





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, promote sustainability, and to prepare for and address the wide range of impacts of climate change from rising seas and groundwater, to wildfire smoke, disease and pandemics.



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

GOAL 1	GOAL 2	GOAL 3	GOAL 4
 <p>EMPOWER</p> <hr/> <p>Empower community action, partnership and leadership to address local and global environmental and climatic emergencies.</p>	 <p>REDUCE</p> <hr/> <p>Reduce the community's greenhouse gas emissions which are contributing to global warming, climate change, and environmental and social impacts.</p>	 <p>PREPARE</p> <hr/> <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 events, hazardous air quality days, and power outages.</p>	 <p>PROTECT</p> <hr/> <p>Protect and conserve Alameda's natural resources and recognize their intrinsic importance in responding to climate change and fostering a healthy environment that sustains people, neighborhoods and the unique natural resources of the island.</p>



SPOTLIGHT

CLIMATE GLOSSARY

Astronomic Tides: Tides are the result of the gravity of the sun and the moon pulling on the water. Tide tables predict these astronomic tide levels. Our tides in Alameda generally fluctuate from 0 feet to + 7 feet, with “king tides” ranging an additional foot below or above that.

Carbon Neutral/Net-Zero Emissions: An activity or entity that sequesters at least as much carbon as it emits.

Climate Change: A change in the usual weather found in a place. This can stress people, wildlife, plants and places as they try to adapt to these weather changes and their downstream impacts, which in much of California include a significant increase in the risk of drought, flooding and fires.

Environmental Justice: Ensuring that the health impacts of environmental hazards are not disproportionately impacting low-income, vulnerable, and marginalized communities.

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 (CO₂) are among the most commonly discussed greenhouse gases.

Groundwater Rise: The rise in levels of underground water is driven in large part from Sea Level Rise applying upward pressure. This is a significant source of local flooding, impacting homes and other important low-lying infrastructure.

The Hundred Year Flood: When a rare high water level has about a 1 in 100 chance of happening in any one year, we call it a 100 year flood. This doesn't mean we are safe for 100 years, it means we have a small but real chance (a 1 in a 100 chance, or 1% chance) every year that this could occur. Houston, Texas recently experienced violent storms and two 500 year floods in a row, demonstrating how what used to be a 500-year flood, for example, is becoming more and more frequent with climate change.

King Tide: The highest tides that consistently 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 to a foot above average high tide levels.

Local Flooding: Local flooding can happen anywhere due to violent rainstorms or inadequate drainage, not just in areas subject to coastal flooding.

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.

MTCO_{2e} (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_{2e}.

Resilience: The capacity of individuals, communities and systems to survive, adapt, and grow in the face of stress and shocks, and even transform when conditions require it.

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

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

Storm-related events: A storm event where changes in wind, barometric pressure, waves and precipitation combine to raise the water level of the Bay and cause flooding. A 50-year storm, for example, is projected to occur just once every 50 years (or a 2% chance of occurring in any given year), which for Alameda, would result in a 3 foot increase in the water level of the Bay during that event.



General Plan policies preserve and build on the City's island setting and urban fabric by preparing the community for the impacts of climate change.

INTRODUCTION TO CONSERVATION + CLIMATE ACTION ELEMENT

Alameda's unique island geography and natural setting supports a high quality of life for Alameda residents and a natural habitat for important fish and wildlife. These natural resources and healthy environment are key contributors to Alameda's identity and sense of place. The island setting is also uniquely vulnerable to changes in the environment. As worldwide temperatures and sea levels rise, Alameda residents and businesses will be increasingly impacted by flooding, sewer back-ups, 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 and groundwater level rise and must act as a global and regional leader by transitioning to an ecologically, socially and economically regenerative economy. In doing so, the City Council established a citywide goal of becoming a net zero emissions community as quickly as possible and reduce emissions by 50% below 2005 levels by 2030. 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 warming, 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 to prepare for climate change. Action is needed on all fronts.

This General Plan element includes a policy framework that is designed to preserve Alameda's high quality of life and unique natural setting and resources for future generations. The General Plan reinforces and complements the Climate Action and Resiliency Plan (CARP) which contains specific plans, programs, and actions 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 the current high tide line and groundwater just a few feet below, rising sea levels and rising groundwater levels threaten to overwhelm our waterfront open spaces and habitat areas, our roadways, stormwater, and sewer systems, and the seawalls, embankments, and shoreline barriers 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 2060-2070, Alameda must prepare for the slim but dramatic possibility of high tides being about 36 inches higher than today. As a result, groundwater 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. Even 6 inches of water in the house can be devastating – ruining floors, wallboard, furniture, cabinets, heating/cooling and electrical equipment, and anything stored on the floor.

