Report. September 2010

⁹ California Air Resources Board. Cap-and-Trade. <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm> [August 2014]

**Table 10-2
Scoping Plan Measures**

Measure	Description
T-1	Pavely I and II – Light Duty Vehicle Greenhouse Gas Standards
T-2	Low Carbon Fuel Standard
T-3	Regional Transportation-Related Greenhouse Gas Targets
T-4	Vehicle Efficiency Measures
T-5	Ship Electrification at Ports
T-6	Good Movement Efficiency Measures
T-7	Heavy-Duty Vehicle Aerodynamic Efficiency
T-8	Medium and Heavy-Duty Vehicle Hybridization
T-9	High Speed Rail
E-1	Energy Efficiency (Electricity Demand Reduction)
E-2	Increase Combined Heat and Power Use
E-3	Renewable Portfolio Standard
E-4	Million Solar Roofs
CR-1	Energy Efficiency (Natural Gas Demand Reduction)
CR-2	Solar Water Heating
GB-1	Green Buildings
W-1	Water Use Efficiency
W-2	Water Recycling
W-3	Water System Energy Efficiency
W-4	Reuse Urban Runoff
W-5	Increase Renewable Energy Production
W-6	Public Good Charge (Water)
I-1	Energy Efficiency for Large Industrial Sources
I-2	Oil and Gas Extraction GHG Reductions
I-3	Oil and Gas Transmission Leak Reductions
I-4	Refinery Flare Recovery Process Improvements
I-5	Removal of Methane Exemption from Existing Refinery Regulations
RW-1	Landfill Methane Control
RW-2	Increase Landfill Methane Capture Efficiency
RW-3	Recycling and Zero Waste
F-1	Sustainable Forest Target
H-1	Motor Vehicle Air Conditioning
H-2	Non-Utilities and Non-Semiconductor SF ₆ Limits
H-3	Semiconductor Manufacturing PFC Reductions
H-4	Consumer Products High GWP Limits
H-5	High GWP Mobile Source Reductions
H-6	High GWP Stationary Source Reductions
H-7	High GWP Mitigation Fees
A-1	Large Dairy Methane Capture
Source: ARB 2008	

Water Conservation in Landscaping Act

Section 65591 of the Government Code requires all local jurisdictions to adopt a water efficient landscape ordinance. The ordinance is to address water conservation through appropriate use and grouping of plants based on environmental conditions, water budgeting to maximize irrigation efficiency, storm water retention, and automatic irrigation systems. Failure to adopt a water efficiency ordinance requires a local jurisdiction to enforce the provisions of the state's model water efficiency ordinance. In 2009, the Department of Water Resources (DWR) updated the Model Water Efficient Landscape Ordinance pursuant to amendments to the 1991 Act. These amendments and the new model ordinance went into effect on January 1, 2010. The amended Act is applicable to any new commercial, multi-family, industrial, or tract home project containing 2,500 square feet (SF) or more of landscaping. Individual landscape projects of 5,000 SF or more on single-family properties will also be subject to the Act. All landscape plans are required to include calculations verifying conformance with the maximum applied water allowance and must be prepared and stamped by a licensed landscape architect. Cudahy does not have a water efficiency ordinance, and therefore enforces the provisions of the state's model water efficiency ordinance, as amended.

California Green Building Standards

New California Green Building Standards Code (CALGREEN) went into effect on January 1, 2011.¹⁰ The purpose of the new addition to the California Building Code (CBC) is to improve public health, safety, and general welfare by enhancing the design and construction of buildings using concepts to reduce negative impacts or produce positive impacts on the environment. The CALGREEN regulations cover planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and environmental quality. Many of the new regulations have the effect of reducing greenhouse gas emissions from the operation of new buildings. **Table 10-3** summarizes the previous requirements of the CBC and the new requirements of CALGREEN that went into effect in January 2011. Minor technical revisions and additional requirements went into effect in July 2012. The Code was further updated in 2013, effective January 1, 2014 through 2016.

¹⁰ California Building Standards Commission. California Code of Regulations Title 24. California Green Building Standards Code. 2010

**Table 10-3
CALGREEN Requirements**

Item		Requirements	
		Previous	CALGREEN
4.1	Stormwater Management	Stormwater management required on projects > than one acre	All projects subject to stormwater management.
	Surface Drainage	Surface water must flow away from building	Drainage patterns must be analyzed
4.2	Energy Efficiency	California Energy Code	Minimum energy efficiency to be established by California Energy Commissions
4.3	Indoor Water Use	HCD maximum flush rates; CEC water use standards for appliances and fixtures	Indoor water use must decrease by at least 20 percent (prescriptive or performance based)
	Multiple Showerheads	Not covered	Multiple showerheads cannot exceed combined flow of the code
	Irrigation Controllers	Not covered	Irrigation controllers must be weather or soil moisture based controllers
4.4	Joint Protection	Plumbing and Mechanical Codes	All openings must be sealed with materials that rodents cannot penetrate
	Construction Waste	Local Ordinances	Establishes minimum 50 percent recycling and waste management plan
	Operation	Plumbing Code for gray water systems	Educational materials and manuals must be provided to building occupants and owners to ensure proper equipment operation
4.5	Fireplaces	Local Ordinances	Gas fireplaces must be direct-vent sealed-combustion type; Wood stoves and pellet stoves must meet USEPA Phase II emissions limits
	Mechanical Equipment	Not covered	All ventilation equipment must be sealed from contamination during construction
	VOCs	Local Ordinances	Establishes statewide limits on VOC emissions from adhesives, paints, sealants, and other coatings
	Capillary Break	No prescriptive method of compliance	Establishes minimum requirements for vapor barriers in slab on grade foundations
	Moisture Content	Current mill moisture levels for wall and floor beams is 15-20 percent	Moisture content must be verified prior to enclosure of wall or floor beams
	Whole House Fans	Not covered	Requires insulated louvers and closing mechanism when fan is off
	Bath Exhaust Fans	Not covered	Requires Energy Star compliance and humidistat control
7	HVAC Design	Minimal requirements for heat loss, heat gain, and duct systems	Entire system must be designed in respects to the local climate
	Installer Qualifications	HVAC installers need not be trained	HVAC installers must be trained or certified
	Inspectors	Training only required for structural materials	All inspectors must be trained

