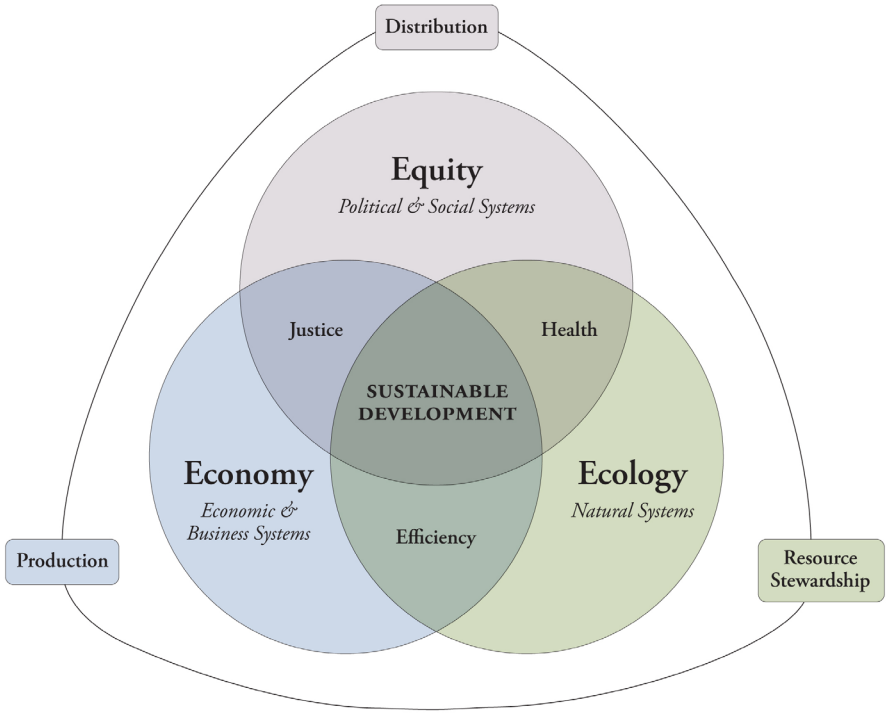
7 SUSTAINABILITY

The purpose of sustainability in Emeryville—and its incorporation throughout the General Plan—is to take responsibility for the urban development and population growth projected during the planning period and their potential impact on the environment. By implementing sustainable design measures and policies, Emeryville can reduce its contribution to global climate change, minimize its reliance on foreign oil and other fossil-fuel sources, and decrease consumption of natural resources.

The very same policies that dictate more sustainable development also enhance quality-of-life and public health: increased energy efficiency, waste diversion and reduction, mixed land uses, convenient access to parks and open spaces, alternative transportation networks, local and organic food sources, stormwater management, and many more initiatives central to this Plan.

The "3 E's" of sustainability—ecology, economy, and equity—provide a framework in which to discuss general plan development policies. The graphic below describes the interrelationship between these systems. Ecology refers to the natural systems, such as species, habitats, and water, inciting a need for stewardship of these resources. The economic component underlies the production of goods and services, integrating sustainability into the management of economic and business systems. Finally, equity refers to the distribution of costs and benefits, reflecting a fundamental human rights issue as well as a holistic perspective that sustainability can only be achieved when all segments of the community are included. Emeryville can improve ecological conditions in a way that enhances the City's already robust economy and provides equal opportunities, in terms of access to housing, transportation, jobs, education and recreation for all residents.



Since the concept of sustainability is an integral part of the Emeryville General Plan, sustainability policies are described within each of the elements. This standalone chapter consolidates these policies, existing City programs, and new goals and policies identified during the development of the General Plan. In this way, the Sustainability Element creates a convenient one-stop resource for Emeryville's sustainability programs. The chapter is organized as follows:

- Section 7.1 provides a summary of the City's leadership and accomplishments toward sustainability and what plans and programs already exist. Existing programs and policies establish a basis on which to implement goals and policies.
- Section 7.2 is a review of sustainability concepts that are included in other chapters of this plan. Sustainability encompasses many dimensions of city building and policies and principles have been woven throughout this document.
- Section 7.3 is a more detailed examination of seven topical areas including energy, waste, land use and urban design, parks and open space, transportation, environmental health and water. This section substantiates the need for additional General Plan goals and policies in certain topic areas and the direction for further work.
- Goals and policies conclude the chapter.