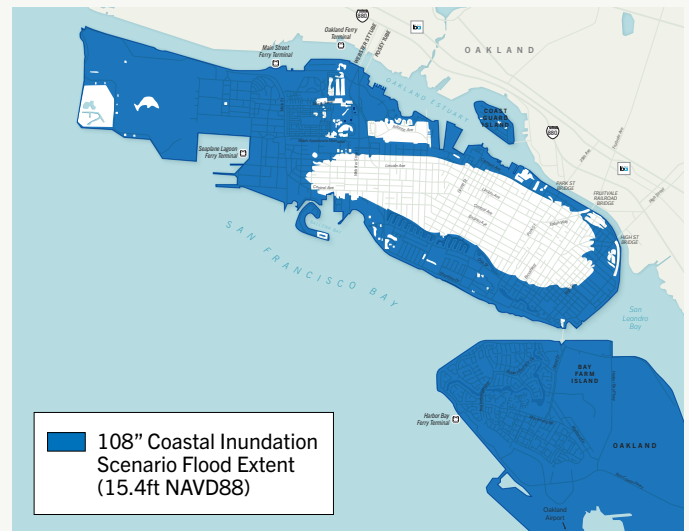
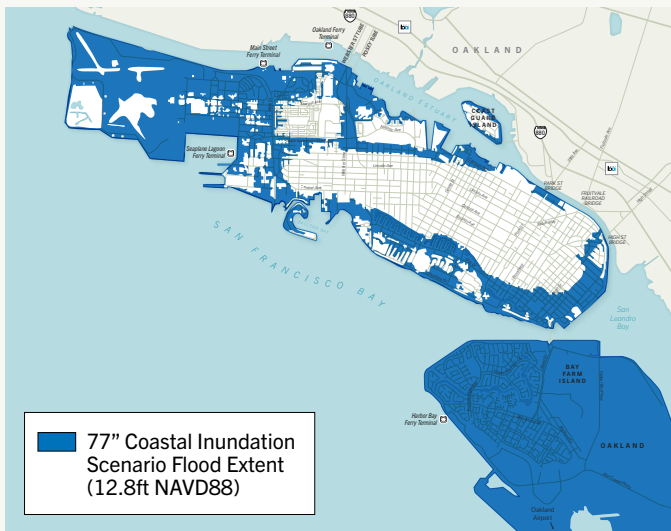
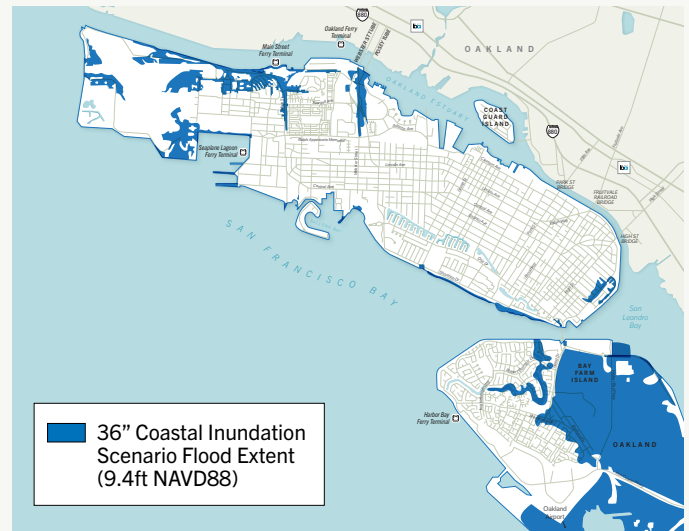
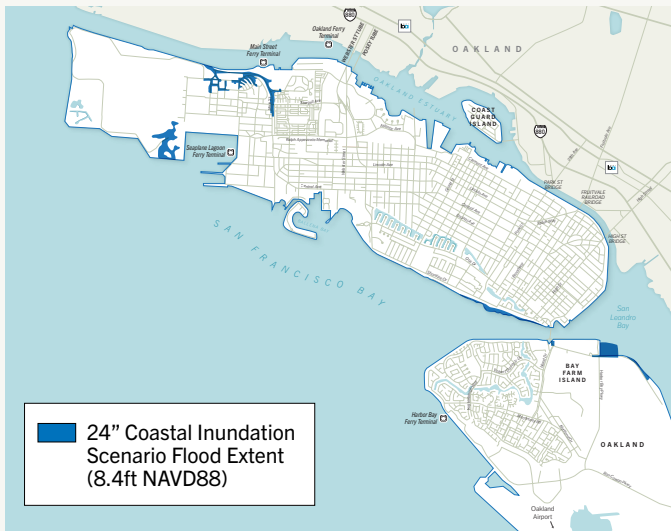


FIGURE 3.1: COASTAL INUNDATION SCENARIOS



GOAL 1: EMPOWER

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

POLICIES:

CC-1

Community Action. Empower local community members and leaders to participate, plan, and implement the changes in both individual and collective behavior and actions that are needed to address the climate crisis. (See also Policies LU-1, ME-1, and HS-4).

Actions:

- a. **Outreach and Education.** Continue to provide planning and educational opportunities that support proactive participation and collaboration by all segments of Alameda's population at the start of processes, with a particular focus on those who will be most impacted by the effects of climate change, such as low income individuals, seniors, youth, people of color, people experiencing homelessness, Tribes and indigenous peoples, individuals with disabilities, and socio-economically disadvantaged individuals.
- b. **Community Organizations.** Continue to partner on climate action initiatives with all interested community groups.
- c. **Community Capacity Building.** Enhance the ability of community members, particularly those in under-served and/or under-represented groups to develop the relationships, knowledge, and skills to effectively participate in planning for, and responding to the climate crisis.
- d. **Climate-Solution Academy.** Consider opportunities to create a Climate Solution Academy at Alameda Point for the purpose of creating an international gathering place and training center for emerging climate-solution technology to be publicly showcased, tested, demonstrated, and funded.

CC-2

Social Vulnerability. Prioritize the needs of frontline communities when prioritizing public investments and improvements to address climate change. (See also Policies LU-1, ME-2 and the Spotlight "What is an equitable and inclusive city?" in Chapter 1).

Actions:

- a. **Equity.** Ensure opportunities for leadership and actions to benefit Alameda's low-income individuals, seniors, youth, people of color, gender, sexual orientation, people experiencing homelessness, individuals with disabilities, and socio-economically disadvantaged communities from environmental and climate change impacts.
- b. **Environmental Justice.** Ensure the equitable treatment and full involvement of all people when considering actions to reduce the adverse impacts of climate change on residents regardless of age, culture, ethnicity, gender, sexual orientation, race, socioeconomic status, or geographic location. Prioritize actions that will reverse historic policies of racial discrimination and exclusion.
- c. **Assessments.** Utilize Alameda's Social Vulnerability Assessment in the Climate Action and Resiliency Plan or similar tool to identify neighborhoods and specific groups with high levels of social vulnerability in order to prioritize locations for action and improvements.



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.

CC-3

Coordinated Regional and Local Planning. Maintain consistency between local and regional plans to reduce greenhouse gas emissions regionally and locally. (See also Policies LU-14, ME-15, HS-3, HS-16 and HS-62).