Source: HCD 2010

Key Baseline Issues

- California produced 459.3 million MTCO₂E in 2013.
- As of 2013, the transportation sector accounted for 37% of total GHG emissions in California.
- According to the CARB business as usual forecast, California is projected to produce 509.4 million MTCO₂E by the year 2020 under business as usual conditions.
- The Gateway Cities Air Quality Action Plan anticipates a 25% greenhouse gas reduction by the year 2035.

11. HEALTH AND HUMAN SERVICES

Introduction

Health and human services are vital considerations for a General Plan, and although Healthy Communities practices are not required for inclusion, it is clear that a person's community's health are tied directly to their physical environment in addition to genetics and behavior. The State of California has drafted language in its General Plan Guidelines for voluntary inclusion of Healthy Communities Elements or integrated considerations.¹ One's environment can have a direct effect on health, such as if one is exposed to high levels of pollution, and can be influenced by day-to-day behavior like exercise and eating habits. The goal of health and human services planning is to create a built environment and supporting programs that limit exposure to health risks and promotes healthy choices and lifestyles. This chapter summarizes the existing health determinants and health conditions in Cudahy, as well as health supporting human services and an outline for incorporating healthy community elements into the planning process. Cudahy is in the top six percent of most at-risk/disadvantaged communities in California according to the State's Office of Environmental Health Hazard Assessment², and tends to show more serious health outcomes and risk factors than average in Los Angeles County³. Fortunately, a wealth of resources are available to support the incorporation of healthy community strategies into planning processes as well as plans themselves, including both sources of funding and planning information.

Environmental Setting

There are a number of available tools that help to determine a city's "Healthy Community" status. When looking at healthy community elements and factors, cities are not determined to be either healthy or unhealthy, rather analysts look at factors that are statistical risks or benefits to individual health, then plan to remove, alleviate, or mitigate risks and extend or improve benefits. These indicators may not directly determine an individual's health, but are helpful in predicting, analyzing, and planning for community-wide health.

This chapter relies on three primary datasets. First, the State of California's Office of Environmental Health Hazard Assessment produces CalEnviroScreen⁴, a comprehensive dataset that analyzes and scores community health risks stemming from pollution exposure, and indicated by population-related metrics. Second, the Kaiser Medical Foundation's 2013 Downey Service Area Community Health Needs Assessment⁵ provides data on health outcomes and health-related behaviors and demographic information in the service area that includes Cudahy, and often in Cudahy itself. Third, the team used geospatial data to map and model access to health-promoting and health-detracting elements in Cudahy.

Environmental and Population Health Risk Factors

Environmental and Population Health Risk Factors are determined using CalEnviroScreen 2.0⁶. This dataset examines each community in California by Zip Code according to a comprehensive set of pollution exposure and population risk factors. Communities are then scored relative to the performance of the rest of the state. This tool is useful not only for

¹ State of California Governor's Office of Planning and Research, "General Plan Guidelines: Draft of Public Comment 2015," October 2015, https://www.opr.ca.gov/docs/DRAFT_General_Plan_Guidelines_for_public_comment_2015.pdf.

² Office of Environmental Health Hazard Assessment State of California, "OEHHA November 2015 CalEnviroScreen 2.0," November 12, 2015, <http://oehha.ca.gov/ej/ces2.html>.

³ Kaiser Foundation Hospital Downey, "2013 Community Health Needs Assessment," 2013, http://share.kaiserpermanente.org/wp-content/uploads/2013/09/Downey-CHNA_2013.pdf.

⁴ State of California, "OEHHA November 2015 CalEnviroScreen 2.0."

