

CHAPTER

# 01

## **SETTING + ORGANIZATION OF THE GENERAL PLAN**

*California Government Code section 65300.5 requires that the General Plan provide an “integrated, internally consistent and compatible statement of policies for the adopting agency.”*

### **CONTENTS**

- 1.1 INTRODUCTION
- 1.2 LOOKING BACK: A BRIEF HISTORY OF ALAMEDA
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**Exhibit 2  
Item 7-B, February 24, 2020  
Planning Board Meeting**



## 1.1 INTRODUCTION

The Alameda General Plan is a statement of goals, objectives, policies and actions to guide and manage change to the physical, environmental, economic, and social conditions in Alameda, California. The General Plan has been prepared to comply with the requirements of California Government Code section 65300 which mandates that each California city and county adopt a comprehensive, long-range, internally consistent plan for future development.

### The General Plan is:

- **Forward-Thinking:** *The General Plan considers the past and present conditions and trends and looks forward to address how change should be managed, how unique and valuable characteristics of the community should be protected, improved or enhanced, and where and how new community needs should be addressed.*
- **Comprehensive and Inclusive:** *The General Plan considers all major components of the community's physical, economic, social, and environmental development. The Plan considers the needs of the entire community and all neighborhoods and business districts.*
- **General:** *Because it is forward-thinking and comprehensive, the General Plan is also general. It is specific enough to effectively guide decision-making, but general enough to allow for unforeseen issues and challenges.*

- Implementable:** *The General Plan guides decision-making and supports regulations and programs designed to implement community policy goals. The Alameda Municipal Code implements General Plan policy and regulates the use of land and actions necessary to protect the public health, safety, and general welfare. When evaluating proposed changes to land use, proposed new regulations, and when making funding and budget decisions, the City Council and Planning Board will ensure conformity with General Plan policy objectives.*
- Evolving:** *The General Plan is amended when and as necessary. Community needs and priorities change over time in response to changing community, regional, and global conditions. The Planning Board and City Council annually review the status of the General Plan to ensure that it reflects current community objectives and State requirements. Requests for amendments may be submitted by individuals or may be initiated by the City itself. Pursuant to State and local law, any proposed amendment to the General Plan must be considered at a noticed public hearing before the Planning Board, which makes a recommendation on the amendment to the City Council. Upon receiving the Planning Board's recommendation, the City Council will hold a public hearing to consider the amendment and make a decision on the proposed amendment.*

The Alameda General Plan is organized by chapters or “elements”. Each chapter or element addresses a different subject matter and identifies the community’s goals in respect to that subject matter while setting forth a series of policies, and in some cases, actions to achieve those goals. Policies in each element are identified by a policy number and two letters, which identify the element and the policy (such as “SN-1”, which means Safety and Noise Element Policy Number 1). Using a consistent numbering system allows for easy reference and helps ensure that the General Plan does not include conflicting policies, which could impair consistent decision-making and hinder progress toward achieving community objectives. Throughout the General Plan additional information is located under the boxes entitled “spotlights”. This information is intended to help explain certain policies or programs in the City relevant to the element’s subject matter.

## GRAPHIC GUIDELINES FOR THE GENERAL PLAN

Using excerpts from the General Plan, here is a guide to the graphics that signal the important concepts included in the General Plan:

**Goals, Objectives, Policies, Actions and Spotlights.**

### GOALS

THE GOALS OF THE CONSERVATION AND CLIMATE ACTION ELEMENT ARE TO:

 <p><b>EMPOWER</b></p> <p>Empower community action, partnership and leadership to address local and global environmental and climatic emergencies.</p>	 <p><b>REDUCE</b></p> <p>Reduce the community's greenhouse gas emissions which are causing global heating, climate change, and environmental and social impacts.</p>	 <p><b>PREPARE</b></p> <p>Prepare the community to adapt to the disruptions and impacts of climate change, including but not limited to rising sea and groundwater levels, increasingly severe storms and flooding, more frequent heat quality days, and power outages.</p>	 <p><b>PROTECT</b></p> <p>Protect and conserve Alameda's natural resources.</p>
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### OBJECTIVES

**OBJECTIVE 2:**  
REDUCE GREENHOUSE GAS EMISSIONS GENERATED BY VEHICLE TRIPS IN ALAMEDA.

### POLICIES

**POLICIES:**

**CC-8**

Climate-Friendly Vehicles and Equipment. Reduce transportation greenhouse gas emissions by promoting, and when possible, requiring the use of low and zero emission vehicles and equipment to reduce energy use and carbon emissions from personal cars, trucks and buses.

### ACTIONS

**Actions:**

- **EV Charging.** Increase the supply of publicly accessible electric vehicle charging stations in Alameda.
- **New Development.** Require electric vehicle charging stations in all new development.
- **Permitting.** Streamline local permitting for hydrogen fueling and electric vehicle charging infrastructure.
- **City Fleet Vehicles.** Replace public fleet vehicles with electric or alternative fueled vehicles to the extent feasible.
- **Buses.** Encourage AC Transit to continue its efforts to replace diesel buses with clean energy buses.
- **Ferries.** Encourage WETA to replace diesel ferries with cleaner energy powered ferries.
- **EV Action Plan.** Prepare and adopt an electric vehicle action plan.

### SPOTLIGHTS

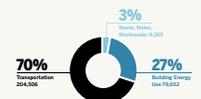
**SPOTLIGHT**

**GREENHOUSE GAS EMISSIONS INVENTORY**

As of January 1, 2020, approximately seventy percent (70%) of Alameda's greenhouse gas emissions still come from cars and trucks. Consider friendly modes of transportation, such as walking, bicycling, buses, ferries, scooters, and water shuttles must replace our current reliance on personal automobiles. How we develop our City will also contribute to our greenhouse gas emissions. Transit oriented, mixed-use multi-family housing must grow as a share of the overall housing stock.

Just under thirty percent (30%) of Alameda's greenhouse gas emissions come from the heating and cooling of our homes and the operation of our businesses. Alameda Municipal Power's (AMP) shift to 100 percent clean electricity effectively eliminates Alameda's GHG emissions from electricity consumption. In addition, the success of the Clean Truck Implementation Plan cut Alameda's GHG emissions from waste almost in half between 2010 and 2020. There has also been a steady decline in vehicle miles traveled (VMT) from passenger cars. As a result of these initiatives, Alameda reached peak emissions in 2015 at 420,703 MTCO<sub>2</sub>e.

The above estimates of greenhouse gas emissions in Alameda only consider "production based emissions," or the emissions produced within Alameda's city limits including tailpipe emissions from cars, emissions from natural gas appliances, and the emissions associated with the generation of electricity used



**THIS GRAPHIC ASSUMES COMPLETED ACTIONS INCLUDING A SHIFT TO 100% CLEAN ELECTRICITY FOR ALAMEDA MUNICIPAL POWER AND A FULLY IMPLEMENTED TRANSPORTATION CHOICES PLAN.** In Alameda's buildings, this method of counting emissions does not include all of the emissions produced in the manufacturing and distribution of the goods and services Alameda consumes, which are known as "consumption-based emissions." In 2019, one estimate places Alameda's consumption-based emissions at almost three times that of production-based emissions. Consequently, strategies to reduce consumption based emissions will play a growing role in Alameda's overall strategy to address climate change.

## THE ALAMEDA GENERAL PLAN IS ORGANIZED AS FOLLOWS:

01

### SETTING + ORGANIZATION OF THE GENERAL PLAN

Setting and Organization of the General Plan introduces the General Plan objectives and purposes, and the major themes that run through all Elements of the Plan.

02

#### LAND USE + CITY DESIGN ELEMENT

The Land Use and Urban Design Element provides the policies for the use, preservation and development of residential, business, mixed use, park, and conservation lands in Alameda consistent with local and regional goals to sustain a high quality of life in Alameda and the region for future generations.

03

#### CONSERVATION + CLIMATE ACTION ELEMENT

The Conservation and Climate Action Element provides policies necessary to address global and local climate change and conserve Alameda's unique natural environment.

04

#### MOBILITY ELEMENT

The Mobility Element provides policies to maintain and improve mobility and transportation choices essential to a high quality of life and economically vital community.

05

#### HOUSING ELEMENT

The Housing Element provides policies related to the maintenance, improvement, and expansion of housing opportunities in Alameda consistent with local and regional housing needs.

06

#### OPEN SPACE + PARKS ELEMENT

The Open Space and Parks Element provides policies for the management, improvement, and expansion of public open space and parks lands.

07

#### THE SAFETY + NOISE ELEMENT

The Safety and Noise Element provides policies necessary to reduce the risk of death, injuries, property damage, and environmental degradation, economic and social dislocation from natural and man-made hazards and protect the population from harmful noise.

 SPOTLIGHT

## ALAMEDA MILESTONES

- **1776**  
Settlement by non-natives begins. Alameda derives its original name, “the Encinal,” from the stands of native oaks.
- **1851**  
William Worthington Chipman and Gideon Aughinbaugh purchased the Encinal.
- **1853**  
The name “Alameda,” meaning “grove of poplar trees,” was established as a poetic gesture by popular vote.
- **1872**  
3 separate settlements, the Town of Alameda, Encinal and adjacent lands, and Woodstock, are established.
- **1902**  
Tidal Canal completed and Alameda becomes an island.
- **1920-1930**  
Era of civic building, followed by political scandal.
- **1940**  
The Naval Air Station commissioned in preparation for WWII and the City’s population reached 89,000.
- **1966**  
SF Bay filled to create Southshore neighborhoods.
- **1973**  
Measure A passed by voters to prohibit multifamily housing citywide.
- **1977**  
SF Bay filled to create Harbor Bay neighborhoods and business park.
- **1991**  
Measure A passed to limit residential density to 21 units per acre citywide.
- **1993**  
Closure of NAS Alameda Naval Station begins. City loses over 16,000 jobs.
- **2012**  
Multifamily housing overlay zoning district adopted. Housing Element certified by State for first time since 1990.
- **2019**  
Alameda population grows to approximately 79,000 and on-island employment grows to approximately 25,000.

## 1.2 LOOKING BACK: A BRIEF HISTORY OF ALAMEDA

Prior to the arrival of the Spanish, Alameda was a peninsula of land covered by a dense forest of coastal live oak and inhabited by Coastal Miwoks who sustained themselves through hunting, fishing and gathering. Settlement of Alameda by non-natives began in 1776, when Luis Peralta divided the Rancho San Antonio among his four sons. Alameda derived its original name, “the Encinal,” from the large stands of native oaks (“encino” means “oak” in Spanish) on the Main Island. The name “Alameda,” meaning “grove of poplar trees,” was given to the City as a poetic gesture upon popular vote in 1853.

In 1849, the California Gold Rush brought Americans and Northern Europeans to the San Francisco Bay. Many made their fortunes in supplying goods and services to the region’s burgeoning population. Among these were two young entrepreneurs, William Worthington Chipman and Gideon Aughinbaugh, who purchased the Encinal from Antonio Maria Peralta for \$14,000 in 1851, the year after California became a state. They subdivided the land and sold tracts for residences and orchards. By 1872, three separate settlements, the Town of Alameda, Encinal, and Woodstock, were established in the east, central and western sections of the peninsula. The Town of Alameda was granted a charter by the State Legislature in 1854; incorporation of all peninsula settlements under one local government occurred in 1872.

Early growth of residential, commercial and industrial areas depended upon water and rail transportation and an excellent climate. (See Figure 1-1, Alameda and Surrounding Areas in 1908.) The City’s industrial waterfront and small commercial districts (“the stations”) were developed in conjunction with rail improvements, while neighborhoods of Victorian homes and beach resorts were built attracting tens of thousands of weekend visitors. Major shipyards and Neptune Beach (the “Coney Island of the West”) were established along the northern and southern shores to take advantage of the island’s coastal assets. In 1902, the Tidal Canal was completed and Alameda became an island.

In the decades between 1920 and 1970 the City witnessed cycles of boom and bust. Following an enlightened era of civic building during the 1920s, Alameda endured difficult years of political scandal and corruption through the 1930s. The entry of the United States into World War II focused the City’s attention on the war effort. During World War II, shifts ran around the clock at the Alameda Naval Air Station (commissioned in 1940) and in the City’s shipyards. The City’s population reached an all-time high of 89,000.



**Figure 1.1: Alameda and Surrounding Areas in 1908**

In 1973, the voters of Alameda passed a measure to amend the City Charter to prohibit multi-family housing in Alameda. City Charter Section 26-1 states, "There shall be no multiple dwelling units built in the City of Alameda". In 1991, the voters added Charter Section 26-3, which limits residential density to one unit for every 2,000 square feet. The two measures, collectively referred to as "Measure A", effectively stopped the development of any multifamily housing in Alameda from 1973 to 2013.

In 1993, the Federal Government announced that it would be closing the naval air station in Alameda, which had operated in western Alameda since the early 1940's. The departure of the Navy resulted in a loss of over 16,000 jobs, but also provided an opportunity for the community to re-envision a future for the western third of the island. In 1996, the City Council adopted a Community Reuse Plan, which envisioned a new mixed-use, waterfront community with over 300 acres of waterfront open space, parks, and conservation areas, called Alameda Point.

In the 2000's the Alameda community continued its planning efforts to address changing local and regional conditions. In 2003, the City Council adopted the Alameda Point General Plan Element, the Northern Waterfront General Plan Element in 2007, and an updated Transportation Element in 2008. In 2009, the City Council adopted a State mandated density bonus ordinance, which provides an opportunity to exceed the Measure A residential density limits and waive the prohibition on multifamily housing, if a project includes specified amounts of deed restricted affordable housing units. In 2012, pursuant to State Housing Element Law requirements to identify sufficient land zoned for residential use to accommodate the City's Regional Housing Needs Allocation, the City Council adopted an updated Housing Element and a Multi-family Residential Combining Zone (MF District), which permits multifamily housing by right with a residential density of up to 30

units per acre on specific sites in Alameda. In 2013, construction began on the townhomes on 5th Street across from the Alameda Landing shopping center - the first privately constructed multifamily homes in Alameda in over 40 years. In 2015, the Council updated the Housing Element for the period of 2015 to 2023, and an updated Safety and Noise Element and Transportation Choices Plan in 2017. In 2018, the City Council adopted an Economic Development Strategic Plan, a five-year road map for economic development programs and initiatives. By 2019, the community completed and the City Council adopted a Climate Action and Resiliency Plan (CARP), which sets the overarching goal of making Alameda a net zero emissions community.

By 2020, Alameda has grown to be a vibrant mixed-use community with a population of approximately 79,000 residents and a variety of innovative and traditional businesses employing an estimated 25,000 people.

### **1.3 LOOKING AHEAD: ALAMEDA IN 2040**

Located at the center of a growing and evolving San Francisco Bay Area, Alameda's next 20 years will be a period of change presenting both challenges and opportunities for the Alameda community.

#### **Population Growth and Housing:**

By 2040, the nine-county San Francisco Bay Area is projected to grow to include 4.5 million jobs and 9.3 million people. The continued growth in employment and population will continue to create both housing challenges and economic opportunities both regionally and locally.

Alameda will continue to provide for its share of the growing regional housing need as required by State Housing Law and Alameda's regional housing needs allocation, which is expected to generate the need for construction of approximately 6,000 new units to accommodate approximately 14,000 additional Alameda residents for a total population of approximately 94,000 in 2040.

The growth in housing and population will be primarily located in Alameda's two designated priority development areas at the former Naval Air Station lands at Alameda Point and the former industrial lands along the northern waterfront in Alameda. Locations for additional housing elsewhere in the City of Alameda are limited to a few small remaining vacant lots, accessory units on existing residential properties, and a limited number of mixed use opportunity sites along the Park Street and Webster Street corridors. It is expected that Alameda's existing historic neighborhoods and commercial main streets will look very similar in 2040 as they do today and as they did in 2000. The Land Use Element and the Housing Element identify housing opportunity areas and sites within the City of Alameda.