Actions:

- a. **City Government Leadership.** *Promote climate friendly policies, standards, practices, technologies, and purchasing in all City facilities and operations.*
- b. **State and Regional Programs.** *Support and participate in state and regional efforts to address climate change through greenhouse gas emission reduction, affordable housing, transportation system improvements, waste reduction, and increased housing supply near job centers and existing regional transportation infrastructure.*
- c. **State and Regional Funding.** *Advocate for and support state and regional efforts to provide funding for greenhouse gas reduction, transportation improvements, affordable housing, and climate change adaptation at the local level.*
- d. **Sustainable Communities Strategy.** *Maintain consistency between the City's General Plan, Climate Adaptation and Hazard Mitigation Plan, and Municipal Code and the regional Sustainable Communities Strategy.*
- e. **Documentation and Open Data.** *Share data in machine-readable formats along with other lessons learned from responding to the climate crisis.*

CC-4

Net Zero Greenhouse Gas Emissions. Take actions to make Alameda a net zero GHG community. (See also Policies CC-13 and ME-22).

Actions:

- a. 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.*
- b. Alameda Climate Action and Resiliency Plan Annual Review and Funding Priorities.** *Implement and update as necessary Alameda's Climate Action and Resiliency Plan (CARP) to reduce GHG emissions to 50 percent below 2005 levels by 2030 and achieve net zero GHG emissions as soon as possible. Implement adaptation strategies to address sea level and groundwater rise, storm surges, inland stormwater system flooding, drought, extreme heat, and unhealthy wildfire smoke.*
- c. Annual Review.** *Annually review and re-evaluate programs, projects, and annual budget for climate action measures and evolving climatic and public health threats, such as groundwater rise, wildfire smoke events, and global pandemics.*
- d. 100% Renewable Energy Goal.** *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. Support Alameda Municipal Power's efforts to provide power from 100% clean, non-fossil fuel sources to all residential and commercial users in Alameda.*
- e. 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. Permit renewable energy generation facilities by right in zones with compatible uses and remove financial disincentives associated with the installation of clean energy generation and storage equipment.*
- f. Local Climate Impact Mitigations.** *Require any carbon neutral goals and initiatives to reduce or sequester greenhouse gas emissions locally and not use taxpayer money to purchase carbon credits from outside the City of Alameda.*

CC-5

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. (See also Policy HS-31).

Action:

- a. Undergrounding Utilities.** *Install utilities underground, while also protecting existing underground utilities from groundwater, to increase resilience of the electric grid, reduce conflicts with street trees and contribute to enhancing neighborhood character so long as they plan for rising groundwater.*



GOAL 2: REDUCE

Reduce the community's greenhouse gas emissions which are contributing to global warming, climate change, and environmental and social impacts.

POLICIES:

CC-6

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 and supporting the use of micro-mobility devices to reduce energy use and carbon emissions from personal vehicles. (See also Policies ME-14 and ME-21).

Actions:

- a. **EV Charging.** Support the increase in supply of publicly accessible electric vehicle charging stations in Alameda.
- b. **New Development.** Require electric vehicle charging stations in all new developments.
- c. **Permitting.** Streamline local permitting for hydrogen fueling and electric vehicle charging infrastructure.
- d. **City Fleet Vehicles and Equipment.** Replace public fleet vehicles and other equipment (such as leaf blowers, water heating and HVAC systems) with clean energy powered vehicles and equipment.
- e. **Buses.** Encourage AC Transit to continue its efforts to replace diesel buses with clean zero emission buses.
- f. **Ferries.** Encourage WETA to replace diesel ferries with low or zero emission ferries.
- g. **EV and Micromobility Action Plan.** Partner with Alameda Municipal Power to prepare and adopt an Electric Vehicle Plan that provides a path forward for increased EV and micromobility adoption in Alameda with a focus on renters and low-income residents, increasing charging availability on City owned lots and in multifamily housing, enhancing community awareness, and expanding incentives and rebates for the purchase of a range of EVs, including micromobility devices, and for the installation of chargers.

CC-7

Climate-Friendly Active Modes of Transportation. Reduce greenhouse gas emissions from transportation by improving the local roadway network to support all mobility choices while specifically encouraging walking and bicycling and prioritizing improvements that both reduce greenhouse gas emissions and support General Plan policies that facilitate transit-oriented housing opportunities, pedestrian friendly business districts, and improved transportation choices. (See also Policies LU-3, ME-8, ME-14 and ME-23).

Actions:

- a. **Active Transportation Plans.** Maintain, regularly update and implement bicycle and pedestrian improvement plans identified in the Mobility Element of the General Plan, the Transportation Choices Plan and the Active Transportation Plan.
- b. **Prioritize Safety.** Promote the creation of 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.



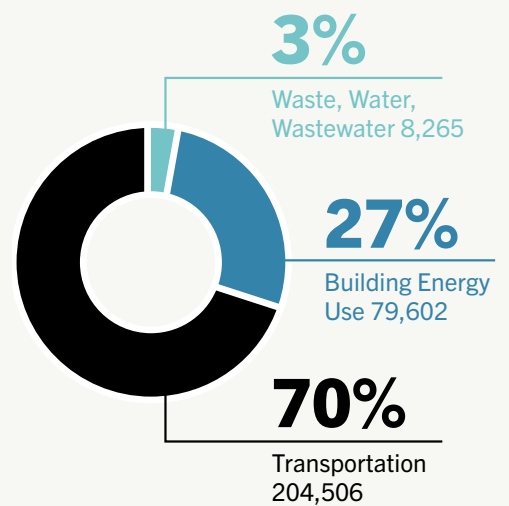
Alameda's pedestrian friendly streets and transit oriented commercial districts will help Alameda meet its Net Zero Emission goals.



SPOTLIGHT

GREENHOUSE GAS EMISSIONS INVENTORY

In 2020, approximately seventy percent (70%) of Alameda's greenhouse gas emissions came from cars and trucks. Approximately thirty percent (30%) of Alameda's greenhouse gas emissions came from the heating and cooling of our homes and the operation 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 which rely 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 fuel powered vehicles, appliances, hot water heaters, furnaces, and other appliances. Alameda Municipal Power's commitment to 100 percent clean electricity sets the stage for significant reductions in GHG emissions citywide.