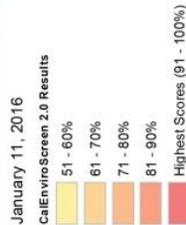
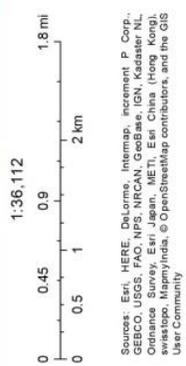
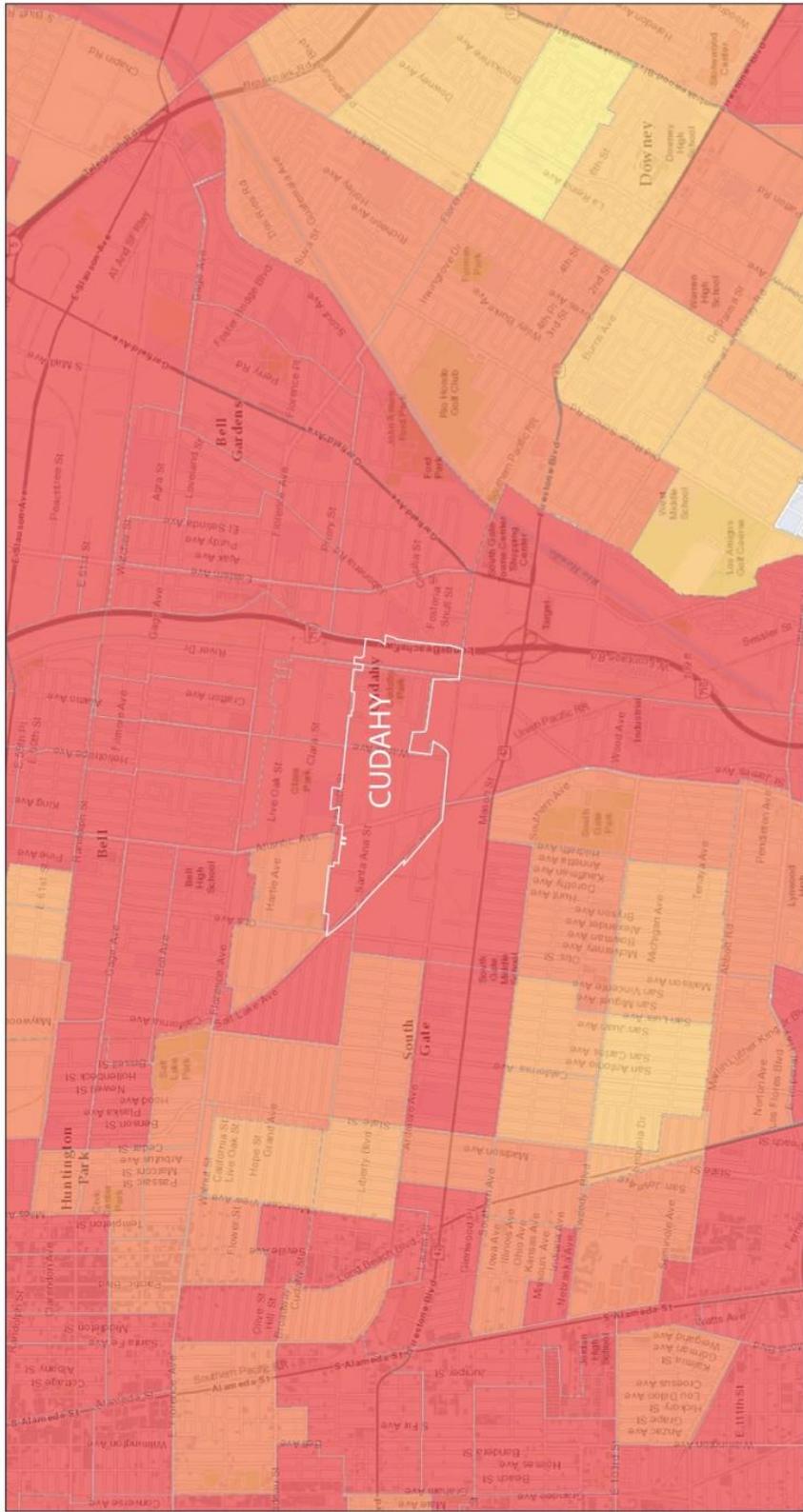
⁵ Kaiser Foundation Hospital Downey, "2013 Community Health Needs Assessment."

⁶ State of California, "OEHHA November 2015 CalEnviroScreen 2.0."

understanding risk factors and levels but is also used to inform funding distributions. More disadvantaged communities are often prioritized for funding awards. The western part of Cudahy is in the CalEnviroScreen 2.0 91-95% percentile range, while the eastern part of Cudahy is in the 96-100% percentile range, meaning that Cudahy as a whole is in the top 6% of most disadvantaged communities in California. Cudahy is in the 97th percentile of most impacted communities in terms of pollution, and is in the 85th percentile of most at-risk communities in terms of population characteristics. Residents who live closer to I-710 are more at risk in terms of both pollution and population factors. The following section describes and maps Cudahy's CalEnviroScreen 2.0 in detail.

Exhibit 11-1 shows Cudahy's overall CalEnviroScreen 2.0 (CES) performance, as well as the performance of its immediate region. Los Angeles County contains many of the most at-risk communities in the state. At-risk communities face significant pollution exposure and population-related health challenges.⁷

⁷ California Office of Environmental Health Hazard Assessment, "CalEnviroScreen 2.0 Results," Online Map, accessed December 16, 2015, <http://oehha.maps.arcgis.com/apps/Viewer/index.html?appid=112d915348834263ab8ecd5c6da67f68>.



Sources: Esri, HERE, DeLorme, International P. Corp., GEBCO, USGS, FAO, NPS, NRCAN, Esri, IGN, Kantam, Swisstopo, Ordnance Survey, Esri, Jiaon, METI, Esri, China (Hong Kong), Swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Exhibit 11-1 Cudahy CalEnviroScreen 2.0 Comprehensive Results

Exhibit 11-2 shows Cudahy’s relative exposure levels to CES pollution risk factors. While these are not absolute exposure metrics, they indicate where Cudahy is on the state-wide scale of exposure. Absolute exposure levels are available in the CES dataset. Cudahy is highly impacted by transportation and industry-related pollution. Exposures to pollution are greater in the eastern part of the city.