#### **Job Growth and Employment:**

Over the next 20 years, the San Francisco Bay Area is expected to remain a global leader and center for the development of new technologies, research, development, and innovation. The growing Bay Area economy is expected to create opportunities for business and job growth in Alameda and increased on-island employment opportunities for Alameda residents. As described in the Land Use Element, Alameda has the available land and capacity to support the anticipated 10,000 to 13,000 new jobs that will be added in Alameda during the next twenty years. Most of the new jobs will be located at Alameda Point, along the Northern Waterfront, and in the Harbor Bay Business Park.



### Transportation and Climate Change:

Over the next twenty years, transportation and climate change are expected to pose major challenges for the Alameda community. Housing shortages and employment growth will continue to contribute to worsening congestion on the regional freeway and transit systems, including Alameda's connecting network of streets, roads, and transit systems. Additional vehicle trips will continue to increase regional greenhouse gas emissions. As described in the Transportation Element and Land Use Element, the community will continue to develop alternative, more climate friendly transportation options for a growing population and prepare the community for the impacts of climate change and sea level rise in Alameda.



## 1.4 THEMES OF THE GENERAL PLAN

This General Plan provides a policy framework to guide future decisions to meet the community's objectives and priorities, as articulated in the following themes of the General Plan.

### *The General Plan's policies reinforce five broad themes:*

**An island environment:** Arriving in Alameda is an event – a journey across or under the water that clearly establishes the City's boundaries, identity and uniqueness. Living on "an island" contributes to the quality of life for residents and makes living in Alameda a unique experience. General Plan policies support and strengthen the City's island setting by making the shoreline more accessible and by preparing the community for the impacts of climate change and the resulting increase in sea levels, rising groundwater levels, and more frequent and intense storm events.

**Protecting the environment and preparing for climate change.** Alameda, with its island geography and unique environmental setting, is uniquely vulnerable to the impacts of environmental and climate change. Rising sea level and groundwater levels and increased and more severe incidents of flooding will significantly impact the quality of life in Alameda and Alameda's unique natural resources and areas of natural habitat. The General Plan policies support reduction of greenhouse gas emissions and actions necessary to prepare for rising seas through infrastructure improvements and expansion and protection of natural conservation areas, marshes, and wetlands.

**Small town feeling:** Alameda is a quiet, predominantly residential community, originally developed in an era when transportation was limited to walking, bicycling, horses, trains, and ferry. General Plan policies are designed to manage change to retain Alameda's small town feeling and to reinforce the historic, transit oriented urban fabric. These policies support the provision of a variety of safe, convenient, and environmentally friendly modes of transportation, a network of interconnected public parks and open spaces, and traditional mixed use commercial main streets.



The General Plan emphasizes restoration and preservation as essential to Alameda's economic and cultural environment.



**Respect for history:** The General Plan emphasizes restoration and preservation of Alameda's history and the historic urban fabric and architecture that is essential to Alameda's economic, social and cultural environment.

**A healthy and socially equitable City:** Alameda is a community of people. The General Plan policies ensure that Alameda continues to be a safe and healthy place for everyone regardless of income, race, gender, cultural background or physical abilities.

CHAPTER

# 03

## **CONSERVATION + CLIMATE ACTION ELEMENT**

The Conservation and Climate Action Element establishes the City's goals, objectives, policies, and actions necessary to conserve and protect Alameda's natural resources, reduce the community's greenhouse gas emissions and energy use, and to prepare for and address the impacts of climate change.



**THE GOALS OF THE CONSERVATION AND CLIMATE ACTION ELEMENT ARE TO:**



**EMPOWER**

Empower community action, partnership and leadership to address local and global environmental and climatic emergencies.



**REDUCE**

Reduce the community's greenhouse gas emissions which are causing global heating, climate change, and environmental and social impacts.



**PREPARE**

Prepare the community to adapt to the disruptions and impacts of climate change, including but not limited to rising sea and groundwater levels, increasingly severe storms and flooding, more frequent heat events, hazardous air quality days, and power outages.



**PROTECT**

Protect and conserve Alameda's natural resources.


**SPOTLIGHT**
**CLIMATE GLOSSARY**

**Climate Crisis:** Another term for climate change caused by man-made greenhouse gas emissions that may be more appropriate for cities like Alameda who have declared a climate emergency.

**Greenhouse Gas Emissions (GHG):** A type of air-borne molecule that traps heat from the sun, contributing to the overall warming of the planet. These particles trap radiation like a greenhouse, hence the name. Methane and carbon dioxide (CO<sub>2</sub>) are among the most commonly discussed greenhouse gases.

**MTCO<sub>2</sub>e (Metric Tons of Carbon Dioxide Equivalent):** The most common way to measure greenhouse gas emissions by comparing the 'greenhouse effect' of particles to that of carbon dioxide. For example, methane has a roughly 25 times stronger greenhouse effect than carbon dioxide on a 100-year time scale so 1 metric ton of methane = ~25MTCO<sub>2</sub>e.

**Low Carbon:** An activity or entity that emits significantly fewer greenhouse gas emissions compared to its peers. A bus, for example, is a low carbon transportation mode when compared to a car powered by fossil fuels.

**Carbon Neutral/Net-Zero Emissions:** An activity or entity that sequesters at least as much carbon as it emits, either directly through sequestration or indirectly by paying someone else to sequester carbon.

**Sequestration:** Removing air-borne pollution like carbon dioxide from the air.

**Resilience:** The ability of a community to adapt to new and unexpected circumstances such as those fueled by the climate crisis.

**Sea-Level Rise (SLR):** The increase in average sea-levels, mostly due to rising temperatures and melting ice around the world.

**King Tide:** The highest tides that happen a few times per year when the moon and sun's gravity align to have the greatest pull on the sea, raising the tide levels several inches.

**50-year storm:** A storm event where wind and precipitation combine to cause flooding at a level typically only seen around once every 50 years, which for Alameda would be about a 3 foot increase in sea-level during that event.

**Environmental Justice:** A movement to correct long-standing inequality as to how the health burdens of environmental hazards exist disproportionately in low-income and marginalized communities.

**INTRODUCTION TO CONSERVATION + CLIMATE CHANGE ELEMENT**

Alameda's unique island geography and natural setting supports a high quality of life for Alameda residents and a natural habitat for important wildlife, but that unique setting is also uniquely vulnerable to changes in our environment. As worldwide temperatures and sea levels rise, Alameda residents and businesses will be increasingly impacted by flooding, road closures, power outages, hazardous air quality days, and periods of intense heat.

In 2019, the City Council joined a number of other American cities and declared a climate state of emergency in response to the growing threat of climate change. The City Council found that as an island city, Alameda faces an existential crisis from sea-level rise and must act as a global and regional leader by transitioning to an ecologically, socially and economically regenerative economy. In so doing, the City Council established a citywide goal of becoming a net zero emissions community. To achieve these ambitious but necessary goals, Alameda's reliance on fossil fuels to support our current way of life must change.

The City of Alameda must respond to the climate emergency with policies and specific actions that reduce greenhouse gas emissions while preparing to protect Alameda from the consequences of global heating, rising sea levels and rising groundwater levels. Specific actions must also be taken by all Alameda residents and businesses, if the community of Alameda is to be successful in reducing its greenhouse gas emissions and preparing for climate change. Action is needed on all fronts.

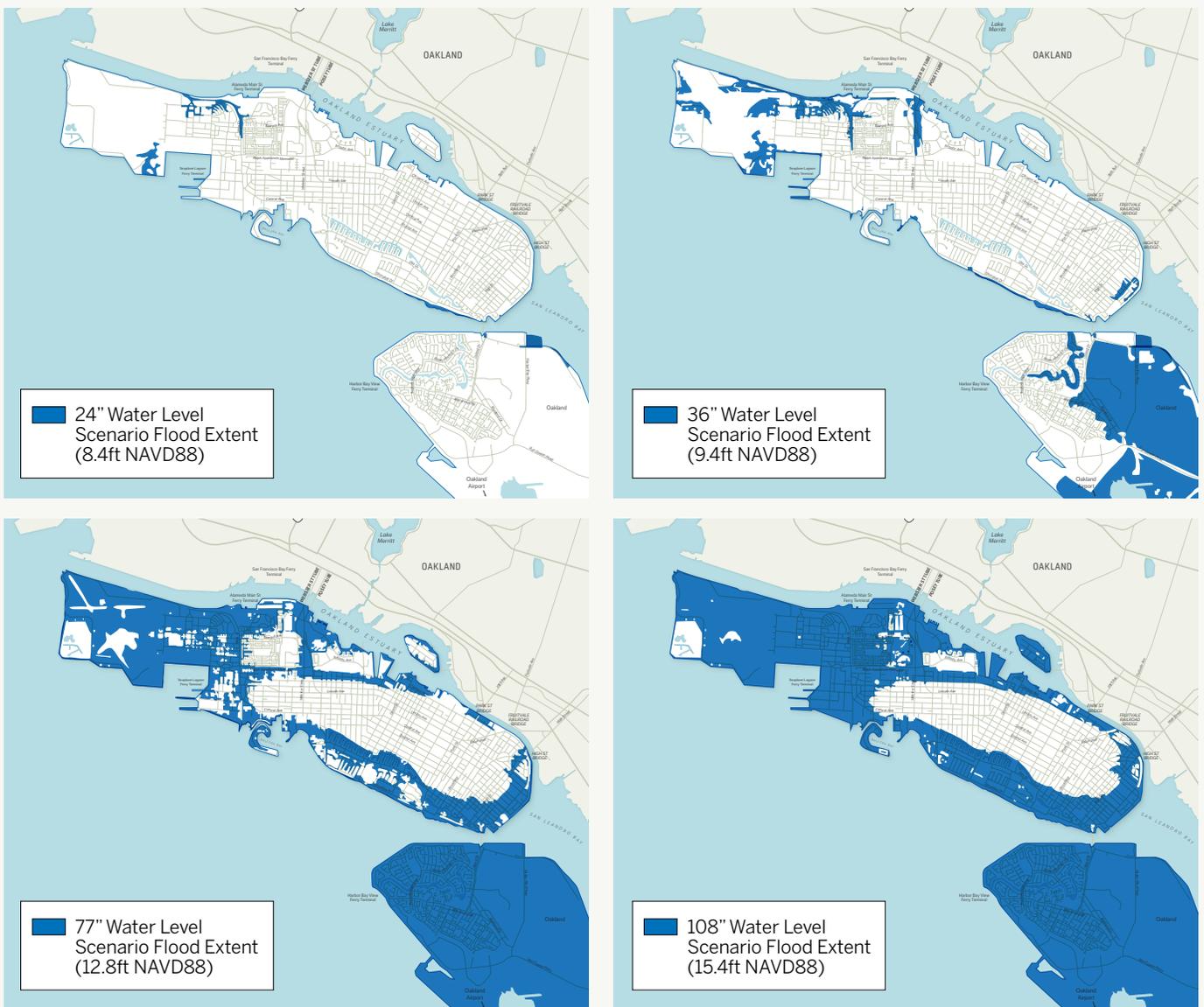
This General Plan element includes an overarching policy framework that is designed to preserve Alameda's high quality of life and unique natural setting and resources for future generations. The 2019 Climate Action and Resiliency Plan (CARP) contains many of specific plans, programs, and tools needed to address the threats of climate change.

**SPOTLIGHT**

**SEA-LEVEL RISE**

Alameda is a community with a uniquely beautiful and environmentally sensitive setting in the center of the San Francisco Bay. This unique waterfront community, its natural resources, and the infrastructure necessary to make it safe, healthy and habitable are also uniquely vulnerable to environmental change. With almost half of its land area 6 feet or less above sea level and ground water just a few feet below, rising sea levels and rising ground water levels threaten to overwhelm our waterfront open spaces and habitat areas, our roadways, storm water, and sewer systems, and the seawalls, embankments, and shoreline barriers that that were constructed to make it possible to live on the delicate peninsula and islands that we call Alameda, California.

The San Francisco Bay rose 8 inches in the 20th century, and it is projected to continue rising for the foreseeable future. Today, a severe storm (storms that occur every 50 years or so) will cause a storm surge in sea level of about 36 inches above the 8 inches it has already risen. Due to global warming and the continued generation of greenhouse gases locally and worldwide, by 2040, Alameda must prepare for sea levels to be about 36 inches higher than today, even without a storm, and as a result ground water levels will also rise, meaning that homes, businesses, infrastructure and natural habitat areas everywhere on the island will be impacted, whether on the shoreline or inland.



**FIGURE 3.1: WATER LEVEL SCENARIOS**

## OBJECTIVE 1:

### Act locally and regionally to implement comprehensive climate action.

#### POLICIES:

##### CC-1

**Community Action.** Empower local community members and leaders to participate, plan, and implement the changes in behavior and actions that are needed to address the climate crisis.

##### **Actions:**

- **Outreach and education.** Continue to provide planning and educational opportunities that support participation and collaboration by all segments of Alameda's population.
- **Community Organizations.** Continue to partner on climate action initiatives with groups such as Community Action for Sustainable Alameda (CASA), Bike Walk Alameda and all other interested community groups.

##### CC-2

**Social Vulnerability.** Consider the needs of the most vulnerable communities when prioritizing public investments and improvements to address climate change.

##### **Actions:**

- **Equity.** Ensure opportunities for participation and actions to involve and protect Alameda's low-income, senior, youth, and disadvantaged communities from environmental and climate change impacts.
- **Environmental Justice.** Ensure the fair treatment and meaningful participation of all people when considering decisions and actions to reduce the adverse impacts of climate change on residents regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location.
- **Assessments.** Use Alameda's Social Vulnerability Assessment in the Climate Action and Resiliency Plan or similar tool to identify neighborhoods with high levels of social vulnerability in order to prioritize locations for action and improvements.

##### CC-3

**Coordinated Regional and Local Planning.** Maintain consistency between local and regional plans to reduce greenhouse gas emissions regionally and locally.

##### **Actions:**

- **City Government Leadership.** Promote climate friendly policies, standards, practices, technologies and purchasing in all City facilities and operations.
- **State and Regional Programs.** Support and participate in state and regional efforts to address climate change through greenhouse gas emission reduction, transportation system improvements, and increased housing supply near job centers and existing regional transportation infrastructure.
- **State and Regional Funding.** Advocate for and support state and regional efforts to provide funding for greenhouse gas reduction, transportation improvements and climate change adaptation at the local level.
- **Sustainable Communities Strategy.** Maintain consistency between the City's General Plan and Municipal Code and the regional Sustainable Communities Strategy.

**CC-4**

**Net Zero GHG Emissions.** Take actions to make Alameda a net zero GHG community.

**Actions:**

- **Partnerships:** Continue to partner on greenhouse gas emission reduction and adaptation strategies with other agencies, including, but not limited to, Caltrans, AC Transit, Bay Conservation and Development Commission, Water Emergency Transit Agency, East Bay Regional Park District, Port of Oakland, East Bay Municipal Utility District, Pacific Gas & Electric, and the US Department of Veterans Affairs.
- **Alameda Climate Action and Resiliency Plan:** Implement and update as necessary Alameda's Climate Action and Resiliency Plan (CARP) for reducing greenhouse gas emissions and preparing and implementing adaptation strategies to address sea level rise, increased flooding, and public health. Annually review programs and projects to evaluate progress on greenhouse gas emission reductions.
- **100% Renewable.** Support powering Alameda with 100% renewable energy by promoting the generation, transmission and use of a range of renewable energy sources such as solar, wind power and waste to meet current and future demand.
- **AMP 2020.** Support Alameda Municipal Power's efforts to provide power from 100% clean, non-fossil fuel sources to all residential and commercial users in Alameda.
- **On-Island Generation.** Support development of on-island solar power generation and on-island wind power with appropriately sized generation, storage, and microgrid distribution infrastructure to be able to provide power for a range of uses, including essential functions.
- **Energy Generation Facilities.** Subject to Alameda Municipal Power's regulatory requirements, permit renewable energy generation facilities by right in zones with compatible uses.