- c. **Complete Streets.** *Ensure that all streets are designed to provide a safe and convenient environment for all modes, including bicyclists, people using mobility devices such as wheelchairs or walkers, and pedestrians. Adequately maintain sidewalk conditions to avoid tripping hazards.*
- d. **Safe Routes to School.** *Increase walking and biking to school by developing and improving safe routes to schools and out-of-school programs.*
- e. **Mobility for All.** *Prioritize roadway network improvements that increase mobility and equitable access for all residents, especially low-income individuals, youth, seniors, individuals with disabilities, and other vulnerable residents.*
- f. **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.*
- g. **Access to the Shoreline.** *Expand and improve pedestrian and bicycle access to the waterfront and recreational facilities throughout Alameda.*
- h. **Access to Oakland.** *Improve connections for all modes, especially transit, bicycle and pedestrian connections to Oakland.*
- i. **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-8

Transit Use. Reduce automobile pollution and greenhouse gas emissions by increasing transit use. (See also Policy ME-16).

Actions:

- a. **Partnerships.** *Collaborate and partner with AC Transit, Water Emergency Transportation Authority (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.*
- b. **Convenience and Frequency.** *Work with AC Transit to provide convenient and frequent bus service within a quarter mile of every Alameda residence and business during normal commute hours.*
- c. **Alameda Easy Pass and/or Free Fare Zone.** *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 and/or a Free Fare Zone that allows for free rides within Alameda.*
- d. **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.*
- e. **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.*
- f. **Transit Priority.** *Evaluate the creation of signal priority lanes, transit-only lanes, and queue jump lanes to make transit corridors more efficient and effective.*
- g. **First and Last Mile Connections.** *Improve safety and access for shared and active transportation around major transportation nodes.*
- h. **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-9

Vehicle Sharing. Support and encourage vehicle sharing to reduce the demand for vehicle parking and increase access to mobility. (See also Policy ME-17).

Actions:

- a. Alternative Vehicle Share Programs.** Support alternative vehicle share programs, such as bike share, car share, and scooter share programs.
- b. Carpooling.** Consider transit and carpool lanes and other methods to support and incent the use of shared vehicles.
- c. Carpool Parking.** Support the provision of preferential parking spaces for carpool vehicles in public parking lots and within private commercial developments that provide shared vehicle parking to increase mobility and equitable access for all residents.

CC-10

Climate-Friendly, Walkable and Transit-Oriented Development. Reduce reliance on automobile use and reduce vehicle miles traveled by prioritizing walkable, transit-oriented, medium and high density mixed-use development in transit-oriented areas and commercial corridors. (See also Policies LU-15, LU-33, LU-34 and ME-21).

Actions:

- a. Density, FAR and Transit.** When zoning property or considering commercial, residential or residential mixed-use projects near transit stops, encourage higher densities and floor-area-ratios to make the most efficient use of land, support public transportation, and minimize vehicle miles traveled.
- b. Parking Requirements.** Maintain off-street parking requirements with no minimum requirements and with maximum requirements to limit the amount of onsite parking allowed with each development in order to reduce reliance on the automobile and automobile ownership.

c. 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 but 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.

- d. Pedestrian Only Areas.** Create pedestrian-only areas and create periodic pedestrian-only programs, such as the San Francisco Sunday Streets program, in and around transit-oriented development and strategically throughout Alameda.

CC-11**Climate-Friendly Employment Commute Behavior.**

Encourage residents to telecommute or work from home to reduce vehicle miles traveled, greenhouse gas emissions, and commute hour congestion. (See also Policies LU-2, LU-13 and HE-4).

Actions:

- a. Home Occupations.** Implement municipal code amendments to allow for a wider variety of “home occupation permit” types in residential zoning districts.
- b. Support Telecommuting Professionals.** Allow and encourage cafes, restaurants, and similar uses that specifically cater to telecommuting professionals in all zoning districts.
- c. Flexible Home Office Spaces.** Allow for and actively encourage the construction of flexible spaces, such as Accessory Units and outdoor spaces to facilitate telecommuting from home in residential zoning districts.
- d. Promote Work-Live Environments.** Support and encourage “work-live” developments in commercial zoning districts.
- e. Telecommuting Work Sites.** Encourage and permit remote work sites, telecommuting workplaces, coworking spaces and other shared work locations within Alameda.



SPOTLIGHT

BUILDING ELECTRIFICATION BENEFITS



FISCAL RESPONSIBILITY AND INEVITABILITY:

Key regional and state decision-makers, including PG&E, have indicated the desire and intention to go all-electric and eventually discontinue gas service.



EQUITY:

As natural gas costs rise over time, customers will switch to all-electric appliances and homes at faster and faster rates. Coordinating and subsidizing a timely and fair transition for lower-income and more vulnerable residents is critical.



HEALTHY AIR:

Gas appliances emit pollutants and increase risk of respiratory illness, cardiovascular disease, and other long-term illnesses. Children living in homes with gas stoves are 40% more likely to develop asthma.



RESILIENCE + SAFETY:

Buildings that depend on natural gas may have to wait 6 months following severe earthquake events for service to return (compared to up to 1 week with electric appliances). Removing gas infrastructure reduces the risk of fires in the event of an earthquake.



CLIMATE:

Replacing gas appliances with electric appliances will reduce methane emissions from natural gas use, which is 86 times stronger than carbon dioxide, having significant impacts on climate change.

CC-12

User Fees and Congestion Pricing. Advocate for changes to State law that would allow local jurisdictions to implement programs such as congestion pricing or tolling to actively manage roadway use to reduce vehicle miles traveled and greenhouse gas emissions. (See also Policy ME-19).

Actions:

- a. **Equity.** *Ensure that user fees are equitable and consider the impact of costs on lower income or other vulnerable communities and users.*
- b. **Revenues.** *Utilize congestion management pricing revenues to fund improvements to transit and active transportation modes of travel.*

CC-13

Alameda's Building Stock. Reduce greenhouse gas emissions from natural gas combustion and natural gas leaks.