**Exhibit 11-2
CalEnviroScreen 2.0 Pollution Burden by Percentile**

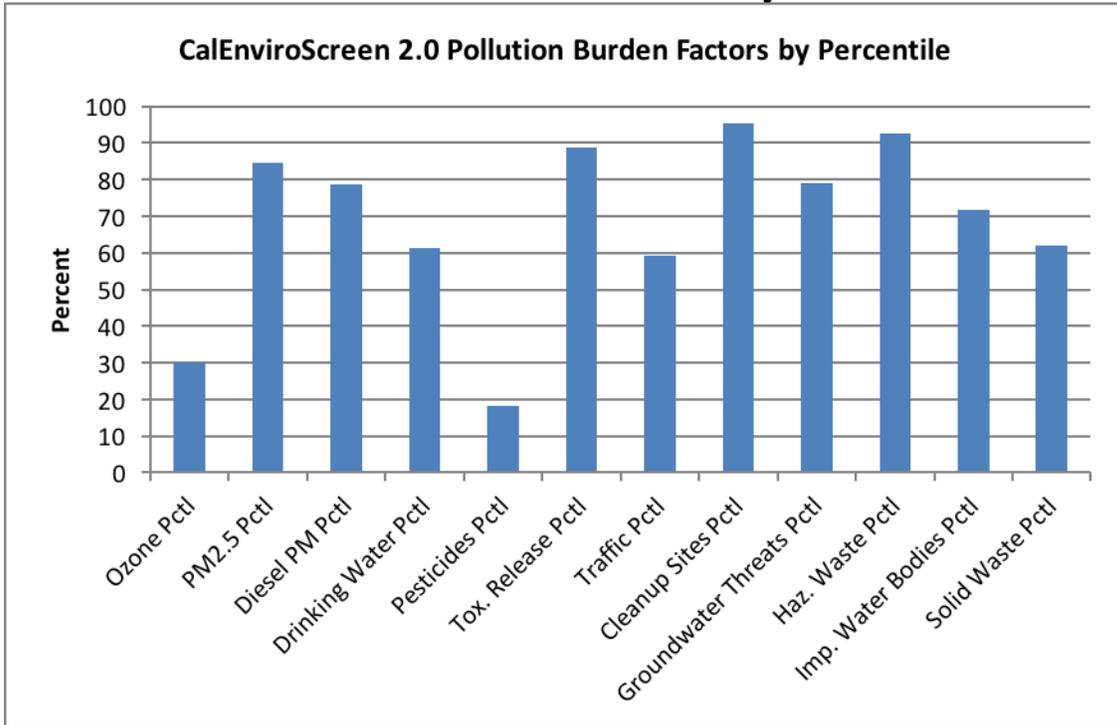


Exhibit 11-3 shows Cudahy’s performance on CES pollution scoring, as well as the performance of the region. Many cities in Los Angeles County are highly impacted by pollution.⁸

⁸ California Office of Environmental Health Hazard Assessment, “CalEnviroScreen 2.0 Pollution Burden Indicators,” Online Map, accessed December 16, 2015, <http://oehha.maps.arcgis.com/apps/MapSeries/index.html?appid=42671dba7b114509922401135ff86588&webmap=28431b9f419346d7ba38f8752631aed4>.