**CC-5**

**Trees and Sequestration.** Preserve, maintain, and expand the number of trees in Alameda on both public and private property to increase carbon sequestration and reduce heat island effects.

**SPOTLIGHT****SB 375**

The Sustainable Communities Act, also known as SB 375 and signed into State law in 2008 recognizes how significant local and regional land use planning is for reducing transportation related greenhouse gas emission and climate change. **The goals of the law are to:**

**SUPPORT**

**Support the state's climate goals to reduce emissions.**

**REQUIRE**

**Require regional "Sustainable Communities Strategies" that coordinate local and regional land use and transportation planning.**

**PROMOTE**

**Promote healthier, more sustainable and equitable communities.**

This state program recognizes that regional land use planning is critical for reducing transportation emissions.

**Actions:**

- **New Development and Parking Lots.** Require trees in new development and in new parking lots.
- **Resilient Urban Forest.** Increase the tree canopy in Alameda with water efficient, shade-producing, fire resistant tree species.
- **Public Parks and Lands.** Utilize public parks and public lands, such as Alameda Point to significantly increase the urban forest.
- **Resilient Urban Forest and Master Tree Plan.** Maintain an up-to-date, climate friendly Master Tree Plan that selects water efficient, shade-producing, fire-resistant tree species adapted to Alameda's changing climate; includes design of new tree wells to allow better infiltration of stormwater; promotes sidewalk gardens and other sidewalk landscaping; expands greenery in the public right-of-way and removes impervious surfaces; reduces the conflicts between trees, tree roots, and other public infrastructure such as sidewalks and streets; and identifies funding for both expansion and maintenance of the urban forest.

**CC-6**

**Clean Energy Infrastructure.** Actively support and advocate for improvements to the regional and local electric power infrastructure to reduce its vulnerability to high winds and other climatic conditions and support 100% clean energy use in Alameda.

**CC-7**

**Reduce Reliance on Natural Gas Infrastructure.** Limit the expansion of infrastructure for natural gas and other greenhouse gas producing power sources.



Alameda's pedestrian friendly streets and transit oriented commercial districts will help Alameda meet its Net Zero Emission's goals.

## OBJECTIVE 2:

### Reduce Greenhouse Gas Emissions generated by vehicle trips in Alameda.

#### POLICIES:

##### CC-8

**Climate-Friendly Vehicles and Equipment.** Reduce transportation greenhouse gas emissions by promoting, and when appropriate, requiring the use of low and zero emission vehicles and equipment to reduce energy use and carbon emissions from personal cars, trucks and buses.

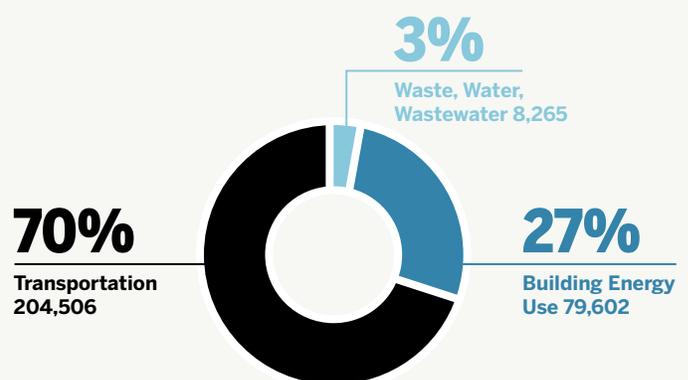
**Actions:**

- **EV Charging.** Increase the supply of publicly accessible electric vehicle charging stations in Alameda.
- **New Development.** Require electric vehicle charging stations in all new development.
- **Permitting.** Streamline local permitting for hydrogen fueling and electric vehicle charging infrastructure.
- **City Fleet Vehicles.** Replace public fleet vehicles with electric or alternative fueled vehicles to the extent feasible.
- **Buses.** Encourage AC Transit to continue its efforts to replace diesel buses with clean energy buses.
- **Ferries.** Encourage WETA to replace diesel ferries with cleaner energy powered ferries.
- **EV Action Plan.** Prepare and adopt an electric vehicle action plan.

#### SPOTLIGHT

### GREENHOUSE GAS EMISSIONS INVENTORY

In 2020, approximately seventy percent (70%) of Alameda’s greenhouse gas emissions comes from cars and trucks. Approximately thirty percent (30%) of Alameda’s greenhouse gas emissions come from the heating and cooling of our homes and the operating of businesses. To reduce our greenhouse gas emissions, climate friendly modes of transportation, such as walking, bicycling, buses, ferries, scooters, and water shuttles must replace modes of transportation reliance on fossil fuel powered, personal automobiles and trucks. Electricity must replace natural gas and other fossil fuel powered energy sources. To reduce our greenhouse gas emissions, electric vehicles, electric hot water heaters and furnaces, and other electric appliances must replace natural gas and other fossil powered vehicles, appliances, hot water heaters and furnaces, and other appliances. Alameda Municipal Power’s commitment to 100 percent clean electricity sets the stage for significant reductions in GHG emissions citywide if everyone does their part to reduce trips and shift to clean energy fuel sources.



THIS GRAPHIC ASSUMES COMPLETED ACTIONS INCLUDING A SHIFT TO 100% CLEAN ELECTRICITY FOR ALAMEDA MUNICIPAL POWER AND A FULLY IMPLEMENTED TRANSPORTATION CHOICES PLAN.

(Please refer to CARP pages 39-40 for more information.)

**CC-9**

**Climate-Friendly Active Modes of Transportation.** Reduce greenhouse gas emissions from transportation by improving the local roadway network to support all modes and specifically encourage walking and bicycling.

**Actions:**

- **Active Transportation Plans.** Maintain, regularly update and implement bicycle and pedestrian improvement plans identified in the Transportation Element of the General Plan, the Transportation Choices Plan and the Active Transportation Plan.
- **Prioritize safety.** Create a safe environment for bicycling and walking by establishing a goal of zero annual fatalities and severe injuries for bicyclists and pedestrians using Alameda's roadway network.
- **Complete streets.** Ensure that all streets are designed to provide a safe and convenient environment for all modes, including bicyclists and pedestrians and adequately maintain sidewalk conditions to avoid tripping hazards.
- **Safe routes to school.** Increase walking and biking to school by developing and improving safe routes to schools and out-of-school programs.
- **Mobility for all.** Prioritize roadway network improvements that increase mobility and equitable access for all residents, especially low-income, youth, seniors, disabled, and other vulnerable residents.
- **Connectivity and Inclusiveness.** Connect neighborhoods and major destinations such as parks, open spaces, civic facilities, employment centers, retail and recreation areas with pedestrian and bicycle infrastructure. Prohibit sound walls, gates and other barriers that separate neighborhoods and decrease physical and visual connectivity throughout the City.
- **Access to the shoreline.** Expand and improve pedestrian and bicycle access to the waterfront and recreational facilities throughout Alameda.
- **Access to Oakland.** Improve connections for all modes, including bicycle and pedestrian connections to Oakland.
- **West Alameda to Jack London Square Bicycle and Pedestrian Bridge.** Continue to work with Oakland, Caltrans, the Alameda County Transportation Commission, the State of California, and the US Coast Guard to design, fund, and construct a bike and pedestrian bridge from West Alameda to Jack London Square in Oakland.

**CC-10**

**Transit Use.** Reduce automobile greenhouse gas emissions by increasing transit use.

**Actions:**

- **Partnerships.** Collaborate and partner with AC Transit, Water Emergency Transit Agency (WETA), BART, community groups, and employers to provide expanded and more convenient transit services throughout the community as well as to downtown Oakland, San Francisco, and the BART system.
- **Convenience and Frequency.** Work with AC Transit to provide convenient and frequent bus service within a ¼ mile of every Alameda resident and business during normal commute hours.
- **Alameda Easy Pass.** Work with AC Transit and WETA to develop and fund an "Alameda EasyPass" program that would provide every Alameda resident with a pass for use on any bus or ferry.
- **Transit Connections.** Improve connections between bus transit and water transit facilities and services, such as a cross-town bus service connecting east and west Alameda to the Ferry Terminal services at Alameda Point.

- **Oakland Connections.** Establish water shuttle service to connect commuters, pedestrians and bicyclists to Oakland and reduce the need to use automobiles to cross the estuary.
- **Transit Priority.** Evaluate the creation of signal priority lanes, transit-only lanes, and queue jump lanes to make transit more efficient and effective.
- **Last Mile Connections.** Consider improvements that will improve last-mile access to major transportation nodes.
- **Alameda BART.** Continue to work with BART to include an Alameda BART station in the design of BART's plan for a second San Francisco Bay crossing connecting Oakland and San Francisco.

**CC-11**

**Vehicle Sharing:** Support and encourage vehicle sharing to reduce the number of vehicles on the roadway network, reduce greenhouse gas emissions, and reduce traffic congestion.

**Actions:**

- **Alternative Vehicle Share Programs.** Support alternative vehicle share programs, such as bike share, car share, and scooter share programs.
- **Carpooling.** Consider transit and carpool lanes and other methods to support shared vehicles.
- **Carpool Parking.** Provide preferential parking spaces for carpool vehicles in public parking lots and within private commercial development that is providing vehicle parking.

**CC-12**

**Climate-Friendly, Transit-Oriented Development:** Reduce automobile use and vehicle miles traveled by new residents by requiring transit oriented, medium and high density mixed use development on transit and commercial corridors and near ferry terminals in Alameda.

**Actions:**

- **Residential Density.** When zoning property for residential or residential mixed use, zone for medium and high density housing and prohibit low density housing to reduce vehicle miles travelled and greenhouse gas emissions from new housing in Alameda.
- **Commercial Intensity.** When zoning property for commercial use, allow for higher floor area ratio (FAR) when proximate to transit or planned transit.
- **Parking Requirements.** Revise off-street parking requirements to replace minimum requirements with maximum requirements to limit the amount of onsite parking allowed with each development to reduce automobile trips and automobile ownership in each residential development.
- **Transportation Demand Management Ordinance.** Prepare and adopt a Transportation Demand Management Ordinance requiring new development to actively address the mobility of new residents and employees, including and not limited to contributing to annual operations and capital improvements for supplemental transit, water shuttle, land based shuttle services and improvements to the bicycle and pedestrian network.


**SPOTLIGHT**
**TELECOMMUTING**

Telecommuting, living where you work, and working a couple of days a week from home significantly reduces your carbon footprint and helps Alameda become a net zero emissions community. Reducing commuter trips each day is essential to meet the City's greenhouse gas reduction goals, set by the 2019 Climate Action and Resiliency Plan comes from an increase in telecommute.


**\$11,000**

 IN SAVINGS PER YEAR,  
PER EMPLOYEE

**20%**

MORE PRODUCTIVITY


**73%**

 TELECOMMUTERS ARE SATISFIED  
WITH THEIR COMPANY

**CC-13**
**Climate-Friendly Employment Commute Behavior.**

Encourage residents to telecommute or work from home to reduce commute trips, reduce greenhouse gas emissions, and reduce commute hour congestion.

**Actions:**

- **Home Occupations:** Consider municipal code amendments to allow for a wider variety of “home occupation permit” types in residential zoning districts.
- **Work Live:** Support and encourage “work-live” developments in commercial zoning districts.
- **Telecommuting Work Sites:** Improve accessibility within Alameda to telecommuting workplaces, such as cafes, libraries, community centers and parks.

**CC-14**

**Congestion Pricing/Tolling.** Advocate for changes to State law that would allow local jurisdictions to implement congestion pricing or tolling to reduce traffic, vehicle miles travelled and greenhouse gas emissions and generate funds to create equitable transportation improvements that reduce greenhouse gas emissions.

**OBJECTIVE 3:**
**Reduce Greenhouse Gas Emissions generated by Buildings in Alameda.**
**POLICIES:**
**CC-15**

**Zero Net Energy and Green Building.** Require newly constructed buildings and structures to comply with the City's adopted Green Building Ordinances with the intent of meeting or exceeding the State's zero net energy goals.

**Actions:**

- **Incentives.** Incentivize use of the Living Community Challenge, LEED for Neighborhood Development, or similar third-party certification system to certify climate friendly construction.
- **Renewable Energy.** Encourage new development and redevelopment projects to generate a portion of their energy needs through renewable sources.

- **Solar Panels.** Encourage installation of solar panels and energy storage equipment in new development.
- **Energy Audits.** Implement building energy audit and retrofit programs and solar programs.

#### CC-16

**Electrifying Alameda's Building Stock.** Reduce greenhouse gas emissions from natural gas combustion and natural gas leaks by preparing and adopting citywide regulations limiting use of natural gas and encouraging the use of clean energy electricity.

##### **Actions:**

- **New Construction.** Encourage and incentivize construction of clean energy new buildings and limit the use natural gas infrastructure.
- **Development on City Land.** Limit or prohibit the use and expansion of natural gas infrastructure on city land to the extent feasible and practicable.
- **Conversions to Clean Energy.** Develop regulations and incentives to facilitate the conversion of existing buildings with natural gas infrastructure to clean energy alternatives.
- **Rebate Programs.** Support programs that encourage homeowners/commercial building owners to implement electrification retrofits.

#### CC-17

**Energy Efficiency and Conservation** Promote efficient use of energy and conservation of available resources in the design, construction, maintenance and operation of public and private facilities, infrastructure and equipment.

##### **Actions:**

- **Energy Efficient Building Renovations.** Streamline permitting requirements for energy-efficient building renovations.
- **Public Facilities.** Incorporate renewable energy and energy efficiency into public facilities capital improvements.
- **Low Carbon Materials.** Require or promote low-carbon building materials where available.
- **Energy Audits.** Consider requirements for energy audits or updates at major renovation or time of sale.

#### CC-18

**Water Efficiency and Conservation.** Minimize water use in new construction and landscaped areas.

##### **Actions:**

- **Water Efficient Landscape Requirements.** Maintain up-to-date water-efficient landscaping regulations and ordinances to reduce water use in both private and public landscapes.
- **Bay-Friendly Landscapes.** Require new developments to include native plant species, and non-invasive drought tolerant/low water use plants in landscaping.
- **Water-Efficient Buildings.** Encourage and when possible require low-flow fixtures, such as low-flow toilets and faucets.

 SPOTLIGHT
**ZERO WASTE GOAL**

In 2020, Alameda residents and businesses divert 83% of their waste from landfills. The community's goal is to become a zero waste community by 2040.



WASTE DIVERSION IN  
**2020**

## COMMUNITY'S GOAL



ZERO WASTE COMMUNITY BY  
**2040**

 SPOTLIGHT
**FOOD WASTE**

Food waste and other organic materials represent over 20% of waste sent to the landfill

**OBJECTIVE 4:****Reduce Greenhouse Gas Emissions and Conserve Natural Resources by Making Alameda a Zero Waste Community.****POLICIES:****CC-19**

**Zero Waste Culture.** Create a zero waste culture by developing programs and campaigns that recognize the shared responsibility for each individual to reduce and divert waste from landfill disposal.

**Actions:**

- **Zero Waste Plan.** Implement the City of Alameda 2018 Zero Waste Implementation Plan
- **Technical Assistance.** Provide targeted technical assistance for commercial and multi-family waste generators, which have the greatest opportunity to reduce waste sent to landfill.
- **Food Recovery.** Work with our waste management partners to create a food recovery program and enhance organics management to reduce organic material disposal in landfills and reduce greenhouse gas emissions.
- **Construction Waste.** Update the City's construction and demolition debris recycling ordinance to reduce the waste that often ends up in a landfill that could be reused or recycled.
- **CAL Green.** Implement CALGreen building code requirements to divert and recycle construction and demolition waste, and to use locally-sourced building materials and recycled content building materials, including mulch/compost.
- **Franchise Agreements.** Expand the high diversion franchise agreement with waste management partner(s) related to recycling, organics and C&D waste to further support Alameda in reaching its zero waste goal.