7.1 LEADERSHIP AND EXISTING PROGRAMS

Given its small size and built out nature, Emeryville is in many ways already practicing sustainable development, as it has to make effective use of its limited resources. The City has shown great leadership in the areas of brownfield remediation, stormwater management and local transit through the Emery Go-Round shuttle. It has joined ten other cities in Alameda County to partner with the County and Local Governments for Sustainability (ICLEI) on developing its own Climate Action Plan. Finally, Emeryville has joined cities around the world in a pledge to pursue sustainable development, signing on to the Urban Environmental Accords on United Nations World Environment Day in 2005. The City can build on these existing policies and programs to develop more effective and locally relevant sustainability programs.

Leadership

Brownfields Remediation

Through the Emeryville's brownfields programs, made possible in large part through a grant from the US Environmental Protection Agency, the City has cleaned up 240 acres of land with substantial soil and groundwater contamination. These clean-up efforts have brought new life and uses out of former industrial land, adding retail, office and housing development to create new neighborhoods and regional destinations. The City produced risk management measures that were designed to protect public health, deep groundwater resources, and the ecological resources of the San Francisco Bay. At the same time, these measures provided regulatory relief and more cost certainty for property owners, developers, and responsible parties. The collaboration among community members, regulatory agencies and technical professionals and success of the program is a model for other post-industrial cities.

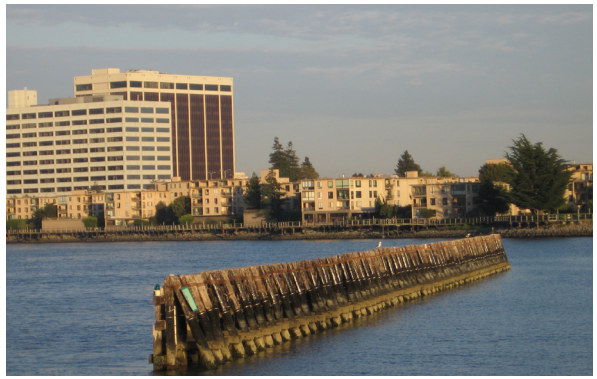
Stormwater Management

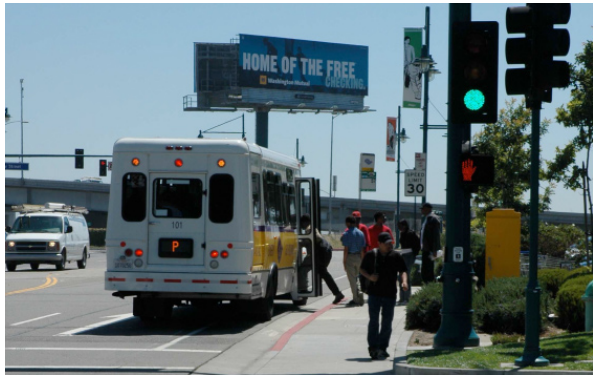
Rain washes pollutants from impervious surfaces, such as roads, rooftops and parking lots, into natural bodies of water. Emeryville has taken responsibility for its bayside location, working to reduce impervious surfaces and clean stormwater runoff before entering into the San Francisco Bay. The City is a participant in the National Pollutant Discharge Elimination System Permit, which is issued and enforced by the San Francisco Regional Water Quality Control Board. This permit system requires new development applicants to incorporate post-construction stormwater treatment systems and best management practices on the site. The City additionally requires that these treatment measures use vegetation to treat pollutants in stormwater runoff (e.g. through rain gardens, bioretention areas and living roof systems).