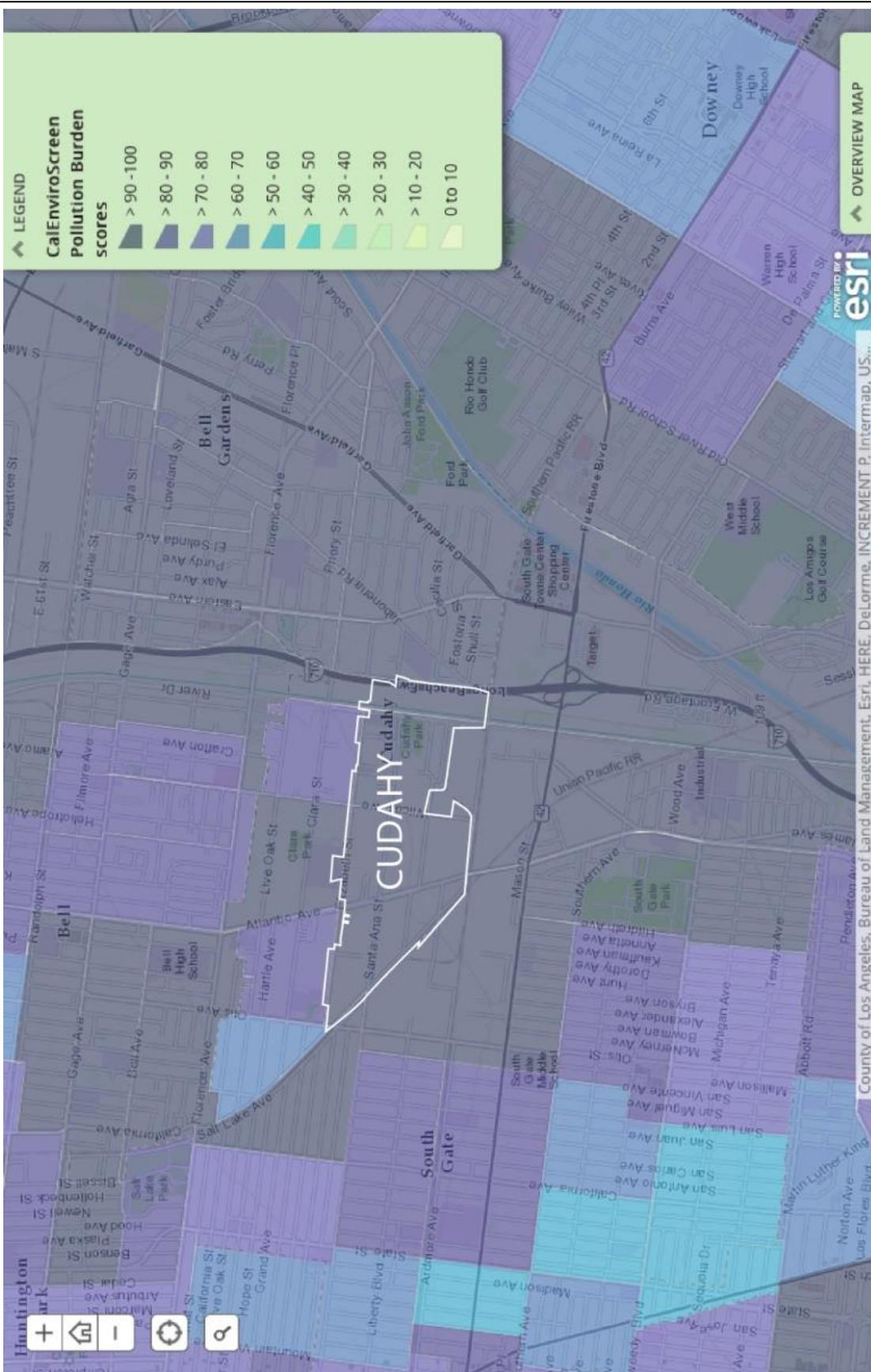


Exhibit 11-3
CalEnviroScreen 2.0 Pollution Burden Map

Exhibit 11-4 shows Cudahy's relative exposure levels to CES population risk factors, which include age, asthma hospitalizations, low birth weight, level of education, linguistic isolation, poverty and unemployment. While these are not absolute exposure metrics, they indicate where Cudahy is on the state-wide scale of exposure. Absolute exposure levels are available in the CES dataset. Cudahy has relatively very low levels of educational attainment and high levels of linguistic isolation, poverty, and unemployment.

Exhibit 11-4
CalEnviroScreen Population Risk Factors by Percentile

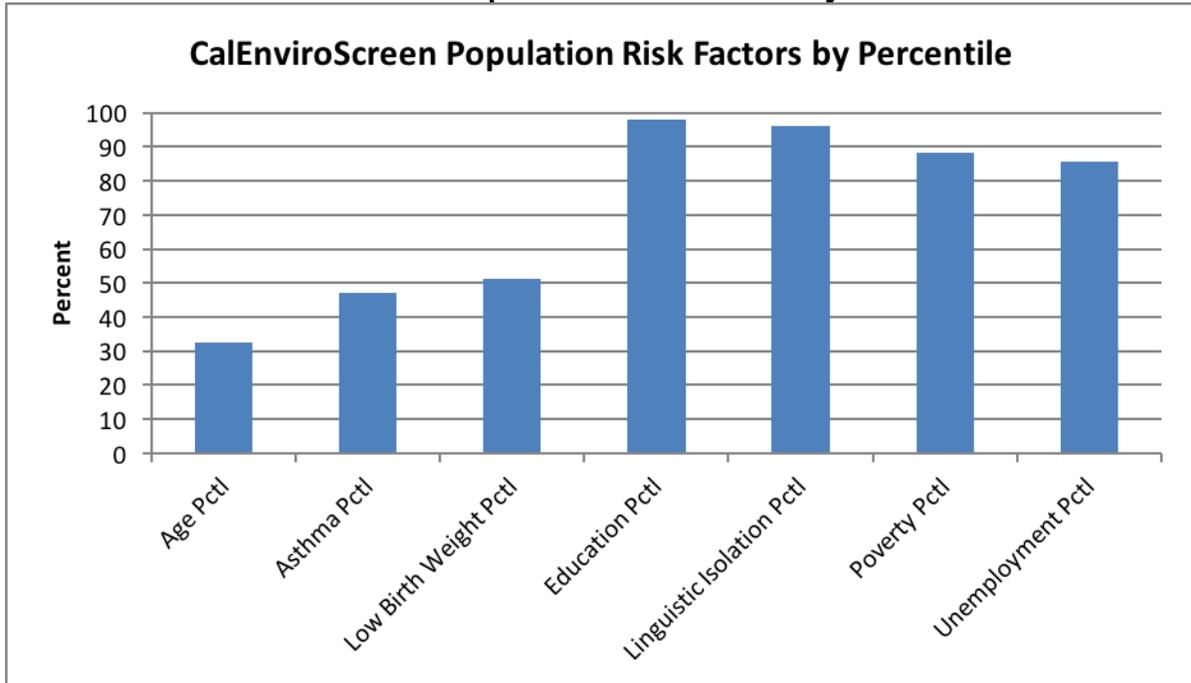


Exhibit 11-5 shows Cudahy's performance on CES population scoring, as well as the performance of the region. Many cities in Central Los Angeles County have high CES Population scores.⁹

⁹ California Office of Environmental Health Hazard Assessment, "CalEnviroScreen 2.0 Population Characteristics Indicators," Online Map, accessed December 16, 2015, <http://oehha.maps.arcgis.com/apps/MapSeries/index.html?appid=6e5df08a61984e29a90e7d67236ef233>.