## OBJECTIVE 5:

**Make Alameda a resilient community that will be able to adapt to the impacts of climate change.**

### POLICIES:

#### CC-20

**Sea Level Rise.** Develop neighborhood shoreline and embankment plan strategies and storm water management improvement plans to address increasing sea level rise and storm events.

#### **Actions:**

- **Funding Strategies.** *Develop funding strategies for implementing neighborhood sea level rise protection.*
- **Adaptive Management Plan.** *Implement and as necessary, update the Climate Action and Resiliency Plan.*
- **Resilient New Development.** *Require new development to incorporate design features to mitigate 36 inches of sea level rise in the initial design and funding mechanisms to pay for later adaptation improvements to address future increases in sea levels above 36 inches.*
- **Elevating out of Flood Zones or Flood Proofing.** *Require elevating land and structures out of flood zones and/or flood-proofing in higher-risk areas when property is improved.*



**CC-21**

**Critical Public Assets.** Implement improvements to move or protect critical public assets threatened by sea-level rise or rising groundwater.

**Actions:**

- **Storm Water.** *Identify funding sources to improve the public stormwater infrastructure and ensure it meets current needs and is prepared for the effects of sea level rise and climate change.*
- **Transportation.** *Work with Caltrans and Alameda County Transportation Commission to identify funding to adapt the regional and local roadways in Alameda.*

**CC-22**

**Rising Groundwater.** Consider and prepare for the impacts of rising groundwater levels on private and public property.

**Actions:**

- **Infrastructure and Access.** *Develop plans and strategies to protect and/or relocate critical infrastructure and maintain access to impacted property.*
- **Annual Review.** *Annually monitor groundwater levels and progress on specific strategies to mitigate impacts.*

**CC-23**

**Water Retention.** Develop and maintain large and small areas to retain water within the City that may serve as areas of “retreat” during large storm events.

**Actions:**

- **Alameda Point Wildlife Refuge.** *Support use and development of the 550 acre former US Navy airfields and runways as a wildlife refuge and area of wetlands that may serve as flood water retention area during major storm events.*
- **Corica Park.** *Support the use and development of the 330 acre golf complex as a recreation area and lagoon system that currently serve as a flood water retention areas during major storm events.*
- **New Development:** *Require new development to incorporate low impact development design strategies and stormwater management systems, such as engineered landscapes, vegetated areas, or cisterns that mimic nature by soaking up and storing water, to manage and protect the quantity and quality of stormwater runoff.*
- **Public Participation:** *Encourage the public’s use of small-scale Green Infrastructure design standards, guidance, and typical details, as presented in the City’s Green Infrastructure Plan, for residential and garden projects.*

**CC-24**

**Heat and Wildfire Smoke Emergencies.** Create a network of smoke and heat emergency shelters throughout Alameda.

**Actions:**

- **Partnerships.** *Identify and partner with large HVAC equipped building owners to establish a network of facilities that are able to open to the public during heat waves and smoke events during the day.*
- **City Facilities.** *Evaluate options to upgrade or otherwise retrofit HVAC systems and buildings.*

## OBJECTIVE 6:

### Conserve and enhance Alameda's natural resources, water quality, and wildlife habitat.

#### POLICIES:

##### CC-25

**Habitat and Biological Resource Protection and Restoration.** Protect and restore natural habitat in support of biodiversity and protect sensitive biological resources and to prepare for climate change.

#### **Actions:**

- **Wetlands and Marshlands.** *Protect wetlands, seasonal and permanent marshland, riparian habitat and vernal pools from direct and indirect impacts of new and existing development and in land planning and community design.*
- **De-Pave Park and New Wetlands.** *Identify areas, such as the plan for De-Pave Park at Alameda Point to increase the amount of wetlands and habitat areas in Alameda.*
- **Submerged Lands.** *Protect aquatic habitat areas, including sensitive submerged tidelands areas, mudflats, and eelgrass beds for nurseries and spawning grounds for fish and other aquatic species.*
- **Permanent Protections.** *Preserve habitat in perpetuity through deed restrictions, conservation easement restrictions, or similar legally enforceable instruments.*
- **Operation and Maintenance.** *Ensure a secure, ongoing funding source for operation and maintenance.*
- **Eelgrass.** *Plant eelgrass in shallow waters around Alameda to provide habitat and help absorb wave energy.*
- **Information.** *Work with local recreation groups to disseminate information regarding the sensitivity of open space habitat areas and the impacts of motorized craft.*
- **Signs.** *Post and maintain signs warning boaters and users of motorized craft as they approach wildlife areas.*
- **Jet Skis.** *Prohibit the use of jet skis and hovercraft within the Elsie D. Roemer Bird Sanctuary, San Leandro Channel, and San Leandro Bay.*

##### CC-26

**Alameda Point Wildlife Refuge.** Work with the US Department of Veterans Affairs, East Bay Park District (EPRPD), and US Fish and Wildlife to maintain and improve the 550 acre Alameda Point Wildlife Refuge and seasonal Least Tern Colony.

#### **Action:**

- **Refuge Floodplains.** *Increase the area of naturally inundated floodplains and the frequency of inundated floodplain habitat. Restore some natural flooding processes and widen riparian vegetation, where feasible, at the Refuge.*

##### CC-27

**Crown Memorial State Beach.** Work with the EPRPD and other appropriate agencies to improve, protect, and preserve Crown Memorial State Beach and the Alameda Beach as habitat as well as recreational resources.

**CC-28**

**Lagoons.** Continue to preserve and maintain all lagoons as natural habitat as well as an integral component of the City's green infrastructure network and flood control system.

**CC-29**

**Green Infrastructure.** Protect San Francisco Bay, San Leandro Bay, and the Alameda Oakland Estuary by promoting, requiring, and constructing green infrastructure that is feasible and improves stormwater runoff quality, minimizes stormwater impacts on stormwater infrastructure, improves flood management, and increases groundwater recharge.

**Actions:**

- **Green Streets and Infrastructure Plan.** *Implement Alameda's Green Infrastructure Plan, the purpose of which is to guide the identification, implementation, tracking, and reporting of green infrastructure projects within the City.*
- **Capital Improvement Program (CIP):** *Include the consideration of green infrastructure design elements in the initial design stages of all public CIP project planning efforts. Implement Green Stormwater Infrastructure (GI) design standards, guidance, and typical details, as presented in the City's GI Plan, as feasible and appropriate, for public CIPs, Complete Streets street design processes, and the infrastructure management of stormwater.*
- **Open Space.** *Utilize and maintain the lagoon systems, public open spaces, wildlife habitat, and other natural areas as integral components of the citywide green infrastructure network.*
- **Storm Water Runoff.** *Reduce runoff into the Bay with the use of pervious materials, retention basins, bioswales and other methods.*
- **Alameda Countywide Clean Water Program.** *Continue to remain an active member agency of the Alameda Countywide Clean Water Program (ACCWP) working to control the discharge of pollutants from urban runoff to ensure continued improvement of San Francisco Bay water quality, water quality monitoring, public education, pollution prevention oversight, regional coordination, and the development of technical guidance and pollution prevention tools.*
- **Municipal Stormwater Permit:** *Continue to comply with the requirements of the Municipal Regional Stormwater NPDES Permit (MRP), issued to the City by the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), to guide the City's efforts to prevent pollutant discharges and to protect Bay water quality.*

**CC-30**

**Clean Marinas.** Protect water quality and biological resources by ensuring marina operating standards prevent degradation of water quality and maintain full compliance with environmental regulations.

**Action:**

- *The Clean Marinas Program requires new marinas to participate in the Clean Marinas Program, which provides a certification program and annual monitoring to ensure the protection of habitat and water quality in proximity to working marinas and boatyards.*

**CC-31**

**New Development.** Preserve on-site natural elements in new development, when feasible, that contribute to the community's native plant and wildlife species value and to its aesthetic character.

**Actions:**

- **Preservation of Wetlands.** Require development to preserve existing natural wetland areas and associated transitional riparian and upland buffers.
- **Buffers.** Preserve and expand buffers between wildlife habitat and developed areas to ensure the continued viability of the natural habitat and wetlands area, which may include provisions for off-site needs such as upland nesting habitat.
- **Biological Assessments.** Require a biological assessment of any proposed project site where species or the habitat of species defined as sensitive or special status by the California Department of Fish and Game or the U.S. Fish and Wildlife Service might be present.
- **Mitigation.** Require development to mitigate any unavoidable losses of wetlands or habitat.
- **Water Quality.** Require new development to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, green roofs, best management practices and Low Impact Development and hydromodification strategies.



The Clean Marinas Program ensures protection of habitat and water quality in proximity to working marinas and boatyards.

(Photo by Alain McLaughlin)

CHAPTER

# 06

## **OPEN SPACE, RECREATION + PARKS ELEMENT**

A well designed and maintained interconnected network of neighborhood and community parks, waterfront open spaces, recreational facilities and natural habitat areas are essential to supporting the health and wellbeing of the community, sustaining and preserving the quality of the natural environment, sequestering greenhouse gases, and withstanding the impacts of climate change.

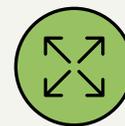


**THE GOALS OF THE OPEN SPACE, RECREATION + PARKS ELEMENT ARE TO:**



**MAINTAIN AND ENHANCE**

Maintain, enhance and improve the existing system of parks, open spaces, refuges, trails, and recreational facilities.



**EXPAND AND IMPROVE**

Expand and improve the system to address the evolving needs of a growing community, serve all residents and neighborhoods equitably throughout the City, and prepare for the impacts of a changing climate.

## INTRODUCTION TO THE OPEN SPACE, RECREATION + PARKS ELEMENT

A growing population, evolving community needs and recreational preferences, and a changing climate are placing new demands and financial challenges on the community's network of open spaces, parks and recreational facilities.

Alameda's island setting provides a variety of unique open space, recreation and park and natural habitat resources for its residents and visitors. The San Francisco Bay, Oakland Estuary, San Leandro Bay, wetlands, marshes, tidal flats, beaches, public boat launches, small boat marinas, neighborhood and community parks, and recreational facilities provide an interconnected network of open space, parks, and recreation facilities that serve all Alameda residents, business employees, visitors, and local wildlife.

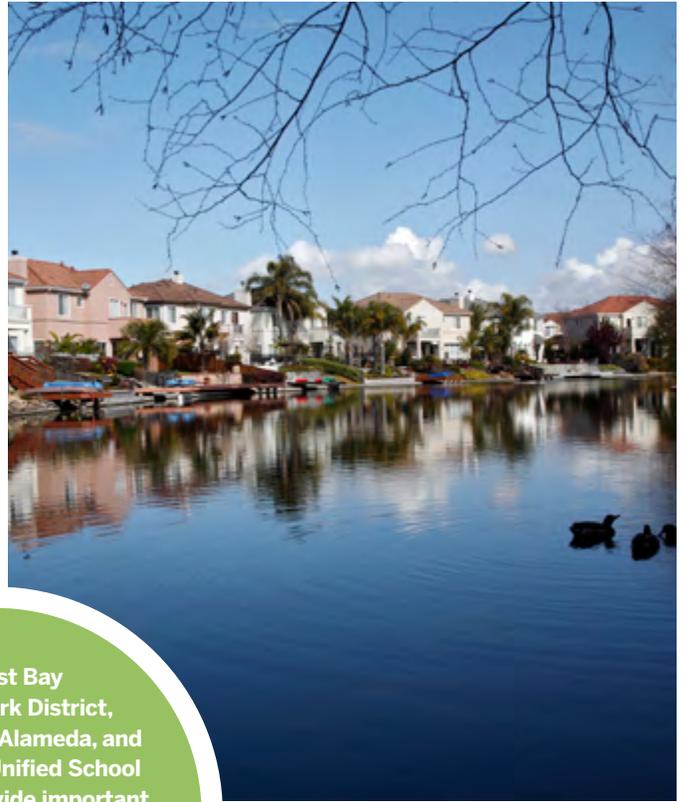
As Alameda prepares and plans for the future, Alameda's network of parks, open spaces and recreational facilities must also be considered. As the population of the region grows, so will the population of Alameda. A growing population will place additional demands on the open space and park network. The network will need to be expanded to accommodate the growing and evolving recreational needs of the community to maintain Alameda's current ratio of park land to population. As the population and demands on the network grow, so too will the impacts of climate change. Rising groundwater levels and sea levels will threaten shoreline parks and trails, but also the infrastructure

and buildings that support the use of inland park areas and facilities.

Planning for the future of the community's open space, parks and recreation network must include planning for the financial resources needed to preserve, maintain and expand the size and diversity of that network. The City's recreation and parks program maintains more building floor area in support of its public programs than any other department or function in the City of Alameda. Unfortunately, many of these buildings are old, are suffering from the effects of deferred maintenance, and are not adequately accommodating access for residents with disabilities. Expanding and modifying the network of parks and open spaces to address the needs of a changing population and climate will require additional financial resources and expanded partnerships with other public agencies, the private sector, and the Alameda community. Providing adequate maintenance for the growing network and the buildings and infrastructure that support those lands and facilities will also require increased expenditures of public resources. The needed funding to maintain Alameda's ratio of open space lands to population will require a wide variety of funding sources, including state and federal grants, local General Fund allocations, development impact fees, and corporate funding.

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**A growing population, evolving community needs and recreational preferences, and a changing climate are all placing increased demand on the network of recreation and parks facilities.**



The East Bay Regional Park District, the College of Alameda, and the Alameda Unified School District all provide important open space, and sports and recreational facilities that complement and support the City's open space and parks network.



<b>TABLE A: CITY OF ALAMEDA OWNED AND OPERATED OPEN SPACE, PARK AND RECREATIONAL PARK FACILITIES</b>	
<b>Community Parks</b>	<b>Approximate Size in Acres</b>
Jean Sweeney Open Space Park	10.64
Krusi Park	7.46
Leydecker Park	5.88
Lincoln Park	7.8
Main Street Linear Park	11
Neptune Park	3.08
Shoreline Park	31.83
Washington Park	14.71
Washington Dog Park	5.7
<b>TOTAL COMMUNITY PARK ACREAGE</b>	<b>98.1</b>
<b>Neighborhood Parks</b>	<b>Approximate Size in Acres</b>
Bayport Park	4.25
Enterprise Park	13.4
Franklin Park	2.98
Godfrey Park	5.45
Jackson Park	2.27
Lexington Fields	6.96
Littlejohn Park	3.45
Longfellow Park	1.14
Main Street Dog Park	1.3
Marina Cove Waterfront Park	3.2
Marina Village Park	4.5
McKinley Park	1.22
Portola Triangle	2.15
Rittler Park	4.81
Tillman Park	4
Towata Park	1.55
Woodstock Park	3.96
<b>TOTAL NEIGHBORHOOD PARK ACREAGE</b>	<b>66.59</b>
<b>Regional Parks</b>	<b>Approximate Size in Acres</b>
Alameda Point City Skate Park + Multipurpose Field	5.35
Bill Osborne Model Airplane Field	1.3
Corica Park and Golf Complex	332
Estuary Park Athletic Fields	4.26
Harrington Soccer Field	2.02
Grand Street Boat Launch Facility	n/a
Encinal Boat Ramp Launch Facility	n/a
<b>TOTAL RECREATION ACREAGE</b>	<b>344.93</b>
<b>TOTAL EXISTING</b>	<b>509.62</b>



## OBJECTIVE 1:

**Ensure that existing parks and community and recreation facilities and programs are well operated and maintained.**

### POLICIES:

#### OS-1:

**Parks and Open Space Funding.** Secure adequate and reliable funding for the development, rehabilitation, programming and maintenance of parks, community and recreation facilities, trails, greenways, and open space areas.