Emeryville developed Stormwater Guidelines for Green, Dense Redevelopment in 2005, with support from the Environmental Protection Agency (EPA). These guidelines outline strategies for meeting stormwater treatment thresholds using site design, parking strategies, and treatment measures to allow water to flow through vegetation. Design measures could include bioretention basins, biofiltration swales, cisterns integrated into the architecture, and/or green roofs. This set of guidelines won an award from the American Planning Association and has been promoted by EPA as a model strategy for other infill communities.

Emery Go-Round

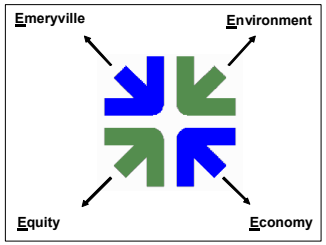
Emeryville has been a leader in providing convenient and accessible local transit. The Emery Go-Round is a free bus shuttle service connecting key job and activity centers in the City with BART and AC Transit





The City has shown impressive leadership through several key programs: brownfields remediation, stormwater management, and the Emery Go-Round shuttle service.

City of Emeryville
Climate Action Plan
November 2008



The City's Climate Action Plan will serve as the implementation tool to reduce greenhouse gas emissions. The Urban Environmental Accords provide an adopted framework for local policy initiatives.

transportation hubs that carries over one million passengers each year, on seven shuttle routes. The shuttle is a private transportation service, funded by all commercial property owners in the citywide transportation business improvement district and operated by the non-profit Emeryville Transportation Management Association. Since BART does not have a station in Emeryville, the shuttle provides essential connectivity to points within and outside Emeryville, while also helping to alleviate congestion. An expansion of the current system—to cover residential areas—was under consideration in June 2008.

Climate Action Plan (CAP)

Regional efforts establish a more localized approach for sustainability that addresses the unique environmental opportunities and constraints in Emeryville and the Bay Area. In 2006, Emeryville partnered with Alameda County and ten other cities to become members of ICLEI - Local Governments for Sustainability (ICLEI) and participate in the Alameda County Climate Protection Project (ACCPP). The jurisdictions committed to an "ongoing, coordinated effort to reduce the emissions that cause global warming, improve air quality, reduce waste, cut energy use and save money."[1]

ICLEI and the Alameda County Waste Management Authority & Recycling Board (StopWaste.org) helped Emeryville to develop a baseline greenhouse gas emissions inventory, a community-wide emissions reduction target, and a climate action plan that identifies policies that will enable the City to meet its target. The CAP is being drafted, led by the City's Climate Change Task Force. The Plan focuses on three key areas: transportation/land use, waste, and energy, which are described in Section 7.3. This General Plan calls for the implementation of the CAP, rather than duplicate its policies. The CAP was adopted by City Council in November 2008.

Urban Environmental Accords

Global efforts by local leaders provide a useful framework for developing a coherent sustainability program. As part of the United Nations World Environment Day, held in San Francisco in 2005, Emeryville joined other cities around the world as a signatory on the Urban Environmental Accords. These Accords represent a collaborative commitment "to build an ecologically sustainable, economically dynamic, and socially equitable future of our urban citizens." Although this General Plan's Guiding Principles, described in Chapter 1, serve as overarching goals to this Plan, the 21 action items described in the Accords dovetail beneath them, stimulating the City's policies around sustainability described in this Element and through the Plan. Section 7.3 documents the action items of the Accords within each of its seven topic area and describes the City's implementation progress so far.

The intention of the Accords was to have each city pick three action items to adopt each year and implement locally appropriate programs to achieve the Accords. Seven years later, at World Environment Day 2012, cities will again come together and determine their collective progress.

1 *City of Emeryville. Draft Climate Action Plan. October 2008: 5.*

7.2 LINKAGES TO OTHER ELEMENTS

Sustainability issues and policies are integral to each element of the General Plan. This section identifies the interrelatedness of sustainability concepts located in the other elements.

Guiding Principles

The Guiding Principles, stated in Chapter 1: Introduction, describe the overarching principles that guide General Plan goals and policies, including the City's strategy for sustainability. One Guiding Principle, in particular, supports sustainability and innovation, with respect for the past—through redevelopment of brownfields, using green construction techniques, and encouraging low ecological impact. The remaining principles support sustainability by aspiring for vibrant communities with an array of amenities and transportation choices that encourage walking and biking and provide accessibility to essential services.