Actions:

- a. **Existing Buildings.** *Prepare and adopt citywide regulations and incentives to encourage owners of existing buildings to convert natural gas appliances to clean electricity.*
- b. **New Construction Reach Codes.** *Adopt reach codes that eliminate the use of fossil-fuels in all new buildings constructed in Alameda.*
- c. **Rebate Programs.** *Support programs that encourage homeowners/commercial building owners to implement electrification retrofits, with an emphasis on Alameda's most vulnerable residents.*
- d. **Partner.** *Partner with PG&E and other utility companies to plan for the safe transition from natural gas to clean energy alternatives, including removal of infrastructure that pose hazards when not in use.*

CC-14

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:

- a. Weatherization and Energy Efficient Building Renovations.** *Promote investments in building energy efficiency through programs and the streamlining of permitting requirements for energy-efficient building renovations such as weatherization while retaining requirements for new windows to visually match the original windows.*
- b. Public Facilities.** *Incorporate renewable energy, electrification, and energy efficiency into public facility capital improvements.*
- c. Low Carbon Materials.** *Require or promote the use of low-carbon building materials where available.*
- d. Energy Audits.** *Consider requirements for energy audits or energy upgrades at major renovations or time of sale.*
- e. Incentives.** *Incent the use of the Living Community Challenge, LEED for Neighborhood Development, or similar third-party certification system to certify climate friendly construction.*
- f. Financing.** *Identify and implement inclusive financing mechanisms that encourage the use of clean electricity for appliances, HVAC, and water heating, in single-family, multifamily, and commercial buildings.*
- g. Solar Panels.** *Encourage installation of solar panels and energy storage equipment in existing and new development and on public property such as the former Doolittle Landfill.*
- h. Low Carbon Materials.** *Seek low-carbon alternatives to conventional construction materials.*
- i. Landscapes.** *Continually update landscape ordinances and guidelines to reduce energy use and GHG emissions from landscape installation, renovation and maintenance.*

**SPOTLIGHT****WHAT IS AN ECO-BLOCK?**

By focusing on the block and neighborhood level, Oakland's EcoBlocks helps communities to upgrade their private and public infrastructure to improve resilience and secure their place in a greener, healthier future. These block-level pilot projects help Oakland to demonstrate and evaluate the cost-effectiveness of coordinated action to adapt buildings and communities to climate change. With leadership from UC Berkeley and financial backing from the California Energy Commission, the types of projects undertaken include:



Affordable energy retrofits (e.g., insulation, air sealing, efficient electric appliances)



Water efficiency upgrades (e.g., efficient fixtures & appliances, reuse water/greywater)



Shared electrical assets (e.g., photovoltaic array & battery storage)



Mobility improvements (e.g., shared electric vehicle with curbside charging)

Source: <https://ecoblock.berkeley.edu/about/>

CC-15

Neighborhood Resilience Coordination. Consider piloting building electrification, water conservation and other climate initiatives at a block or neighborhood level to more cost effectively transition to climate friendly energy, water, and resource use.

Actions:

- a. Electrification.** Offer blocks or neighborhoods assistance in electrifying their homes through incentives that reflect the savings to taxpayers and ratepayers from being able to remove or shut off the natural gas infrastructure on their block.
- b. Flooding.** Include tailored planning and support for communities testing various flooding adaptation strategies.
- c. Priorities.** Prioritize block and neighborhood-driven priorities while selecting a broad range of interventions to test to maximize the City's ability to learn from each pilot project.

CC-16

Water Efficiency and Conservation. Minimize water use in existing and new construction and landscaped areas to make Alameda more resilient to drought and generate less wastewater.

Actions:

- a. Water Efficient Landscape Requirements.** Maintain up-to-date water-efficient landscaping regulations and ordinances to reduce water use in both private and public landscapes that include healthy, drought tolerant soils, diverse native plant species, non-invasive drought tolerant/low water use plants, and high-efficiency irrigation systems.
- b. Water-Efficient Buildings.** Require low-flow fixtures, such as low-flow toilets and faucets in new construction.
- c. Recycled and Reclaimed Water.** Promote the production and usage of recycled and reclaimed water (sometimes called "grey water") for potable and non-potable uses.

- d. Pesticides, Herbicides, and Fertilizers.** Limit the use of pesticides, herbicides, and fertilizers throughout the city by fostering healthy soil practices, which include organic carbon amendments (e.g. compost and mulch) on all non-turf planting areas.
- e. Soil Health.** Encourage soil health by promoting and educating the public about the benefits of organic carbon soil amendments that improve water retention in local landscapes.
- f. EBMUD.** Work with EBMUD to improve effectiveness of water conservation programs and increase drought awareness.
- g. City Buildings.** Implement water-saving technologies at all City-owned buildings and post visible signage to educate visitors.

CC-17

Zero Waste Culture. Create a zero waste culture by implementing the City of Alameda's 2018 Zero Waste Implementation Plan (ZWIP). (See also Policy HS-36).

Actions:

- a. Zero Waste Awareness.** Promote 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.
- b. Single-Use Plastics.** Work toward eliminating single-use plastic products. Promote and require compostable, recyclable and/or reusable products.
- c. Technical Assistance.** Provide targeted technical assistance for commercial and multi-family waste generators, which have the greatest opportunity to reduce waste sent to landfill.
- d. Green Waste and Food Recovery.** Work with waste management partners to create green waste and food recovery programs and enhance organics management to reduce organic material disposal in landfills and reduce greenhouse gas emissions.

- e. **Salvageable Materials.** Update the City's construction and demolition debris recycling ordinance to include specific incentives or requirements for deconstruction (rather than demolition) of existing buildings to salvage usable building components (lumber, doors, fireplaces, brick) on homes of a certain age.
- f. **CALGreen.** 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.
- g. **Franchise Agreements.** Expand the high diversion franchise agreement with waste management partner(s) related to recycling, organics and construction and demolition waste to further support Alameda in reaching its zero waste goal.
- h. **Recycling/Reuse.** Support organizations or facilities that help Alameda to recycle or reuse materials. Provide access to recycled materials, such as mulch, for use by Alameda residents and businesses. Make material available to the public.

CC-18

Building Renovation and Reuse. To reduce construction waste and GHG emissions associated with construction material manufacture and transportation, encourage and facilitate renovation and rehabilitation of existing buildings or relocation of existing structures to a new location instead of demolition and new construction. (See also Policy LU-17).

 **SPOTLIGHT**
FOOD WASTE

FOOD WASTE AND OTHER ORGANIC MATERIALS REPRESENT OVER 20% OF CALIFORNIA'S METHANE EMISSIONS,

which are 84 times more potent as a greenhouse gas than carbon dioxide and contribute to conditions like asthma.