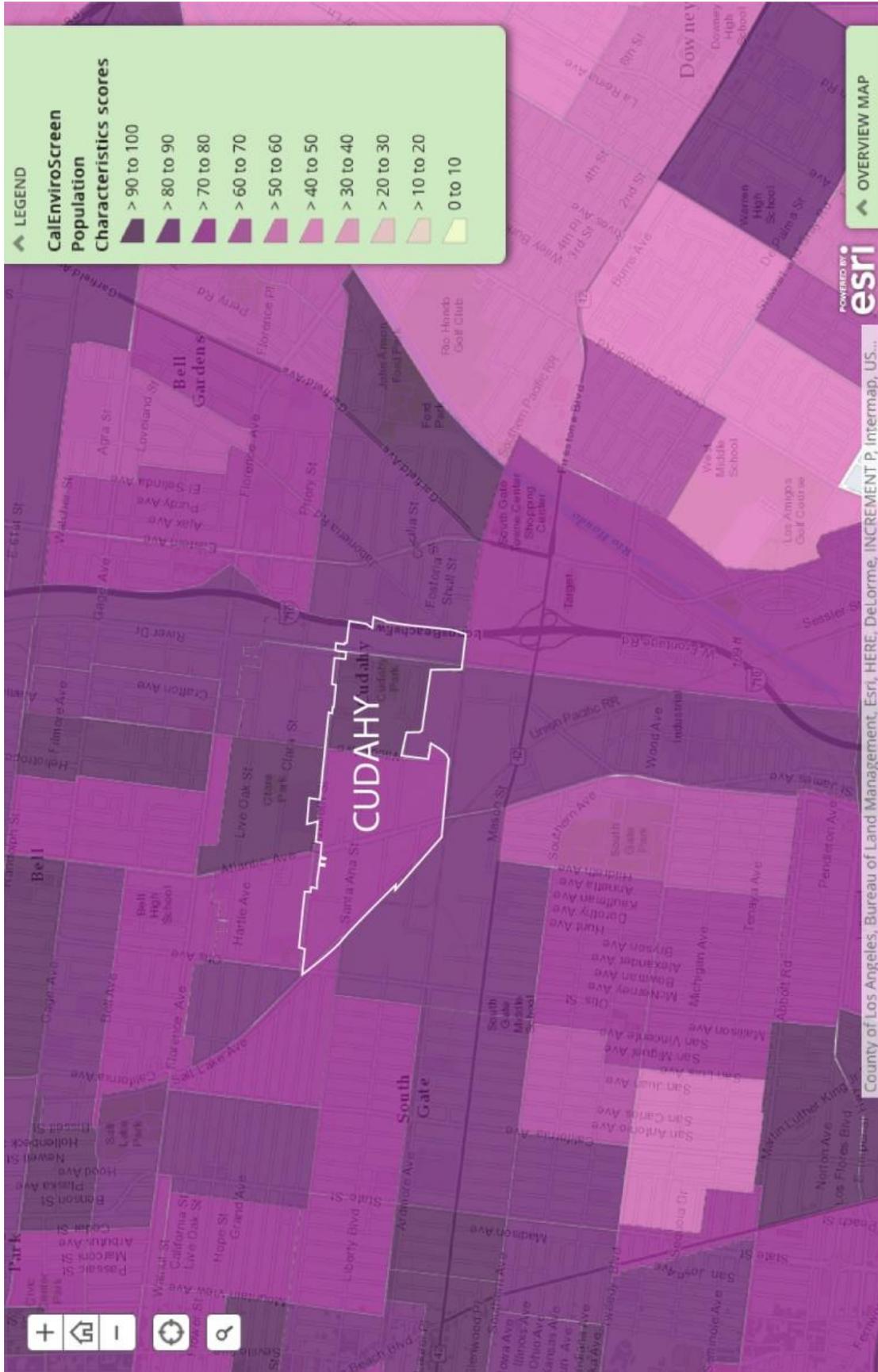


Exhibit 11-5
CalEnviroScreen 2.0 Population Risk Factors Map

Overview of Health Conditions

Health in Cudahy

An individual's health is the result of many variables, including environment, behavior, and genetics. This section details health-related statistics presented at the citywide and sub-regional level drawn from the Kaiser Medical Foundation's 2013 Downey Service Area Community Health Needs Assessment¹⁰, unless otherwise noted. These statistics are divided into demographic factors and health outcomes.

Demographics

Cudahy has a very young population, with a median age of 27. Younger people are less likely to exhibit signs of chronic diseases. Approximately 96% of the population is Hispanic. Hispanic people tend to have lower rates of access to health care, which can lead to negative health outcomes. Hispanic people have higher rates of obesity, diabetes, periodontitis, HIV, and teen births compared to Caucasian Non-Hispanic people.¹¹

Twenty four percent of the population in Cudahy lives below the Federal Poverty Level, the highest level for all communities in the service area. 32.3% of children live in poverty, and 45% of households with female Heads of Household are in poverty. The California poverty rate for female Heads of Household is 33%. People below the poverty line can have difficulty accessing health care and affording healthy food. Unemployment is 17%. This is high relative to Cudahy's sub-region, but not at the top of the spectrum, though this is a very high rate for California.

Cudahy has a moderate to low level of violent crime for the subregion. Living in a violent community has significant adverse health risks.

Adults and teens in Cudahy exercise via walking or other means more than average for California, though children are more sedentary than average. Cudahy has a Walkscore of 67, meaning that it is "Somewhat walkable." Cudahy's long blocks and lack of street trees may deter walking for pleasure.

Cudahy residents' level of educational attainment is relatively very low; 57% have less than a high school diploma or GED, 24% have a high school diploma or GED, 11 % has attended some college, 4% has an associate's degree, 3% has a bachelor's degree, and 1% has a master's degree or equivalent.¹²

Health Outcomes

Asthma rates in Cudahy are slightly higher than statewide average, though confidence in controlling asthma is significantly lower: 53% versus 77%. Obesity levels (30%) are higher than the county-wide average (24%). Obesity in children is also 6% higher than in Los Angeles County: 29% versus 23%. Asthma and diabetes hospitalization rates in Cudahy's subregion are higher than the state average and heart disease rates are slightly higher than the state average.