#### **Actions:**

- *Provide an annual opportunity for the public to review the park maintenance budget and comment on upcoming priorities and plans to ensure compliance between the biannual Capital Improvement Program and the General Plan.*
- *Monitor parks and open space and recreational facilities on a regular basis and identify those sites that require repair, renovation and/or improvements. Assign high priority to maintenance and renovation of existing parks and facilities.*
- *Consider establishing neighborhood park assessment districts to fund neighborhood park maintenance and improvements.*
- *Annually consider restoring and preserving natural areas for habitat protection, carbon sequestration, climate adaptation and passive recreation use such as walking, hiking, and nature study.*
- *Annually consider developing areas for recreation use, active transportation and public access along the islands' shorelines and interior that will help Alameda meet its time-sensitive greenhouse gas reduction goals and protect against climate change impacts such as increased shoreline flooding. Improve parks and related open space facilities to ensure safety for users and adjacent properties.*

#### OS-2

**Partnerships.** Pursue and develop partnerships with federal, regional, and local non-profits, agencies, organizations, and districts to reduce the costs borne by the City of Alameda for the acquisition, construction, operations, and or maintenance of parks, open space, facilities and programs.

#### **Actions:**

- **Alameda Unified School District (AUSD)**  
**Partnerships:** *Continue to support and collaborate with the AUSD to ensure that school and park open space joint uses are optimized.*
- **East Bay Regional Park District (EBRPD)**  
**Partnerships:** *Continue to support and collaborate with the EBRPD to ensure and protect the benefits of regional parks in Alameda. Collaborate with the EBRPD to develop, operate and maintain facilities and programs at regional parks including Alameda Point Northwest Regional Shoreline Park, Encinal Beach, Crown Memorial State Beach and Alameda Beach, portions of the Bay Trail, and the Elsie D. Roemer Bird Sanctuary.*
- **Federal Partnerships with the U.S. Veterans Administration and U.S Fish and Wildlife:** *Continue to develop and sustain partnerships with the Veterans Administration and the U.S. Department of Fish and Wildlife to ensure the protection and maintenance of the Wildlife Refuge at Alameda Point.*
- **Private Sector Partnerships:** *Continue to develop public-private partnerships for the development, maintenance and operation of publicly accessible open space and recreational facilities, such as the Corica Park Golf Course Complex, Alameda Point Sports Complex, and the development of new parks at Alameda Point and along the Northern Waterfront.*

**OS-3**

**Revenue Generating Opportunities.** Pursue and develop revenue generating approaches, including cost recovery opportunities, concessions, design flexibility, independent use, and opportunities for rentals.

**Actions:**

- Consider long term leases for complementary revenue generating uses, such as concessions or other uses available to the public.
- Consider corporate sponsorship and/or naming rights agreements.

**OS-4**

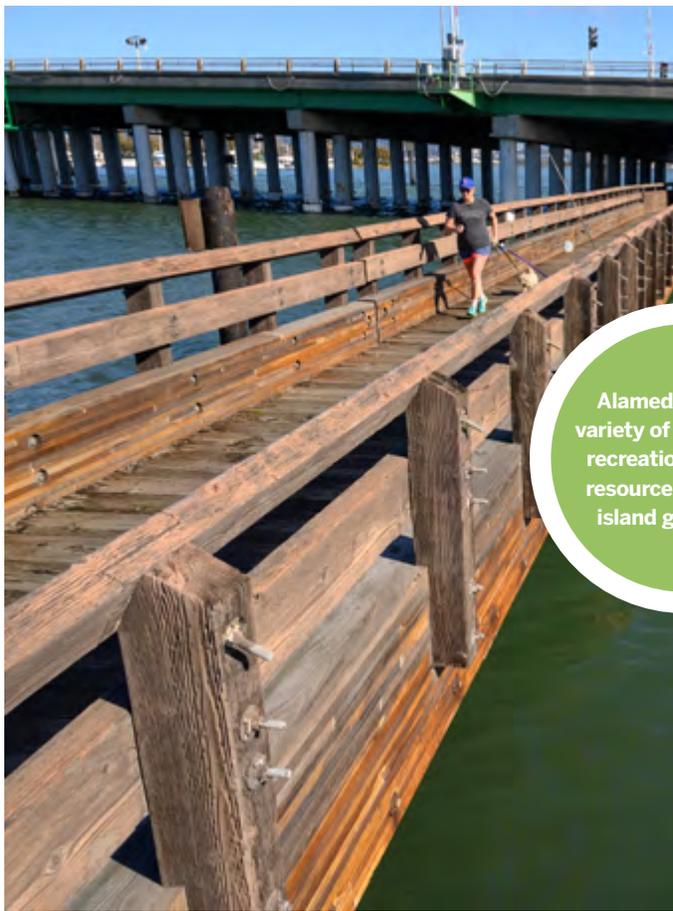
**Grant Funding Opportunities.** Pursue park and open space grant opportunities and cooperative agreements with local, regional, state and federal agencies for expansion of the City’s park and open space system.

**OS-5**

**Accessibility For All.** Continue to upgrade parks, trails, and community facilities to ensure accessibility and inclusivity for all residents.

**OS-6**

**Efficient Operations.** Reduce operational duplication and provide services, programs, and facilities as efficiently as possible.



Alameda enjoys a variety of open space, recreation and park resources due to its island geography.

(Photo by Alain McLaughlin)


**SPOTLIGHT**
**MONARCH BUTTERFLY**

These orange and black butterflies make massive migrations from August-October, flying thousands of miles south to winter along the California coast and in central Mexico. Every fall, the monarch flies to the same overwintering sites and frequently to the same trees. At wintering sites, these butterflies roost in trees and form huge aggregations that may have thousands to millions of individuals. In California, these sites are primarily eucalyptus or Monterey pine groves and the butterfly winters at such sites from about October through February. Autumnal roost sites generally host smaller populations of the monarch, and may be used for only a few weeks or a couple of months in the fall and early winter as the butterfly passes through an area. Alameda Point, Estuary Park, and the Chuck Corica Golf Complex on Bay Farm Island have all served as autumnal roost sites for these unique butterflies on their long annual travels. Given the subspecies of the Monarch Butterfly that calls North America home, *Danaus plexippus plexippus*, is imperiled, preserving winter habitats along the California coast is a conservation priority.

**OBJECTIVE 2:**

**Ensure that every resident is within a safe and convenient 10-minute walk or 6-minute bike ride of an interconnected citywide network of parks, open spaces, trails, and recreational facilities by 2040.**

**POLICIES****OS-7**

**An Interconnected Network.** Create and maintain a comprehensive, seamless, interconnected system of parks, open space, commercial recreation, trails, and urban forest that frames and complements the City's waterfronts, neighborhoods, and commercial areas.

**Actions:**

- *Create a network of safe and convenient pedestrian and bicycle trails connecting all public open spaces, parks, and recreational facilities to improve access to parks for all residents and reduce greenhouse gas emissions from auto use.*
- *Where separated trails are not feasible, improve on-street connections to ensure pedestrian and bicycle safety and convenience.*
- *Consider public and privately owned sites that could be made available for public use, such as community gardens and sports fields.*
- *Work with neighborhoods in the design of parks and recreational facilities to meet the unique needs and interests of residents.*

**OS-8**

**Waterfront Access.** Ensure safe and convenient access to the Alameda waterfront from all Alameda neighborhoods.

**Actions:**

- *Expand the City's trail system to provide additional north-south trails and safe on-street connections to link neighborhoods to the closest waterfront shoreline facilities.*
- *Preserve view corridors to the waterfront along public streets, pathways, and trails.*
- *Prohibit private encroachments on public property and ensure that the use of public property does not create significant negative impacts to adjacent property owners.*



- Work with the Alameda Unified School District in obtaining shoreline access at Paden School and Encinal High School.
- Add access to the water with public boat launches for non-motorized craft at strategic points around the island.
- Require that new developments along or adjacent to the waterfront provide continuous shoreline access on to serve the general public, residents, employees and visitors.


**SPOTLIGHT**
**SF BAY WATER TRAIL**

The SF Bay Water Trail is a regional program that encourages non-motorized small boaters to safely enjoy the San Francisco Bay. Just as the SF Bay Trail connects people to the bay by land, this project promotes recreational access to the water itself.

While there are a couple trailheads in and around Alameda, the Encinal Beach and Boat Launch is Alameda's signature launch site for the Water Trail. This site, located between rich wildlife habitat areas, offers a unique way to see the wide variety of birds and other Bay wildlife that spend time near the shore.

**OS-9**

**San Francisco Bay Trail.** Complete a continuous shoreline Bay Trail along the entire perimeter of the City of Alameda. See *Figure 6.3*.

**Actions:**

- *Support a variety of recreation activities including walking, running, bicycling, fishing, and vista points along the Bay Trail.*
- *Create a sequence of open spaces and activity areas that occur at significant points along the waterfront and offer recreational opportunities and enhance other uses along the waterfront.*
- *Ensure that the public access path along the waterfront includes a separated path for bicyclists or is wide enough to minimize conflicts between pedestrians and bicyclists.*
- *Create pedestrian and bicycle pathways and visual corridors along the waterfront and link the waterfront to inland neighborhoods.*
- *Consider current sea level rise projections when planning trail expansion and maintenance and design trail upgrades for long-term resilience.*

**OS-10**

**Cross Alameda Trail.** Complete the Cross Alameda Trail for pedestrians and bicyclists from the Alameda Point park at Seaplane Lagoon to the Miller Sweeney Bridge to support access to the citywide network of parks. See *Figure 6.3*.

**Action:**

- *Work with the County of Alameda and the City of Oakland to provide safe and convenient pedestrian and bicycle facilities from the Cross Alameda Trail across the Miller Sweeney Bridge to the Bay Trail in Oakland.*

**SPOTLIGHT**

**THE SAN FRANCISCO BAY TRAIL**

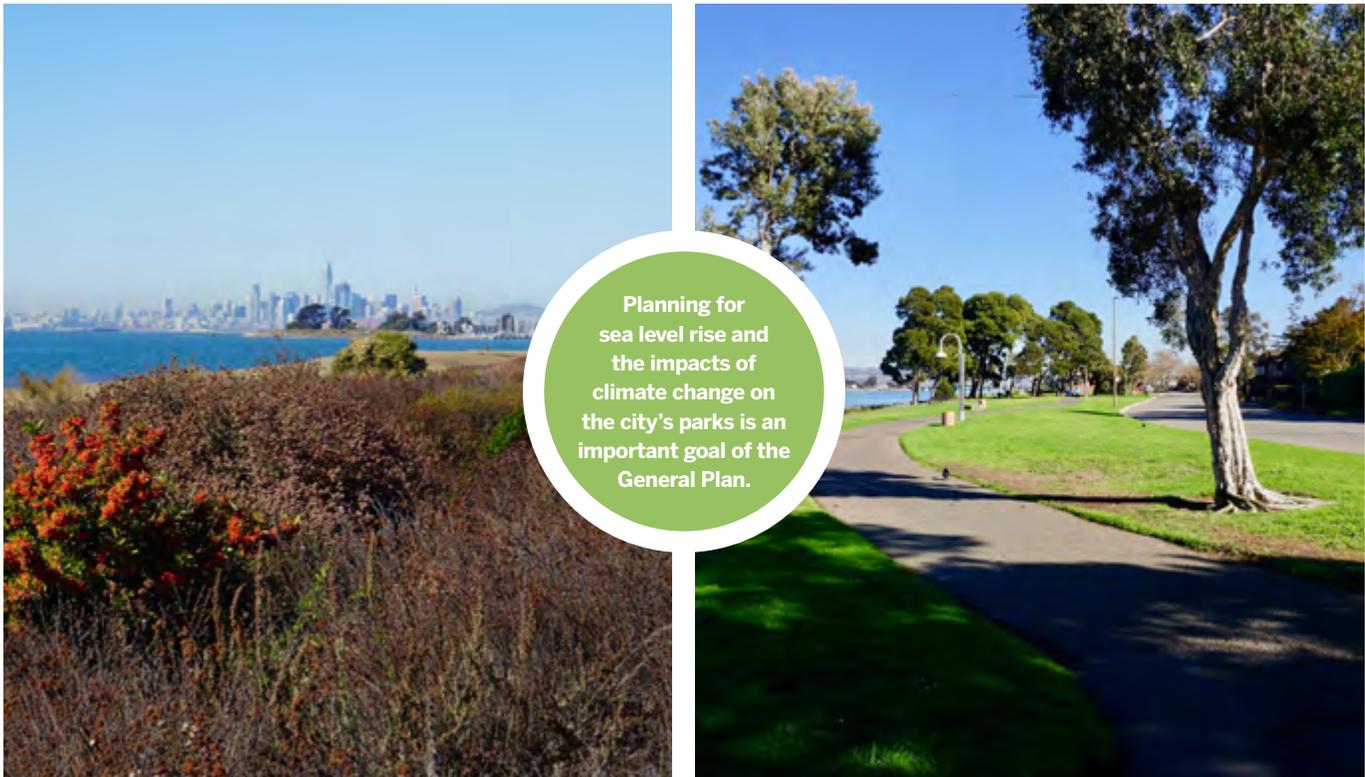
One of the most ambitious trail networks in the United States, the San Francisco Bay Trail follows much of the shoreline of the San Francisco Bay. It is planned to provide over 500 miles of trails connecting residents of 77 cities with opportunities for active and passive recreation while enjoying fresher air and pleasant views that comes with being close to the Bay. With the addition of ferry terminals, the Bay Trail will become a more important commuting corridor, especially in cities like Alameda.

**CROSS ALAMEDA TRAIL**

The Cross Alameda Trail, when completed, will provide a safe bicycle and pedestrian connection from Alameda Point to the Fruitvale Bridge. The rails-to-trails movement has become a massive success around the United States, with Atlanta's BeltLine as the largest example of how linear parks can completely transform a city's central neighborhoods. These linear parks have an advantage over their shoreline cousins in that they are surrounded by destinations, and ideally connections, on all sides. The crown jewel of the

Cross Alameda trail, Jean Sweeney Open Space Park, is a rails to trails project that turned an old rail yard into a park that provides key walking and biking connections between Constitution Avenue and Sherman Street. With the rise of electric-assisted, shared micro-mobility options, the Cross Alameda trail could lead to a major reduction in car trips and greenhouse gas emissions and improved access to Alameda's parks. It also provides key connections to major transportation hubs for the ferry and ACTransit.





### OBJECTIVE 3:

**Expand and improve the system of parks, open spaces and recreational facilities in Alameda to accommodate population growth, provide for evolving community recreational needs, prepare for climate change, and protect the natural environment.**

#### POLICIES:

##### OS-12

**Climate Adaptation.** Adapt the existing park and open space network to rising sea levels, more severe storm events and wave energy, and rising ground water.

##### **Actions:**

- *Where ever possible, utilize natural, green or 'soft infrastructure' like sand dunes and wetlands over 'hard infrastructure' like concrete seawalls and levees.*
- *Recognize and utilize the open space network as an expanding asset to sequester greenhouse gases and increase citywide resiliency.*

##### OS-13

**Wildlife Habitat.** Preserve, protect and expand wildlife habitat areas, open space corridors, and ecosystems as essential pieces of the overall network and an important contributor to citywide resiliency to climate change.

##### OS-14

**Jean Sweeney Open Space Park.** Complete the last two phases of the 25 acre Jean Sweeney Open Space Park to include a community garden, demonstration gardens, walking trails, a bicycle skills loop, outdoor classroom, picnic areas, and large areas of open space and trees.

**OS-15**

**Estuary Park.** Complete the 8-acre Estuary Park to provide recreational facilities for the neighborhoods on the former Naval Air Station property in western Alameda to include passive recreational space, picnic areas, and basketball courts.

**OS-16**

**City Aquatic Center.** Partner with the Alameda Unified School District to develop a City Aquatic Center to serve the community's swimming needs and District swim programs.

**OS-17**

**Alameda Point Northwest Shoreline Park and Bay Trail Extension.** Partner with the East Bay Regional Park District to develop a 158 acre waterfront, public park and Bay Trail extension on the Northwest Territories.