Source: <https://www.calrecycle.ca.gov/organics/slcp>



GOAL 3: 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.

POLICIES:

CC-19

Sea Level Rise Protection. Reduce the potential for property damage and loss, and loss of natural habitat resulting from sea level rise. (See also Policy HS-15).

Actions:

- a. **Flood Protection Maps.** *Work with regional agencies to regularly update the Climate Action and Resiliency Plan with projected inundation zones for years 2070 and 2100 consistent with the most up to date guidance from the Ocean Protection Council (OPC) for sea level rise in California.*
- b. **Contaminated Lands.** *Identify and map contaminated lands at risk of inundation from rising groundwater and flood inundation and identify actions to mitigate the risk of mobilizing contaminants.*
- c. **Land Planning.** *Prioritize areas of little or no flood risk for new flood-incompatible development (i.e. housing and commercial development) in new plans or zoning decisions.*
- d. **Shoreline Habitat and Buffer Lands.** *Identify, preserve, and restore existing undeveloped areas susceptible to sea level rise to reduce flood risk, enhance biodiversity, and improve water quality. Maintain and restore existing natural features (i.e. marsh, vegetation, sills, etc.) between new development and the shore to allow for marsh or beach migration.*
- e. **Conservation Easements.** *Consider use of conservation easements to maintain private lands for shoreline and beach migration.*
- f. **Nature Based Flood Control Systems.** *When designing new flood control systems where none currently exist, prioritize use of nature based flood control systems, such as horizontal levees, marsh lands, or beach restoration.*

CC-20

Land Development. Require that new development reduce the potential for property damage, and loss of natural habitat, which results from groundwater and sea level rise. (Also see Policy HS-22).

Actions:

- a. **Assessment.** *Require new development proposed in areas of flood risk to assess flood risk and incorporate specific groundwater and sea level rise mitigation strategies.*
- b. **Mitigation.** *Require new development to incorporate design features to mitigate 50 years of the Ocean Protection Council's Medium-High Risk Aversion, high emissions scenario of sea level rise in addition to a 100 year storm in the initial design and funding mechanisms to pay for later adaptation improvements to address future sea level and groundwater increases above that level. Projects that include new seawalls where none currently exist shall evaluate the off-site impact of the new walls on adjacent and nearby communities.*
- c. **Nature Based Design.** *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.*

CC-21

Adaptation Pathway Master Plan. Develop an adaptation pathway master plan that includes updated vulnerability studies, groundwater rise studies and other data collection as needed to identify the range of shoreline protection, groundwater management and adaptation strategies over time from short- to long-term as well as land use, building and infrastructure design standards needed to help Alameda and the entire San Leandro Bay and Oakland-Alameda Estuary area adapt to rising sea and groundwater levels. The plan should include economic analysis and cost estimates to facilitate the development of funding strategies and regional cooperation (See also Policies LU-14, CC-24, and HS-24).

CC-22

Critical Public Assets. Ensure resilience and long-term functionality of critical public assets threatened by earthquakes, sea level rise or rising groundwater. (See also Policy HS-12).

Actions:

- a. **Stormwater System.** 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.
- b. **Sewer System.** Protect vulnerable wastewater systems and facilities to minimize disruption to the systems following ground shaking and extreme weather events.
- c. **Electric System.** Ensure electrical infrastructure is flood-proofed or elevated. Where possible, move assets out of the hazard zone.
- b. **Transportation.** Work with Caltrans and the Alameda County Transportation Commission to identify funding to adapt the regional and local roadways in Alameda.

CC-23

Rising Groundwater. Prepare for the impacts of rising groundwater levels on private and public property. (See also Policy HS-24).

Actions:

- a. **Infrastructure and Access.** Develop plans and strategies to protect and/or relocate critical infrastructure and maintain access to impacted property.
- b. **Building Codes.** Prepare and adopt revised zoning and building codes to increase resilience of new buildings against the impacts of rising groundwater.
- c. **Annual Review.** Annually monitor groundwater levels and progress on specific strategies to mitigate impacts.
- d. **Data.** Collect new data, add groundwater monitoring wells, analyze additional contaminants and potential landfill risks, update liquefaction zones and continue to refine the quality of the groundwater model.



SB 1383:

SHORT-LIVED CLIMATE POLLUTANTS (SLCP): ORGANIC WASTE METHANE EMISSIONS REDUCTIONS

REQUIRES REDUCTION OF ORGANIC MATERIAL TO LANDFILL BY:



BELOW 2014 LEVELS BY:

2020



BY:

2025



OF DISPOSED EDIBLE FOOD SHOULD BE RECOVERED FOR HUMAN CONSUMPTION BY:

2025

ENFORCEMENT & PENALTIES WILL BEGIN JANUARY 1, 2022



SPOTLIGHT

OCEAN PROTECTION COUNCIL'S RECOMMENDED PLANNING SCENARIO

California's Ocean Protection Council, in its March 2018 Sea-Level Rise Guidance, recommends California communities plan for at least 50 years of sea-level rise at the Council's Medium-High Risk Aversion, high emissions scenario and prepare for 100-year events at that level, such as inundation from a 100-year storm surge. For the City of Alameda, this means preparing for approximately 3.5 feet of sea-level rise plus the potential for a 3.5 foot coastal storm surge. It also means considering the increased risks that 3.5 feet of sea-level and groundwater rise, as well as changing weather patterns, would bring for tsunamis, liquefaction and rainfall events. Future updates of this General Plan will explore and consider more fully this 50-year climate scenario and its implications.

Source: https://opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf



photo: Maurice Ramirez

View of Elsie Roemer Bird Sanctuary on Alameda's south shore

CC-24

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. (See also Policy HS-18).

Actions:

- a. **Alameda Nature Reserve.** Support use and development of the 550 acre former US Navy airfields and runways as a Nature Reserve and area of wetlands that may serve as flood water retention area during major storm events.
- b. **Corica Park.** Support the use and development of the 330 acre golf complex as a recreation area and lagoon system that currently serves as a flood water retention area during major storm events.
- c. **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-25

Heat and Wildfire Smoke Emergencies. Create a network of clean air and cooling emergency shelters throughout Alameda. (See also Policy HS-62).