Access to Healthy Choices

When a person has access to healthy food and exercise options they are much more likely to make healthy choices for themselves and to have improved health outcomes. Access to full-service grocery stores, schools, parks, open spaces, trails, and community services are all positive drivers for health.

¹⁰ Kaiser Foundation Hospital Downey, "2013 Community Health Needs Assessment."

¹¹ CDC's Office of Minority Health & Health Equity (OMHHE), "CDC - Hispanic - Latino - Populations - Racial - Ethnic - Minorities - Minority Health," accessed December 16, 2015, <http://www.cdc.gov/minorityhealth/populations/REMP/hispanic.html#Disparities>.

¹² U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

Exhibit 11-6 shows Cudahy residents' access to grocery stores. The majority of the population is within a half mile's walk of a grocery store, and there are multiple grocery options available.

Exhibit 11-7 shows Cudahy residents' access to parks as well as the location of transit lines and stops. The majority of the population is within a half mile's walk of a park, and there are multiple options available. However, Cudahy is very dense and private parcels tend to be sparsely planted, leading to an elevated need for open space. Every parcel is within a half mile of a transit stop.

Exhibit 11-8 shows Cudahy residents' access to schools. The majority of the population is within a half mile's walk of a school.

Exhibit 11-9 shows the location of places in Cudahy that offer unhealthy choices, including liquor stores, convenience stores, and fast food restaurants. While liquor stores, convenience stores, and fast food restaurants do not directly cause ill health, they are correlated with it. For example, Healthy Kern County says liquor stores, "are associated with higher rates of violence, regardless of other community characteristics such as poverty and age of residents. High alcohol outlet density has been shown to be related to increased rates of drinking and driving, motor vehicle-related pedestrian injuries, and child abuse and neglect. In addition, liquor stores frequently sell food and other goods that are unhealthy and expensive."¹³ Convenience stores similarly frequently offer unhealthy food options, though this can vary significantly by store, and many communities have initiated programs to increase access to healthy food in convenience stores. Most "unhealthy" land uses are clustered along Atlantic Avenue and Clara Street.

¹³ Healthy Kern County, "Healthy Kern County : Community Dashboard : Liquor Store Density," accessed December 16, 2015, <http://www.healthykern.org/modules.php?op=modload&name=NS-Indicator&file=indicator&iid=17967459>.