**OS-18**

**Alameda Point Wildlife Refuge and Bay Trail Extension.** Partner with the Bureau of Veterans Affairs and the Department of Fish and Wildlife to create a seasonal bay trail along the shoreline of the Wildlife Refuge.

**Action:**

- *Support creation of related educational facilities and programs.*
- *Maintain access for ships, ferries, and water-taxis within the deep-water channel to the Alameda Point piers and the Seaplane Lagoon through the southern bay waters of the Wildlife Refuge.*
- *Maintain the breakwater gap and Island Breakwater for wildlife habitat.*
- *Support actions by the federal government that improve and manage wetlands, increase carbon sequestration, and support long-term climate resiliency for Alameda.*


**SPOTLIGHT**
**WILDLIFE HABITAT AREAS OF INTEREST**

The San Francisco Bay is the largest estuary along California's coastline, and the estuarine environment of marshlands, mudflats, salt production lands, and open water supports close to 100 species of fish. As an essential portion of the Pacific Flyway, a bird migration route which spans from Canada to Mexico, the Bay supports countless migratory as well as year-round bird species.

**Alameda Point Open Space Wildlife Refuge:** the endangered California Least Tern has its nesting sites in the Refuge. In spite of its restricted access, citizen scientists have identified 96 different species of birds from 2010 to 2019 in the Reserve (source: eBird).

**Elsie Roemer Bird Sanctuary** has had sightings of 165 different species of birds from 2010-2019.

**Robert W. Crown State Marine Conservation Area** has had sightings of 189 species of birds (2010-2019), while in the last year (2019) Alameda County as a whole had 298 species of birds identified in its borders.

**Bay Farm Island Shoreline** has had documented sightings of 126 species of birds (from 2010-2019), with its habitat value higher thanks to its proximity to Arrowhead Marsh (214 species) and other rich habitat areas like Peet's Pond (96 species).

**The egret rookery on Bay Farm Island** (on the lagoon by the Peter Pan School) has had sightings of 53 species of birds from 2010-2019.

**Seaplane Lagoon** has had sightings of 89 different bird species from 2010-2019.

**Wetlands:** Two separate beds of eelgrass provide distinctive habitat for marine organisms living in the waters off of Alameda. The bed which is southwest of Bay Farm Island is believed to be the richest grass bed left in San Francisco Bay, with respect to the presence of small animals. The grass is long and wide, grows quickly, and dozens of common species are known to be associated with this bed of eelgrass. The endangered Least Terns are known to forage on herring living in and around this eelgrass. The second bed of eelgrass off of Crab Cove, although shorter and growing in shallower water, probably also provides a nursery for fish species which the Least Terns nesting at Alameda Point (GPA 01-01) forage.

Continuing to upgrade parks, trails, and community facilities to ensure inclusivity for all residents and visitors is a primary goal of the General Plan.



*(Photo by Alain McLaughlin)*

**OS-19**

**De-Pave Park on the Seaplane Lagoon and Bay Trail Extension.** Develop the 22 acre western shore of the Seaplane Lagoon as a passive, Nature Park with upland and floating wetlands, educational and interpretive programs, picnic areas, camping opportunities, and nature trails.

**OS-20**

**Seaplane Lagoon Park and Bay Trail Extension.** Develop the northern and eastern shore of the Seaplane Lagoon as an urban waterfront with access to the Ferry Terminal, the Bay Trail, waterfront dining and cafes, passive recreation space, an outdoor amphitheater, public boat launches, and non-motorized watercraft rental and lessons.

**OS-21**

**Regional Sports Park.** Develop a 55-acre regional sports complex for active recreational uses and team sports, including baseball and softball diamonds, multi-purpose rectangular fields, expanded skate park, BMX park, tennis and pickle ball courts.

**OS-22**

**Waterfront Developments.** Partner with private property owners to develop publically accessible waterfront open space and Bay Trail facilities in new waterfront development.

**Action:**

- Partner with private property owners and businesses to develop publically accessible waterfront parks and trails at:
  - » Alameda Landing Waterfront
  - » Ballena Isle
  - » Marina Village Shipways property
  - » Former Windriver property on the Alaska Basin
  - » Encinal Terminals and the Alaska Basin
  - » Alameda Marina
  - » Other future waterfront development

 **SPOTLIGHT**

**SPECIAL STATUS WILDLIFE SPECIES**

A number of species known to occur in and around Alameda are protected pursuant to federal and/or State of California endangered species laws, or have been designated Species of Special Concern by the California Department of Fish and Wildlife. Special status wildlife species that have been observed or have a moderate to high potential to occur in and around Alameda, include:



**MARINE SPECIES:**

- 
- |  |  |
|--|--|
| • Green sturgeon                             | • Central Valley spring-run Chinook salmon         |
| • Central California coast coho salmon       | • Longfin smelt                                    |
| • Central California coastal steelhead       | • Pacific herring                                  |
| • Central Valley steelhead                   | • Central Valley fall/late fall-run Chinook salmon |
| • Sacramento River winter-run Chinook salmon | • Pacific harbor seal                              |
|  | • California sea lion                              |



**BIRDS, BUTTERFLIES, AND BATS:**

- 
- |                            |                            |
|----------------------------|----------------------------|
| • California least tern    | • Red-shouldered hawk      |
| • Western snowy plover     | • Northern harrier         |
| • White-tailed kite        | • Snowy egret              |
| • Peregrine falcon         | • California horned lark   |
| • California brown pelican | • American kestrel         |
| • Monarch butterfly        | • Caspian tern             |
| • Cooper's hawk            | • Loggerhead shrike        |
| • Great egret              | • California gull          |
| • Great blue heron         | • Alameda song sparrow     |
| • Burrowing owl            | • Osprey                   |
| • Great horned owl         | • Double-crested cormorant |
| • Red-tailed hawk          | • Townsend's big-eared bat |

CHAPTER

# 07

## **SAFETY + NOISE ELEMENT**

**State law (Government Code Sections 65300-65303.4) requires that the General Plan include policies to protect the community from both natural and human-induced disasters and policies that protect the community from harmful noise.**

The Alameda Safety and Noise Element identifies the policies and strategies necessary to reduce the risk of death, injuries, property damage, environmental degradation, economic and social dislocation, and excessive and harmful noise from the natural and man-made hazards and noise sources in the City of Alameda.



**THE GOALS OF THE SAFETY + NOISE ELEMENT ARE TO:**



**PROTECT**

Protect the health, safety and general welfare of City of Alameda residents, workers and visitors.



**REDUCE**

Reduce exposure to hazards.



**REDUCE**

Reduce damage to public and private property and the environment from natural disasters and hazards.



**MINIMIZE**

Minimize disruption of essential public services, facilities, and infrastructure as the result of natural disaster.



**FACILITATE**

Facilitate timely and complete recovery from a natural disaster.



**INCREASE**

Increase public understanding and awareness of hazard and hazard mitigation.



**PROMOTE**

Promote participation in mitigation and resiliency preparation by Alameda residents, workers, and partner agencies.


**SPOTLIGHT**
**THE SAFETY + NOISE ELEMENT IS INFORMED BY:**

- The City of Alameda Local Hazard Mitigation Plan
- City of Alameda Emergency Operations Plan
- Association of Bay Area Government's Resiliency Program
- Adapting to Rising Tides, Transportation Vulnerability and Risk Assessment Pilot Project (prepared by Metropolitan Transportation Commission, California Department of Transportation and Bay Conservation and Development Commission)
- Adapting to Rising Tides: Alameda County Shoreline Vulnerability Assessment (prepared by the Alameda County Flood Control and Water Conservation District and Bay Conservation and Development Commission)
- California Governor's Office of Emergency Services
- United States Geological Survey Earthquake Preparedness
- The National Oceanic and Atmospheric Administration: Weather-Ready Nation

## INTRODUCTION TO SAFETY + NOISE ELEMENT

The City of Alameda is located in a region that is susceptible to a variety of natural disasters. Close proximity to major regional earthquake faults leads to significant risk from seismic and geologic hazards. Earthquake ground shaking and soil settlement can lead to infrastructure breaks that can lead to fire hazards. Relatively flat topography and proximity to the San Francisco Bay poses flooding hazards for Alameda. Severe storm events currently cause flooding in low lying areas in Alameda. Climate change and sea level rise will increase the severity of these hazards in the future. In addition, man-made risks from hazardous materials, airport operations and noise will continue to pose risks for Alameda residents.

### 8.1 EMERGENCY MANAGEMENT

The City of Alameda aspires towards resiliency through the continual implementation of mitigation actions that reduce the potential for loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters. A resilient City is reliant on functional infrastructure systems, buildings, and programs to keep key services operational, to help damaged areas rebuild, to keep undamaged homes habitable, and to keep businesses open during recovery.

Disasters are rarely limited to jurisdictional boundaries and impacts from disasters often affect multiple agencies within a region. The Federal Disaster Mitigation Act of 2000 encourages State, regional and local agencies to work together to mitigate hazards. The Emergency Operations Management program in Alameda is intended to coordinate response to potential disasters such as hazardous materials releases, earthquakes, fire, or aircraft crash.

## OBJECTIVE 1

**Minimize risks of loss of life, personal injury, property damage and environmental degradation by developing, monitoring and updating comprehensive and collaborative emergency preparedness and recovery programs.**

### POLICIES:

#### SN-1

Maintain emergency management and disaster preparedness as a top City priority.

#### **Actions:**

- *Maintain and update the recommendations and standards established in the City of Alameda's Emergency Management and Operations Plan as the guide for disaster planning in Alameda.*
- *Maintain training programs to ensure that City personnel are sufficiently prepared to respond to an emergency and staff the Emergency Operations Center.*
- *Identify and publicize essential emergency facilities in the City, including shelters, evacuation routes, and emergency operation staging areas, and take the necessary actions to ensure that they will remain operational following a disaster.*
- *Conduct periodic emergency response exercises to test the effectiveness of local preparedness response, recovery, and mitigation procedures.*

#### SN-2

Maintain a prepared Emergency Operations Center to support City responses to a major emergency event.

#### SN-3

Continue to develop and maintain General Mutual Aid Agreements. Coordinate local emergency preparedness efforts with the Federal Emergency Management Agency (FEMA), Coast Guard, United States Maritime Administration Ready Reserve Fleet (MARAD), the San Francisco Bay Area Water Emergency Transportation Authority (WETA), the Port of Oakland, adjacent jurisdictions, the Alameda Unified School District, the various private schools in Alameda, local hospitals, senior or disabled care housing facilities, and other local and regional police, fire and public health agencies in preparation for natural and man-made disasters, and ensure that the City's disaster response communication technologies are compatible with other agency communication technologies.



## SPOTLIGHT

### WHAT IS VISION ZERO?

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all. First implemented in Sweden in the 1990s, Vision Zero has proved successful across Europe — and it is now gaining momentum in major American cities. The City of Alameda is one of those cities that has committed to Vision Zero.

#### **The Problem**

Yearly, more than 40,000 people — the population of a small city — are needlessly killed on American streets and thousands more are injured. For too long, traffic deaths and severe injuries have been considered inevitable side effects of modern life. While often referred to as "accidents," the reality is that they are preventable tragedies by taking a proactive approach that prioritizes traffic safety as a public health issue.

#### **A New Vision for Safety**

Vision Zero starts with the belief that everyone has the right to move safely in their communities, and that system designers and policy makers share the responsibility to ensure safe systems.

### TRADITIONAL

- ✦ Traffic deaths are **inevitable**
- ✦ **Perfect** human behavior
- ✦ **Prevent** collisions
- ✦ Individual **responsibility**
- ✦ **Saving lives is expensive**

VS

### VISION ZERO

- ✦ Traffic deaths are **preventable**
- ✦ **Integrate** human failing in approach
- ✦ **Prevent** fatal + severe crashes
- ✦ Systems **approach**
- ✦ **Saving Lives is not expensive**

More information:  
[visionzeronetwork.org](http://visionzeronetwork.org)

 SPOTLIGHT

## EARTHQUAKE HAZARDS

 **72%**

According to the United States Geological Survey (USGS), the chance of an earthquake of M6.7 or greater in the **Bay Area in the next 30 years is 72%**.

 **28%**

The chance of a M6.7 or greater earthquake on our closest fault, **the Hayward Fault, in the next 30 years is 28%**.

 **10%**

**Combining all likely scenarios, Alameda has a 10% chance of experiencing “Very Strong” to “Violent” (MMI 8 to MMI 9) shaking in the next 50 years.**

 **0.2%**

**This probability can also be expressed as a 0.2% chance per year, or a 500-year event, which could happen any time.**

## SN-4

Maintain and promote community programs to train volunteers, senior and disabled support groups, food banks, and other local aid organizations to assist police, fire, and civil defense personnel during and after a major earthquake, fire, or flood.

**Actions:**

- *Maintain community-based emergency preparedness training programs targeted to neighborhoods and business groups including outreach and coordination with Voluntary Organizations Active in Disasters (VOAD) and other community based programs.*
- *Prepare and/or make available public education and awareness materials in multiple languages on all aspects of emergency preparedness, including the type and extent of hazards in the community, measures to reduce the likelihood of damage and injury, provisions for emergency supplies, steps to take immediately after a disaster, and the locations of shelters and medical facilities.*

## SN-5

Ensure that the City prioritize public safety through the implementation of a Vision Zero policy to reduce annual pedestrian and bicyclist fatalities and serious by injuries resulting from collisions with faster moving vehicles and unsafe street design.

## 8.2 SEISMIC + GEOLOGIC HAZARDS

Earthquakes are the single-most significant short-term geologic hazard facing the residents and businesses in Alameda. Earthquakes are also the hazard that are most likely to cause extensive damage. In addition to the initial shaking, secondary seismic hazards associated with earthquakes include liquefaction, lateral spreading, and cracking of the ground surface, sand boils, slope failure, and seiches. Figure 8-1 illustrates the proximity of Alameda to the Hayward and San Andreas Faults. The likelihood of occurrence of these secondary effects due to ground shaking in Alameda is high due to underlying soil conditions in Alameda, such as artificial fill, bay mud, and expansive soils. Figure 8-2 illustrates Alameda’s susceptibility to severe liquefaction in the event of ground shaking. Alameda’s relatively old housing stock and unique historic commercial buildings were generally constructed without the benefit of modern Building Code requirements to strengthen buildings against earthquake shaking.

The 1989 Loma Prieta earthquake, caused damage to private and public buildings, water mains, sewer lines, streets, and bulkheads. Liquefaction (mud boils) occurred at Alameda Point and Harbor



Bay Business Park. South Shore experienced buckled streets and sidewalks, and subsidence that made the sanitary sewer pipes no longer flow downhill, requiring the City to build a new sanitary sewer pump station.

Climate change is expected to worsen earthquake hazards. Rising sea levels will cause rising groundwater levels. Soils that are more saturated with groundwater are more likely to liquefy and subside. Some preliminary evidence suggests that changes in groundwater levels in the vicinity of fault lines can promote more frequent small earthquakes.

## OBJECTIVE 2

### Minimize risks of loss of life, personal injury, property damage and environmental degradation posed by earthquakes and other geologic hazards.

#### POLICIES:

##### SN-6

Amend and update the Alameda local California Building Code, as necessary, to incorporate new standards for construction pertaining to development on areas of fill or underlain by Bay Mud or Merritt Sand and the design of new buildings to resist the lateral effects and other potential forces of a large earthquake on any of the nearby faults.

##### SN-7

Work with Caltrans, the Metropolitan Transportation Commission, the Alameda County Transportation Commission and other regional, state and federal partners to fund earthquake strengthening protection for critical public regional transportation facilities, such as the Posey and Webster Tubes, the Miller Sweeney Bridge and the High Street Bridge.

##### SN-8

Work with Caltrans, Alameda County, and other regional agencies to retrofit and improve at least one estuary crossing to meet a life-line standard to ensure access to the larger region for emergency access, equipment supplies, and disaster response and recovery in the event of a major seismic event.