Actions:

- a. **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.
- b. **Incentives.** Incentivize building owners to upgrade or install HVAC systems to provide more safe places during heat waves and times with dangerous air quality levels.
- c. **City Facilities.** Evaluate options to upgrade or otherwise retrofit HVAC systems and buildings to be able to maintain temperatures below 78 degrees fahrenheit and adequately filter air pollutants.



photo: Maurice Ramirez

Protecting and restoring natural habitats to support biodiversity and to prepare for climate change is a key goal of the General Plan.



GOAL 4: PROTECT

Protect and conserve Alameda’s natural resources and recognize their intrinsic importance in responding to climate change and fostering a healthy environment that sustains people, neighborhoods and the unique natural resources of the island.

POLICIES:

CC-26

Urban Forest. Take actions to maintain and expand the number of trees in Alameda on public and private property to improve public health, reduce pollution, and reduce heat island effects. (See also Policies LU-2, LU-3 and ME-14).

Actions:

- a. Tree Preservation.** Continue to require and incent the preservation of large healthy non-invasive trees and vegetation.
- b. New Development and Parking Lots.** Require ample tree plantings in new development and related parking lots.
- c. Strengthen Tree Replacement Requirement.** Strengthen the tree replacement requirement for any protected trees removed due to new development or redevelopment.
- d. Prioritize Tree Planting.** Invest in tree planting and maintenance, especially in low canopy areas and neighborhoods with under-served or under-represented communities.

- e. **Resilient Urban Forest.** Support the increase of the tree canopy in Alameda with drought tolerant, shade-producing, fire resistant tree species.
- f. **Public Parks and Lands.** Utilize public parks and public lands, such as Alameda Point, to significantly increase the urban forest.
- g. **Maintain and Update the City's Master Tree Plan.** Ensure an up-to-date, climate friendly Master Tree Plan that selects drought tolerant, shade-producing, fire-resistant tree species adapted to Alameda's changing climate. This plan should include:
 - » Design of new tree wells to allow better infiltration of stormwater;
 - » Promotion of sidewalk gardens and other sidewalk landscaping;
 - » Expansion of greenery in the public right-of-way and removal of impervious surfaces as feasible;
 - » Strategies to reduce conflicts between trees, tree roots, and other public infrastructure such as sidewalks, overhead lines and street infrastructure; and
 - » Identification of funding for both expansion and maintenance of the urban forest.

CC-27

Habitat and Biological Resource Protection and Restoration. Protect and restore natural habitat in support of biodiversity and protect sensitive biological resources to prepare for climate change. (See also Policies OS-12, OS-18 and HS-36).

Actions:

- a. **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 incorporate those protections in land planning and community design.
- b. **DePave Park and New Wetlands.** Identify areas, such as the plan for DePave Park at Alameda Point, to increase the amount of wetlands and habitat areas in Alameda.
- c. **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.
- d. **Permanent Protections.** Preserve habitat in perpetuity through deed restrictions, conservation easement restrictions, or similar legally enforceable instruments.
- e. **Operation and Maintenance.** Ensure a secure and ongoing funding source for operation and maintenance.
- f. **Eelgrass.** Promote the planting of eelgrass in shallow waters around Alameda to provide habitat, improve water quality, sequester carbon, help absorb wave energy, and prevent erosion.
- g. **Information.** Work with local recreation groups to disseminate information regarding the sensitivity of open space habitat areas and the impacts of motorized craft.
- h. **Signs.** Require the posting and maintenance of signs warning boaters and users of motorized craft as they approach wildlife areas.
- i. **Waste Diversion.** Prevent accumulation of trash in the Bay by collaborating regionally and implementing design solutions throughout Alameda, such as providing clearly-marked, covered wind-sheltered trash and recycling bins, fish hook and line bins, and sharps bins that are emptied regularly. Post signs and launch efforts such as 'Adopt-a-Drain' programs and Marine Alert Systems to empower, educate and raise awareness about the dangers posed from marine waste and other more acute hazards like sewage and oil spills.



FIGURE 3.2: PROPOSED MARINE CONSERVATION, WILDLIFE AND RECREATION AREA ON THE SOUTH SHORE OF ALAMEDA POINT, REFER TO POLICY CC-29

CC-28

Alameda Nature Reserve. Work with the US Department of Veterans Affairs, East Bay Regional Park District (EBRPD), and US Fish and Wildlife to maintain and improve the 550 acre Alameda Nature Reserve and seasonal Least Tern Colony. (See also Policy OS-17).

Action:

- a. **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 Reserve.
- b. **Lighting.** Ensure that all lighting installations at Alameda Point near the Nature Reserve are designed and installed to be fully shielded (full cutoff) to minimize glare and obstructive light and avoid misdirected or excessive illumination.

CC-29

Alameda Point Marine Conservation, Wildlife and Recreation Area. Support partnerships with regional, state, and federal conservation agencies and volunteer non-governmental organizations to establish and designate a Marine and Wildlife Conservation and Recreation Area to enhance and protect habitat values, ensure safe public access, and foster appreciation of the marine environment south of Alameda Point. (See also Policy OS-22 and Figure 3.2).

Actions:

- a. **Mapping.** *Work with the partnership to visually map the sea bed and rock walls to establish a biological inventory and final boundary for the proposed Conservation Area.*
- b. **Trash Removal.** *Work with the partnership to implement quarterly or semi-annual removal of trash that accumulates on Alameda's rocky shoreline, rock walls and beaches that is detrimental to wildlife.*
- c. **Signage.** *Work with the partnership to establish signage on Breakwater Island that acknowledges this marine formation as the largest night roosting site for California Brown Pelicans in the San Francisco Bay. Restore the historic light beacon at the western end of the breakwater.*
- d. **Oil Spill Boom.** *Work with the partnership to establish a dedicated oil spill boom to be stored at Alameda Point to protect this sensitive habitat area in case of an oil spill on the Bay.*
- e. **Public Access Structure.** *Work with the partnership to construct a safe public access structure on the long rock wall that begins at the beach, which will allow safe fishing and wildlife observation and safe access for trash removal.*
- f. **Active Recreation.** *Partner with non-motorized recreational watercraft organizations to promote safe and responsible enjoyment of this waterway and an appreciation of the marine natural environment.*

CC-30

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

Action:

- a. **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

Crown Memorial State Beach. Work with the East Bay Regional Park District 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-32

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-33**

Green Infrastructure. Protect San Francisco Bay, San Leandro Bay, and the Alameda Oakland Estuary by promoting, requiring, and constructing green infrastructure that improves stormwater runoff quality, minimizes stormwater impacts on stormwater infrastructure, improves flood management, and increases groundwater recharge. (See also Policy HS-25).