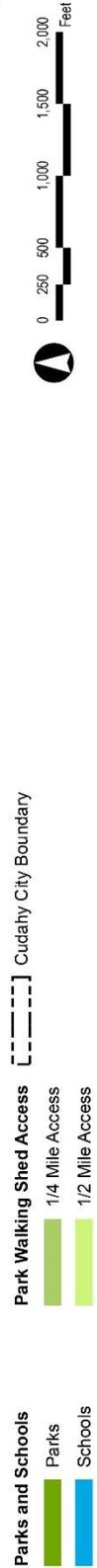


Exhibit 11-7
Walking Shed Access to Parks

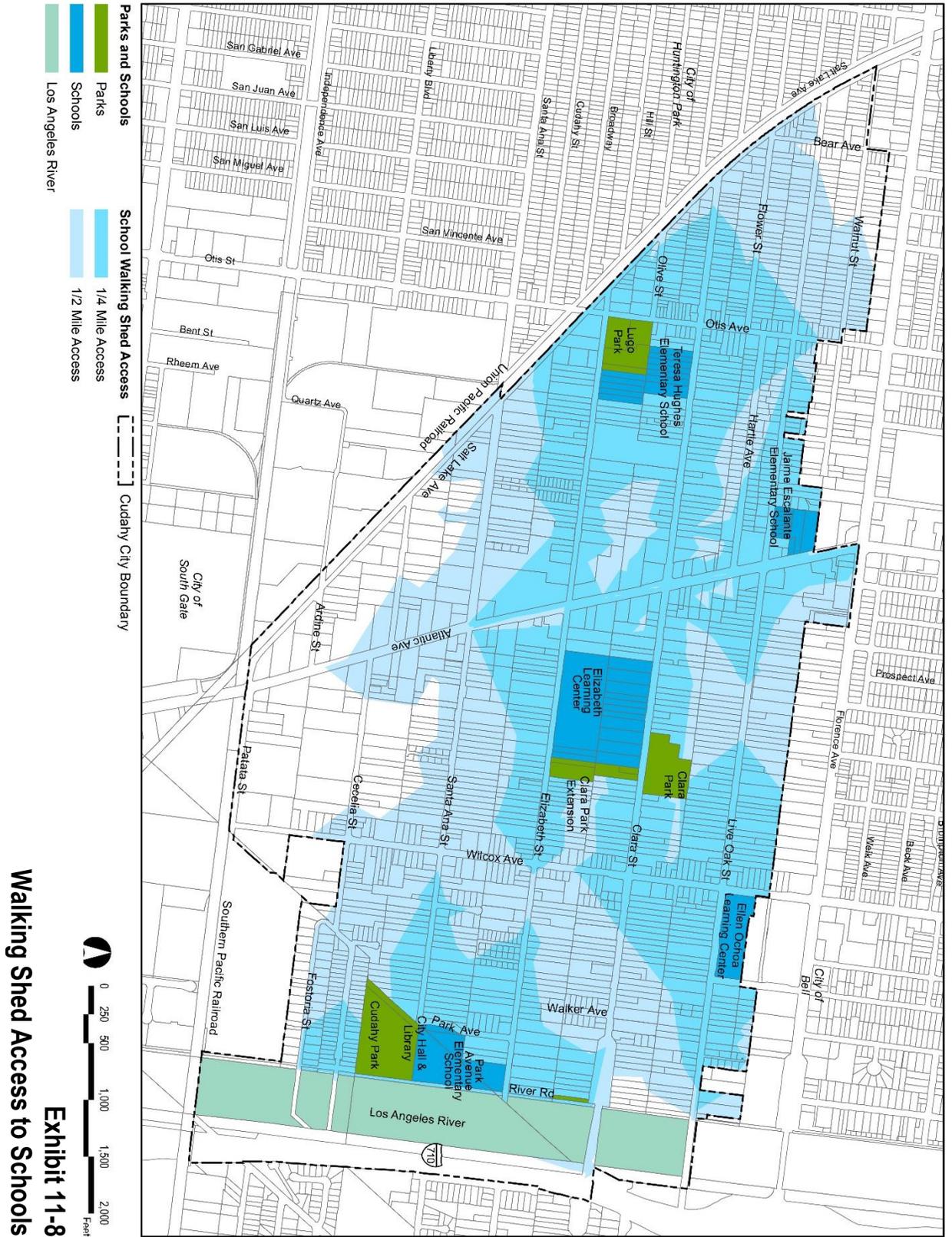




Exhibit 11-9
Unhealthy Land Uses: Liquor Stores, Convenience
Stores, and Fast Food Restaurants



Community Services

There are a range of community services available in Cudahy, including City-run facilities like the library and parks, as well as a monthly food distribution, public events, and senior services. The Los Angeles Department of Public Social Services Office also has an office in Cudahy. Cudahy has a post office and Department of Motor Vehicles office as well as medical and dental offices.¹⁴ These local public services both support the community and encourage walking and biking as forms of transportation. The City of Cudahy does not yet have a program focused specifically on increasing health in the city via a targeted “Healthy Community” program.

Integrating Health into the Planning Process

Integrating health into community planning can take many forms and be done at a wide range of scales, from improving food selections at a local store to changing land uses and street infrastructure. Many health related policies also have a positive impact on the economy, social equity, and climate change goals. When a community begins planning around health, the first step is to define the elements of a healthy community that are most important locally. Local workshops and surveys can be used to gather input from the community on its health priorities in addition to interviews with local leaders and experts. Incorporating health into a General Plan may take the form of a separate Health Element, integrating health-related policies into other elements, or a hybrid approach with a Health Element that frames the topic of health and provides a summary of related policies.

The State of California is developing materials that provide general information and specific data sets for healthy community planning. Two noteworthy sources include the 2015 Draft General Plan Guidelines¹⁵ and the Healthy Communities Data and Indicators Project¹⁶. The Draft General Plan Guidelines suggest looking at the following health considerations:

- Health and Economic Opportunity
- Climate Change and Resiliency
- Active Living and Recreation
- Social Connections and Safety
- Housing
- Nutrition and Food Systems
- Environmental Health
- Health and Human Services

The California Department of Public Health has worked with experts across California to develop a comprehensive draft set of indicators for tracking how “healthy” a community is in particular areas. The Core List of Indicators¹⁷ is the following:

What is a Healthy Community?

A Healthy Community provides for the following through all stages of life:

- Meets basic needs of all
 - Safe, sustainable, accessible, and affordable transportation options
 - Affordable, accessible and nutritious foods, and safe drinkable water
 - Affordable, high quality, socially integrated, and location-efficient housing

¹⁴ Google, “Google Maps,” *Google Maps*, accessed December 16, 2015, <https://www.google.com/maps>.

¹⁵ Governor’s Office of Planning and Research, “General Plan Guidelines: Draft of Public Comment 2015.”

¹⁶ California Department of Public Health, “Healthy Communities Data and Indicators,” accessed December 16, 2015, <http://www.cdph.ca.gov/programs/Pages/HealthyCommunityIndicators.aspx>.

¹⁷ *Ibid.*

- Affordable, accessible, and high quality health care
- Complete and livable communities including quality schools, parks and recreational facilities, child care, libraries, financial services, and other daily needs
- Access to affordable and safe opportunities for physical activity
- Able to adapt to changing environments, resilient, and prepared for emergencies
- Opportunities for engagement with arts, music, and culture
- Quality and sustainability of environment
 - Clean air, soil and water, and environments free of excessive noise
 - Tobacco- and smoke-free
 - Green and open spaces, including healthy tree canopy and agricultural lands
 - Minimized toxics, greenhouse gas emissions, and waste
 - Affordable and sustainable energy use
 - Aesthetically pleasing
- Adequate levels of economic, social development
 - Living wage, safe, and healthy job opportunities for all, and a thriving economy
 - Support for healthy development of children and adolescents
 - Opportunities for high quality and accessible education
- Health and social equity
- Social relationships that are supportive and respectful
 - Robust social and civic engagement
 - Socially cohesive and supportive relationships, families, homes, and neighborhoods
 - Safe communities, free of crime and violence

This project has defined accessible data sets that provide metrics for each of these factors so that communities prioritizing one factor or another will be able to quantifiably track progress.

Key Baseline Conclusion

While Cudahy faces significant public health challenges it is very helpful to know precisely what they are in order to plan to alleviate them. Communities tend to strongly support efforts to improve community health, and there are an easily available set of tools that will support planning for community health, as well as funding opportunities designed to forward public health in disadvantaged communities.

This page intentionally left blank.