##### SN-9

Continue to strengthen and rehabilitate City Buildings and other city infrastructure, including but not limited to waste water systems and pump stations, storm water systems and pump stations and electric systems and facilities to ensure that the City can respond effectively to a seismic event.

##### SN-10

Require owners of vulnerable structures, to the extent feasible, to retrofit existing structures to withstand earthquake ground shaking, and require retrofitting when such structures are substantially rehabilitated or remodeled.

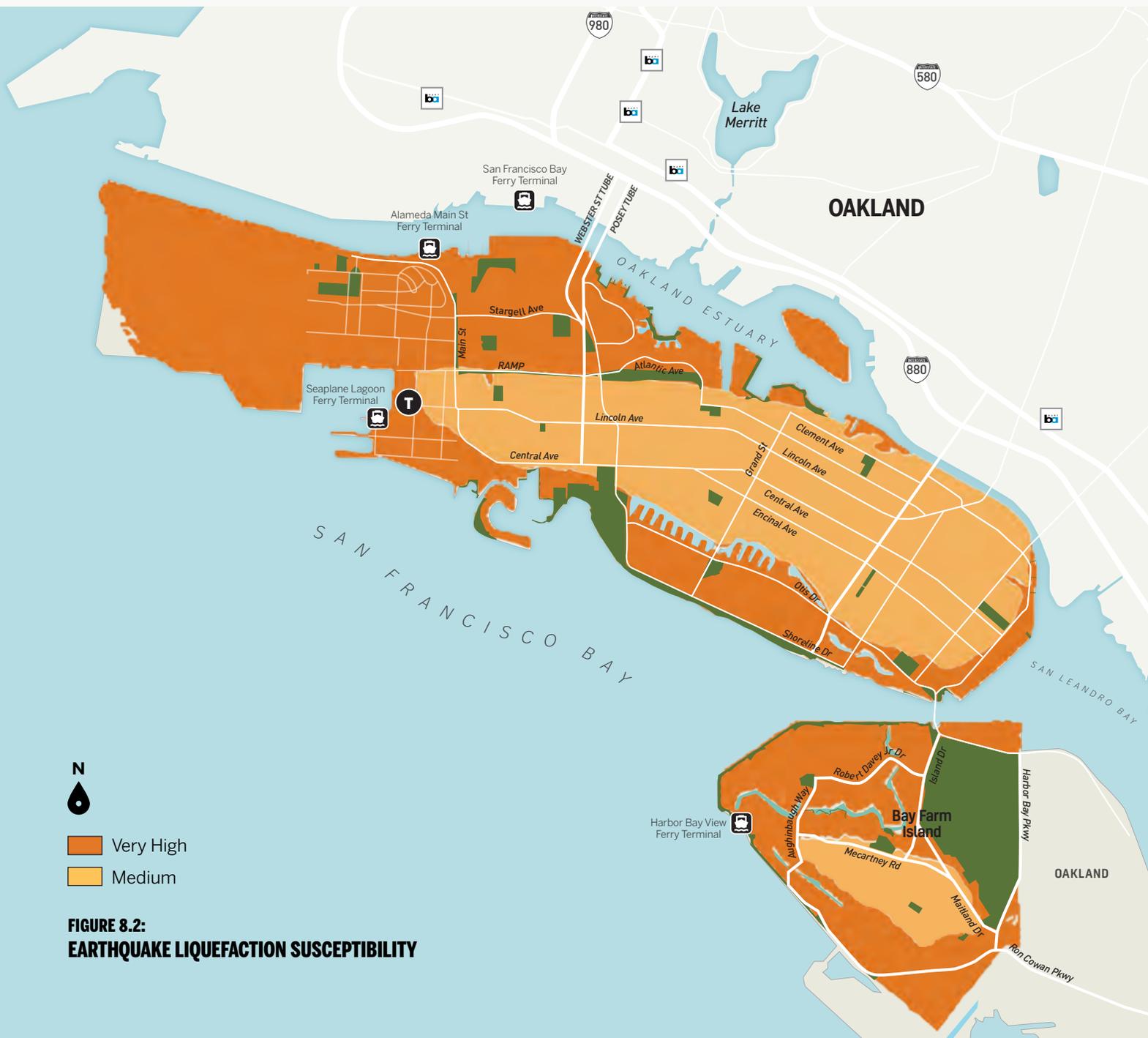
#### **Actions:**

- *Continue to implement the City's Soft Story Program including mandatory requirements for substantially improving the seismic performance of multi-family wood frame residential buildings with "soft stories."*
- *Continue to implement the City's Wood Framed Building Program including voluntary requirements for substantially improving the seismic performance of one and two story wood frame residential buildings with vulnerable "cripple walls".*
- *Develop incentives and assistance to help property owners make their homes and businesses more earthquake-safe. Pursue a variety of funding sources, such as grants, low-interest loans, and tax credits, to assist residents and businesses with seismic upgrades.*
- *Require owners of shoreline properties, to the extent feasible, to inspect, maintain, and repair the perimeter slopes to withstand earthquake ground shaking, consolidation of underlying bay mud, and wave erosion.*
- *Establish incentives and exemptions from City zoning code requirements, such as off-street parking and/or on-site common open space, to facilitate private rehabilitation and strengthening of soft story multi-family buildings.*

**SPOTLIGHT**

**WHAT IS LIQUEFACTION?**

Liquefaction is a phenomenon where saturated sand and silt take on the characteristics of a liquid during the intense shaking of an earthquake. The highest hazard areas are concentrated in regions of man-made landfill, especially fill that was placed many decades ago in areas that were once submerged bay floor.



**N**



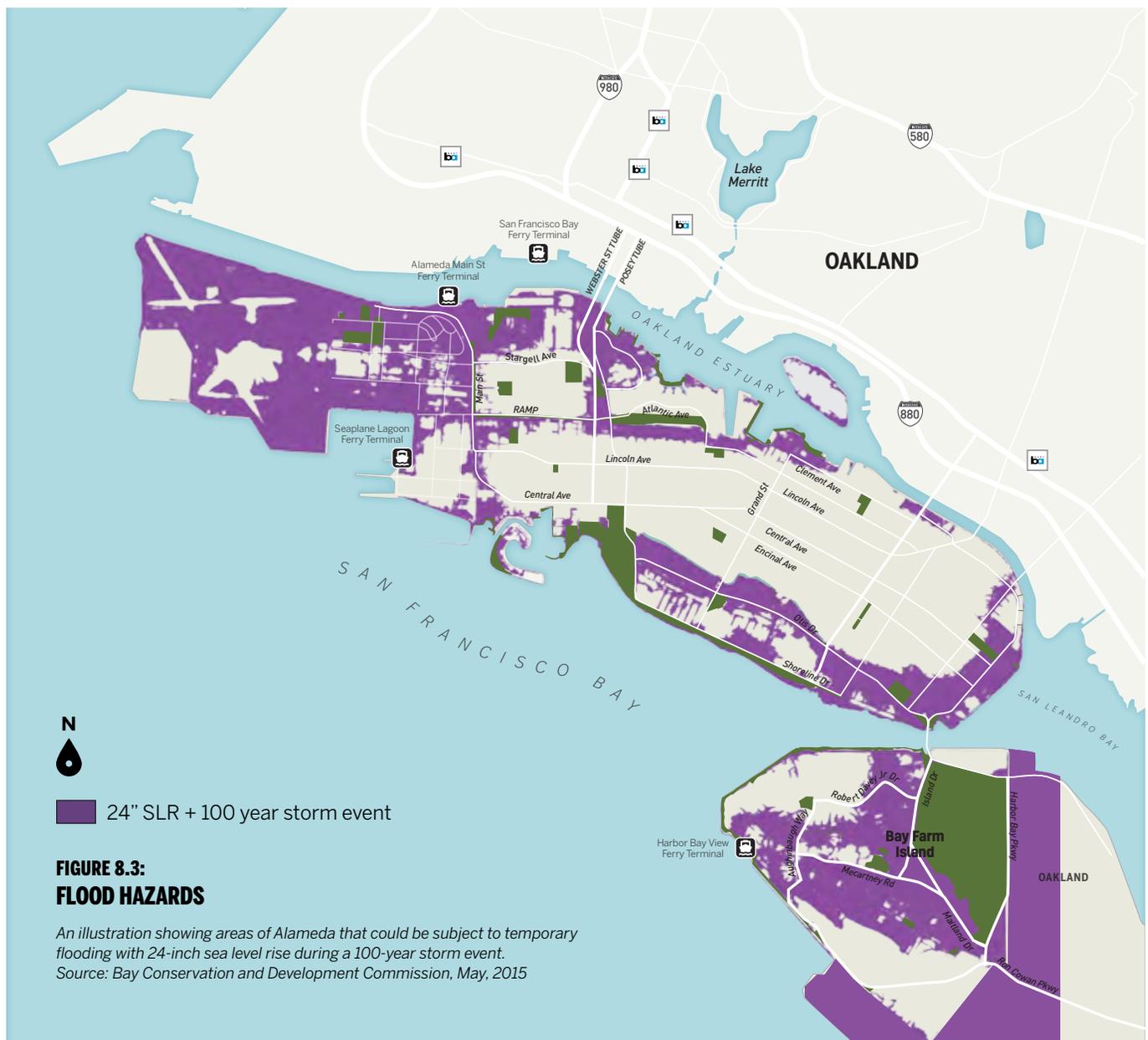
 Very High

 Medium

**FIGURE 8.2: EARTHQUAKE LIQUEFACTION SUSCEPTIBILITY**

### 8.3 FLOODING + SEA LEVEL RISE

Due to its relatively flat topography and proximity to the San Francisco Bay, Alameda is uniquely sensitive to flooding caused by high tides, storm events, and climate change induced sea level rise. The City of Alameda normally experiences tides that range from -0.2 Mean Lower Low Water (MLLW) to +6.4' Mean Higher High Water (MHHW), based on the NAVD88 datum. (The NAVD88 datum or zero elevation is approximately the same as the elevations used in local tide tables.) The highest tide of the year, or “king tide”, normally occur during the winter months of November thru February, and is usually about 7.4'. Every year, there is a 1% chance the king tide will exceed 9.4'. The ten highest king tides recorded by NOAA in Alameda for the last 75 years measured 8.6' to 9.5' elevation.



Winter months are also when the City is likely to experience storms. During an extreme storm event, the level of the sea can temporarily rise several feet above the level predicted by tide tables. During the El Niño event of 1997-98, up to 2 feet of standing water occurred on Main Street, due to higher sea levels during high tide and heavy rainwater runoff. In 1981, storms eroded Crown Beach to the edge of Shoreline Drive. In 2006 storm waves damaged the Harbor Bay Ferry Terminal, and washed away portions of the adjoining Bay Trail.

Storm related hazards will occur more frequently and more extensively in the future due to climate change, which contributes to both sea level rise and more intense storms. A home located in a currently predicted 100 year flood level would have a 1% annual likelihood of being flooded in any one year. As sea level rises, the emergent groundwater levels will also rise so that smaller and smaller high tides and storms will not just have greater flooding impacts along the shore but also inland as well.

Global heating and sea level rise will have severe long-term effects on Alameda. In addition to residential and commercial properties, the Webster and Posey Tubes, Ron Cowan Parkway and the Alameda Gateway Terminal Ferry and other major public improvements are vulnerable to inundation.

### OBJECTIVE 3

**Minimize risks of loss of life, personal injury, property damage and environmental degradation posed by sea level rise, flooding and storm water runoff.**

#### POLICIES:

##### SN-11

Continue the City's participation in the National Flood Insurance Program.

##### SN-12

Continue to review and publish for public discussion the latest and most up to date flood hazard and sea level rise forecasts from regional, state and federal agencies.

##### SN-13

Advocate for a permanent seat for City of Alameda representation and active participation in regional discussions on sea level rise mitigation, infrastructure improvements and adaptation strategies.



#### SPOTLIGHT

### GLOBAL HEATING + SEA LEVEL RISE

Global heating and sea level rise will have severe long-term effects on Alameda.

FOLLOWING SEA LEVEL RISE  
ADAPTATION GUIDANCE  
FROM THE STATE OF  
CALIFORNIA, THE CITY OF  
ALAMEDA WILL  
**PLAN FOR A POTENTIAL:**

**1.9ft**

INCREASE IN SEA LEVEL BY

**2050**

ON THE ALAMEDA CO COASTLINE

**6.9ft**

INCREASE IN SEA LEVEL BY

**2100**

Source: State of California Sea-Level Rise  
Guidance. 2018 Update.

**SN-14**

Identify public transportation, open space, and storm water and waste water facilities, shoreline assets, and other public assets vulnerable to sea level rise and flooding hazards, and begin planning for adaptation and protection.

**Action:**

- *Implement a program for Resilient Shoreline Facilities, including performing appropriate seismic, storm, flooding and other safety analyses based on current and future use for all City-owned shoreline facilities, including dikes, shore protection (rip rap), lagoon sea walls, storm water outfalls, marinas and protective marshlands.*

**SN-15**

Develop sea level rise adaptive strategies for different areas of the City for public discussion and evaluation, including but not limited to: avoidance/planned retreat, enhanced levees, setback levees to accommodate habitat transition zones, buffer zones, beaches, expanded tidal prisms for enhanced natural scouring of channel sediments, raising and flood-proofing structures, and/or provisions for additional floodwater pumping stations, and inland detention basins to reduce peak discharges.

**Action:**

- *Develop for public discussion and evaluation potential financing strategies and partnership opportunities with regional and state agencies such as the Municipal Oakland International Airport, and other agencies to fund and build selected adaptive strategies.*

**SN-16**

Protect and upgrade public infrastructure, including but not limited to streets, waste water systems and pump stations, storm water systems and pump stations and electric systems and facilities to ensure capacity and resilience during storm events, high tides, and sea level rise, to decrease the chance of flooding of nearby streets, utilities, and private property.

**SN-17**

Reduce the risk of tsunami inundation through public tsunami education, with special emphasis in low-lying shoreline properties, including the maritime communities and marinas.

**SN-18**

Design street rights-of-way, parks, other public spaces, street trees and landscaping to be resilient to temporary flooding.

**SN-19**

Require new development to plan for and protect against 42 inch 100-year storm events plus an additional 36 inches of sea-level rise.. Ensure that the design of future developments incorporate flood protection measures to protect improvements from a 100-year storm event and anticipated sea level rise.

**Action:**

- *Require new development to provide adequate setbacks along waterfront areas for the future expansion of seawalls and levees to adapt to sea level rise.*

**SN-20**

Require the creation and maintenance of easements along drainage ways necessary for adequate drainage of normal or increased surface runoff due to storms.

**SN-21**

Require and enforce stringent groundwater management programs to prevent subsidence.

**SN-22**

Require the use of "Green Infrastructure", landscaping, pervious surfaces, green roofs, and on-site storm water retention facilities to reduce surface runoff and storm drain flooding during storm events.

## 8.4 FIRE HAZARDS + EMERGENCY RESPONSE

Major fires resulting from the rupture of local gas or electric lines during an earthquake could be severely compounded by water main failures and substandard fire protection systems in older buildings.

### OBJECTIVE 4

**Minimize risks of loss of life, personal injury, property damage and environmental degradation posed by fire hazards.**

#### POLICIES:

##### SN-23

Maintain the City's fire prevention, disaster preparedness, and fire-fighting and emergency medical service capabilities.

##### SN-24

Maintain a response time of 5 minutes, 20 seconds, 90 percent of the time, for the first fire unit to be on-scene of a fire.

##### SN-25

Work collaboratively with other jurisdictions and agencies to reduce fire hazards in Alameda, with an emphasis on effective vegetation management and mutual aid agreements.

##### SN-26

Require new development to comply with the City's current Fire, Seismic, and Sprinkler Codes.

##### SN-27

Require new development to minimize the risks of fire and includes adequate provisions for vegetation management, emergency access and appropriate firefighting equipment.