Actions:

- a. 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.
- b. Capital Improvement Program (CIP).** Include 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.
- c. 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.
- d. Stormwater Runoff.** Promote the reduction of stormwater runoff into the Bay with the increased use of pervious materials, retention basins, bioswales and similar methods.
- e. 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.
- f. 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 and the San Francisco Bay Region (Regional Water Board), to guide the City's efforts to prevent pollutant discharges and to protect Bay water quality.

CC-34

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

Actions:

- a. **Preservation of Wetlands.** *Require development to preserve existing natural wetland areas and associated transitional riparian and upland buffers.*
- b. **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.*
- c. **Biological Assessments.** *Require a biological assessment of any proposed project site where species or the habitat of species defined as endangered, sensitive, or special status by the California Department of Fish and Game or the U.S. Fish and Wildlife Service might be present. Require development to mitigate any unavoidable losses of wetlands or habitat.*
- d. **Water Quality.** *Require new development to protect the quality of water bodies and natural drainage systems through site design, source controls, stormwater treatment, runoff reduction measures, green roofs, best management practices and low impact development and hydromodification strategies.*
- e. **Soil Contamination.** *Ensure proper remediation of contaminated soils to reduce the risk of current or future exposure from groundwater or sea level rise.*
- f. **Nesting Bird Survey.** *Require consultation with a qualified wildlife biologist prior to any construction activities that would remove, trim or otherwise disturb large trees during the general bird breeding season (February 1 through August 31) and implement any necessary no-work buffer zones around identified nests in coordination with the California Department of Fish and Wildlife.*
- g. **Bat Survey.** *Require consultation with a qualified wildlife biologist prior to any construction activities that would demolish existing buildings or remove large trees, with removal or disturbance of any roosting bats to be performed in coordination with the California Department of Fish and Wildlife.*
- h. **Aquatic Species and Habitats.** *Require consultation with the National Marine Fisheries Service and California Department of Fish and Wildlife to identify the need for any permits and to identify appropriate measures to protect aquatic species and habitats during any in-water construction requiring pile driving.*
- i. **Native Oysters and Eelgrass Beds.** *Require a pre-construction eelgrass and native oyster survey prior to any construction activities involving any disturbance to the shoreline or adjacent waters in accordance with guidance provided by the National Marine Fisheries Service.*
- j. **Dredging.** *Require all dredging activity in waters surrounding Alameda to implement Best Management Practices identified in the Long-term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region (2001) published by the U.S. Army Corps of Engineers in order to avoid impacts on water quality and avoid degradation of aquatic habitat.*
- k. **Lighting.** *Ensure that all lighting installations are designed and installed to be fully shielded to minimize glare and obstructive light and avoid misdirected or excessive illumination.*
- l. **Rooftop Antennas.** *Minimize the number of rooftop antennas and other equipment, and co-locate the equipment whenever feasible to reduce risks to wildlife.*
- m. **Guy Wires.** *Prohibit the use of guy wires to support monopole structures or antennas on buildings, in open areas, and at sports and playing fields and facilities. CC-35*

CC-35

Paleontological Resources. Protect paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions, during site grading and construction activities.

Action:

a. Construction. *If resources are discovered during construction, halt all ground disturbance within 100 feet of the find until the services of a qualified paleontologist can be retained to identify and evaluate the scientific value of the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). Significant paleontological resources should be salvaged and deposited in an accredited and permanent scientific institution, such as the University of California Museum of Paleontology.*

CC-36

Prehistoric or Historic Cultural Resources. Protect prehistoric or historic cultural resources during construction activities.

Actions:

- a. Discoveries.** *In the event that prehistoric or historic cultural resources are encountered during excavation and/or grading of the project site, all activity within a 100-foot radius of the find shall be stopped, the City shall be notified, and a qualified archaeologist shall examine the find to evaluate the significance of the encountered resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). The results of any additional archaeological effort required shall be presented in a professional-quality report, to be submitted to the City of Alameda and the Northwest Information Center at Sonoma State University in Rohnert Park.*
- b. Preservation In Place.** *In the event that any cultural resources encountered during subsurface disturbance are determined to be historical resources, the project sponsor shall implement preservation in place as the preferred manner of mitigating impacts to buried historic resources.*
- c. Tribal Consultation.** *If any Native American tribal representatives have requested consultation with the City of Alameda regarding general or specific development projects in Alameda, prior to issuance of a grading permit, the City shall notify the tribal representative(s) in writing soliciting their input regarding the protection of tribal cultural resources (TCRs) during project construction in accordance with California Public Resources Code Section 21080.3.2. Mitigation measures to reduce impacts to TCRs shall be developed in coordination with the consulting tribal group. The consultation required by Senate Bill (SB) 18 and Assembly Bill (AB) 52 is considered complete when either the parties agree to measures to mitigate or avoid any significant impact on TCRs, or if one of the parties, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.*
- d. Human Remains.** *In the event that any human remains are encountered, all ground-disturbing work in the vicinity of the remains shall cease immediately until the coroner of Alameda County has been contacted, in accordance with Section 7050.5 of the California Health and Safety Code. If the coroner determines that the human remains are of Native American origin, the Native American Heritage Commission (NAHC) must be contacted within 24 hours, and the project sponsor shall comply with State laws relating to the disposition of Native American burials, regulated by the NAHC (Pub. Res. Code Sec. 5097 et seq.). No further excavation or disturbance of the site shall occur until the coroner of the County has been informed and has determined that no investigation of the cause of death is required; and if the remains are of Native American origin, the Coroner's Office will notify the NAHC of the find as provided in Public Resources Code Section 5097.98.*