##### SN-28

Require new development to underground utilities to minimize disruption by fire or other natural disasters.



## 8.5 HAZARDOUS MATERIALS + WASTE

The careful management of hazardous materials and the reduction in generation and safe disposal of hazardous waste is critical to public health and safety. Hazardous materials are stored and transported throughout Alameda. Hazardous materials used in industrial and commercial areas and in households include: Flammable and combustible liquids, solvents, paint, plating or photographic solutions, acids, and pesticides. Waste oil, gases, and other hazardous liquids associated with vehicle and heavy machinery maintenance are also present.

### OBJECTIVE 5

**Minimize risks of loss of life, personal injury, serious illness, property damage and environmental degradation posed by the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.**

#### POLICIES:

##### SN-29

Continue to identify and assess the risks associated with various hazardous materials transported in Alameda.

##### SN-30

Increase public awareness of hazardous material use and storage in the City, the relative degree of potential health hazards, and the appropriate channels for reporting odor problems and other nuisances.

#### **Action:**

- *Promote public education about the safe disposal of household hazardous waste, such as motor oil and batteries, including the locations of designated household hazardous waste disposal sites.*

##### SN-31

Work with County, regional, state and federal agencies to implement programs for hazardous waste reduction, hazardous material facility siting, hazardous waste handling and disposal, public education and regulatory compliance.

#### **Action:**

- *Continue to remove and monitor methane gas produced as a waste product of materials decomposing in the former landfill on Doolittle Drive.*

##### SN-32

Work with County, regional, state, and federal agencies and private property owners to ensure that the necessary steps are taken to clean up residual hazardous wastes on any contaminated sites.

#### **Action:**

- *Require that all new construction, including construction on former industrial sites, has been cleared for residential, commercial or industrial uses from the appropriate federal, state and local agencies and acts, including the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Program, the Resource Conservation and Recovery Act (RCRA), the California Department of Toxic Substances Control (DTSC), the Regional Water Quality Control Board (RWQCB) and the Alameda County Department of Environmental Health (ACDEH), which is the Certified Unified Program Agency (CUPA) responsible for implementing state environmental regulations related to hazardous waste and hazardous materials.*

**SN-33**

Continue to support the various resource recovery initiatives and other measures specified in the Alameda County Countywide Integrated Waste Management Plan.

**SN-34**

Ensure that the City's Emergency Preparedness programs include provisions for hazardous materials incidents, as well as measures to quickly alert the community and ensure the safety of residents and employees following an incident.

**Action:**

- *Improve the training and capability of the Fire Department to handle accidental releases of hazardous materials. Provide ongoing training for hazardous materials enforcement and response personnel. Apply the Emergency Operations Plan, if necessary, in response to a hazardous materials release disaster.*

**SN-35**

Require adequate and safe separation between areas and uses with hazardous materials and sensitive uses such as schools, residences and public community facilities.

**SN-36**

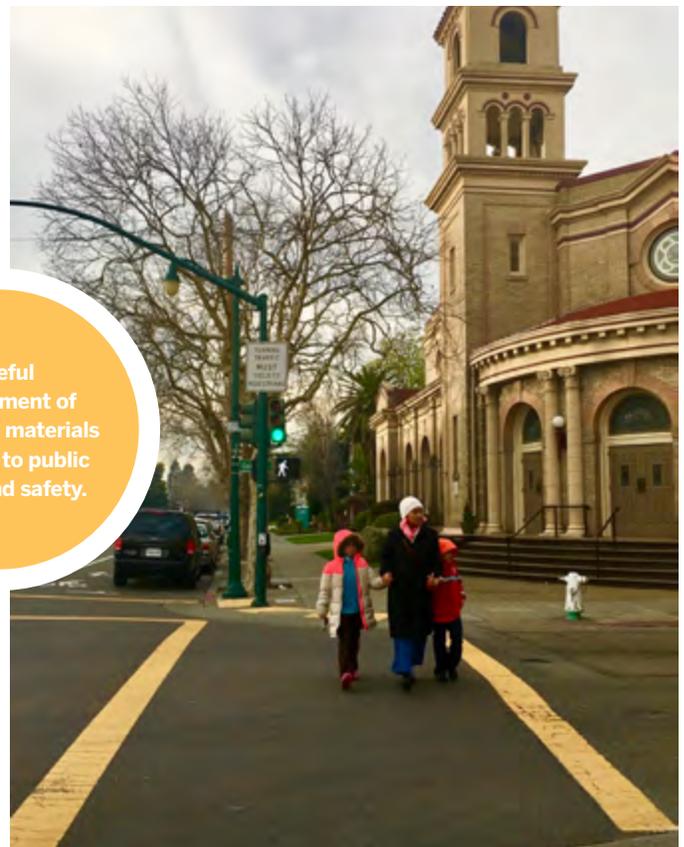
Require that all facilities that handle and/or store hazardous materials are designed to minimize the possibility of environmental contamination and adverse off-site impacts and that they are in compliance with state and federal standards and requirements designed to protect public health and the environment.

**SN-37**

Encourage residential, commercial and industrial property owners to test their properties for elevated levels of radon gas (more than 4 pico curies per liter).



Careful management of hazardous materials is critical to public health and safety.



 **SPOTLIGHT**
**MEASURING NOISE**

The volume or intensity of sound is measured in units called decibels (dB), generally on a scale from zero to 140 (any higher than 140 and you are in trouble immediately). The higher the number in decibels, the louder the noise. The louder the noise, the greater the risk of hearing loss. Hearing loss can occur with regular exposure to noise levels of 110 decibels or more for periods longer than one minute.




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**SHORT LIST OF COMMON NOISES AND THEIR DECIBEL LEVELS:**


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**AIRCRAFT AT TAKE-OFF: 180 DB****FIREWORKS: 140 DB****AMPLIFIED MUSIC: 110 DB****NOISY OFFICE: 90 DB****CITY TRAFFIC: 80 DB****NORMAL CONVERSATION: 60 DB****LEAVES RUSTLING: 10 DB**


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**8.6 NOISE + AIRPORT ENVIRONS**

Located within a major urban metropolitan area, the major noise sources in Alameda are: aircraft noise, automobile and truck noise, and noise associated with certain commercial and industrial land uses, such as the Port of Oakland seaport and Coast Guard Island. Research shows excessive roadway, aircraft and/or wind turbine noise negatively impacts the memory, learning acquisition, test scores and physical well-being of children. Every effort should be made to minimize these risks in the placement of children with exposure to these noise sources. Aircraft operations at the Oakland International Airport and San Francisco International Airports are the most significant sources of noise impacts in Alameda neighborhoods. Some Alameda residents currently experience single event noise in excess of 80 dBA on a nightly basis.

**OBJECTIVE 6**

**Protect Alameda residents from the harmful effects of exposure to excessive noise from aircraft, buses, boats, trucks and automobiles, and adjacent land uses.**

**POLICIES:****SN-38**

Support state and federal legislation to reduce transportation noise from cars, trucks, and aircraft.

**SN-39**

Through the City's federal lobbying agenda, support and advocate for operational practices, changes to aircraft, new technologies, and physical improvements that would reduce the number of properties in Alameda that are impacted by aircraft noise.

**SN-40**

Oppose any expansion of operations at Oakland International Airport that would exceed the limits established by the existing Settlement Agreements.

**SN-41**

Work with Oakland International Airport to reduce the incidence of single event noise exposure above those currently experienced.

**SN-42**

To reduce existing and future potential harmful aircraft noise impacts in Alameda neighborhoods:

**Actions:**

- Actively participate in forums and discussions regarding operations and expansion plans for Oakland International Airport, including various working groups composed of individuals representing the City of Alameda, the City of San Leandro, the Port of Oakland, the Federal Aviation Administration (FAA), and the air transport industry to monitor the airport's noise control program and to make recommendations for the benefit of City of Alameda residents. These groups include the South Field & North Field Research Groups, Oakland Airport-Community Noise Management Forum and Oakland International Airport Aviation Stakeholder Advisory Committee.
- Seek local representation on all task forces, commissions and advisory boards established to guide airport policies and programs.

- Seek adherence by airport operators to operational, development and management policies that will minimize noise nuisance and safety concerns for Alameda.
- Work with Oakland International Airport and the FAA to limit night use of North Field to Stage 3 and Stage 4 aircraft, and pursue mitigation of aircraft noise impacts to the fullest extent possible.
- Ensure that any changes to aircraft operations that would potentially result in increased noise levels in Alameda incorporate comprehensive noise mitigation measures, even when the impacts will be of limited duration. To the greatest extent feasible, any changes in airport activity should avoid impacts to noise sensitive uses such as residential areas and schools.
- To the extent permitted by the 1976 Settlement Agreement, the 2001 Settlement Agreement, the 2002 Settlement Agreement, the 2003 Addendum to the Settlement Agreement and the Written Compliance Plan, advocate for noise abatement and mitigation programs that are based not only on the airport's noise contour maps, but that consider other factors such as the frequency of overflights, single-event noise levels, the altitude of aircraft, the hours of operation, low frequency noise, and sensitive receptors. Monitor implementation and compliance with the Settlement Agreements of 1976, 2001 and 2002 and the Written Compliance Plan.
- Obtain assurance that the future noise exposure for Alameda is known and that aircraft operations will be controlled to ensure that projected noise levels are not exceeded. Validation of the 65 dB CNEL contour is to be carried out by means of a permanent full-time noise monitoring system to ensure compliance with the California Airport Noise standards and the ALUC Plan.

**SN-43**

Advocate for the following operational measures to be incorporated into any plans for the expansion of the Oakland International Airport:

**Actions:**

- Use of Stage 3 and Stage 4 (least noisy) aircraft only, on all runways directly overflying Alameda residential areas.
- Enforced flight path alterations for noise abatement, for all runways, with remote monitoring sites maintained in locations mutually acceptable to the Port and the City.
- Prohibition of touch-and-go operations by jet aircraft.
- Prohibition of noisy engine ground run-ups at night outside of the Ground Run-Up Enclosure.
- Prohibition of intersection departures on Runway 28.

**SN-44**

Support the Port of Oakland in continuing to maintain a permanent full-time noise monitoring system that will (a) measure noise continuously, (b) separate OAK noise events from other noise source events, particularly overflights from other airports, (c) measure and augment CNEL values, (d) provide information on excessively noisy aircraft operations, (e) monitor effectiveness of noise abatement programs, and (f) meet the performance specifications of the California Noise Standards.

**SN-45**

Regulate land uses within designated airport safety zones, height referral areas, and noise compatibility zones to minimize the possibility of future noise conflicts and accident hazards.

**SN-46**

Maintain a high degree of readiness to respond to aircraft crashes through participation in preparedness drills and mutual aid activities with the City and Port of Oakland to ensure quick and effective response to emergencies.

**SN-47**

Enforce compliance with noise emissions standards for all types of automotive vehicles established by the California Vehicle Code and by federal regulations.

**SN-48**

With the cooperation of the U.S. Coast Guard, the City of Oakland, and the Port of Oakland, enforce California noise emission standards for engine-driven maritime vessels.

**SN-49**

Encourage BART and AC Transit to develop and apply noise-reduction technologies that reduce noise impacts associated with BART trains and buses.

**SN-50**

Where feasible and appropriate, develop and implement noise reduction measures when undertaking improvements, extensions or design changes to Alameda streets.

**SN-51**

Maintain day and nighttime truck routes that minimize the number of residents exposed to truck noise.

**SN-52**

Require new or replacement residential development within 500 feet north of the 65 dB CNEL Settlement Agreement line on Bay Farm Island, to include noise insulation that meets the standards established in the Airport Land Use Commission Plan for assumed exterior 65 dB CNEL.

**SPOTLIGHT****COMMUNITY NOISE EQUIVALENT LEVEL (CNEL)**

Average noise exposure over a 24-hour period often is presented as a community noise equivalent level (CNEL). CNEL values are calculated from hourly equivalent noise level values, with a 5 dBA annoyance penalty added to the evening (7:00 p.m. to 10:00 p.m.) equivalent noise level values and a 10 dBA penalty added to the nighttime (10:00 p.m. to 7:00 a.m.) equivalent noise level values.

The settlement agreement as described in Policy SN-42 set Alameda's CNEL at 65dB for aircraft operations (See Figure 8-4 for Oakland Airport 65dB contour). Validation of the 65 dB CNEL contour is to be carried out by means of a permanent full-time noise monitoring system to ensure compliance with the California Airport Noise standard and the ALUC plan.

**SN-53**

Require compliance with the California Building Code requirements to ensure appropriate interior noise levels in new or replacement residential construction, hotels, motels, and schools. In new dwellings subject to an airport noise easement, the maximum interior noise level is not to exceed 45 dB CNEL. If this requirement is met by inoperable or closed windows, a mechanical ventilation system meeting California Building Code requirements must be provided. Require acoustical analyses as allowed by the California Building Code.

**SN-54**

Ensure that purchasers of property within or adjacent to the following areas are aware of existing and future potential noise conditions and the limitations of the City's ability to abate existing or future noise conditions: the Oakland International Airport Influence Areas, as defined by the Alameda County Airport Land Use Commission (ALUC), commercial districts, truck routes, major arterials, Alameda United School District facilities, City recreation facilities, and business parks. Require the full disclosure of the existing and potential future noise levels within deeds and lease agreements as a condition of project approval, whenever possible.

**SN-55**

To the extent feasible, through the development entitlement process, require local businesses to reduce noise impacts on the community by avoiding or replacing excessively noisy equipment and machinery, applying noise-reduction technology, and following operating procedures that limit the potential for conflicts.

**SN-56**

Require noise reduction strategies in all construction projects. Require a vibration impact assessment for proposed projects in which heavy-duty construction equipment would be used (e.g. pile driving, bulldozing) within 200 feet of an existing structure or sensitive receptor. If applicable, the City shall require all feasible mitigation measures to be implemented to ensure that no damage to structures will occur and disturbance to sensitive receptors would be minimized.

**SN-57**

In making a determination of impact under the California Environmental Quality Act (CEQA), consider the following impacts to be "significant" if the proposed project causes: an increase in the Ldn noise exposure of 4 or more dBA if the resulting noise level would exceed that described as normally acceptable for the affected land use, as indicated in Table 8-1, or any increase in Ldn of 6 dBA or more.

**SN-58**

Continue to enforce the Community Noise Ordinance by promptly responding to local noise complaints.

## 8.7 AIR QUALITY

Located within a major urban metropolitan area, the main pollution sources in Alameda are generated from car and truck traffic. Less significant source of air pollution include wood smoke and construction related emissions. Every effort should be made to minimize these risks, especially to the most vulnerable populations such as children and seniors.

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### OBJECTIVE 7

**Protect Alamedans from the harmful effects of air pollutants.**

#### POLICIES:

##### SN-59

**Diesel Emissions.** Continue to work with the Bay Area Air Quality Management District (BAAQMD) to reduce diesel related air quality impacts throughout the region and in Alameda.

##### **Actions:**

- *First, ensure a completed transition away from diesel fuels for all government operations and vehicles.*
- *Set a date prior to 2033 to ban diesel vehicles from entering Alameda altogether, only allowing exceptions where no reasonable substitute exists.*

##### SN-60

**Reduce Wood Smoke:** Adopt ordinances and regulations to reduce wood smoke in Alameda.

##### **Actions:**

- *Prohibit wood burning fireplaces and heaters in all new development as well as remodels.*
- *Provide incentives to replace wood burning fireplaces and wood burning heating devices in existing buildings.*
- *Continue to work with BAAQMD to reduce wood smoke and to raise awareness on the health affects of wood smoke.*

##### SN-61

**Construction Air Pollution:** Adopt and enforce regulations and project conditions of approval to reduce construction related air quality impacts.

##### SN-62

**Air Quality Alerts.** Continue to partner with BAAQMD to enhance awareness of air quality index alerts and related outreach and education to protect the health of residents.