Land Use Element

The Land Use Element, Chapter 2, describes a vision for a mixed use city, with greater residential and employment densities and enhanced neighborhood centers and services, leading to a more livable compact and efficient city. Orienting higher-density housing and more intensive non-residential uses near transit can reduce vehicle miles traveled.

TABLE 7-1: CROSS-REFERENCED GOALS AND POLICIES FROM THE LAND USE ELEMENT

LAND USE GOALS	
LU-G-1	**An overall balance of uses—**Employment, residential, cultural, destination and local retail—as well as a full range of amenities and services are necessary to support a vibrant community.
LU-G-3	**Community activity centers—**Centers that combine residential, retail, office, and public uses to create areas of identity and activity for residents and visitors.
LU-G-4	**A mix of housing types—**A diversity of housing types to accommodate a variety of household sizes and incomes.
LU-G-6	**Vibrant new mixed-use centers—**Intensification of existing underutilized commercial centers with surface parking (such as Powell Street Plaza and East Bay Bridge Center) as vibrant, multi-story, walkable mixed-use destinations with structured parking and open space.
LU-G-11	**A wide range of economic activity—**An economy that capitalizes on Emeryville's central location, strengthens the City's tax base, and ensures that Emeryville has adequate fiscal resources to fund high quality public services for its residents and businesses.
LAND USE POLICIES	
LU-P-2	The Powell/Christie/Shellmound/I-80 core area will be developed into a compact but high-intensity regional transit hub. This hub will include a retail core, with stores, restaurants, and hotels; a financial and commercial center, creating a daytime work population; and a residential neighborhood, providing vitality during non-work hours.
LU-P-3	The northern (north of Powell) and southern halves of the Powell/Christie core area shall be integrated and connected, and the district shall be walkable, with small blocks, pedestrian-oriented streets, and connections to surroundings.
LU-P-4	Park Avenue (west of Hollis Street), Hollis Street (between 61st and midblock between 65th and 66th streets), Powell Street/Captain Drive, and San Pablo Avenue (between 36th and 47th streets) will be developed as walkable, mixed-use neighborhood centers, with an array of amenities and services—including stores, restaurants and cafes, galleries, and office uses—to serve neighborhood needs, with community-serving uses and active building frontages that engage pedestrians at the ground level.
LU-P-6	The current deficiency of park and open space will be addressed by making parkland acquisition a high priority by the City, and working with private land owners to secure these areas through development incentives, land swaps, and other mechanisms.
LU-P-17	The area around the Amtrak station shall be developed with pedestrian and bicycle amenities, and transit-supportive uses, through measures such as reduced parking requirement, incorporation of public parking in developments, and accounting for transit proximity when considering height and FAR bonuses.

Continues on next page

New residential development will support retail and neighborhood centers in key parts of the city and around transit centers. Encouraging a mix of land uses reduces vehicle trips and promotes circulation by alternative modes.

LU-P-21 The East Bay Bridge, Powell Street Plaza, and Marketplace shopping centers shall be intensified by consolidating parking into structures and converting surface parking lots into residential and mixed-use development—including retail, hotels, and offices; expanding the city street grid through the sites; and developing new parks and public open space. Future redevelopment of these shopping centers should include at least as much retail space as existed when this General Plan was adopted.

LU-P-27 A diversity of commercial uses to insulate the City's fiscal base from downturns in particular markets shall be maintained.

LU-P-28 The City will pursue retail uses that will serve the need of Emeryville residents, and encourage these uses to locate in the Neighborhood Centers.

LU-P-29 The City will encourage the development and retention of small business, start-up firms, partnership incentives, and buildings that accommodate these businesses.

LU-P-31 The City will encourage development of existing Emeryville businesses with the objective of retaining and expanding employment opportunities and strengthening the tax base. Provide assistance to existing businesses that may be displaced by new development to relocate in Emeryville.

LU-P-32 The City will work with existing Emeryville businesses, Chamber of Commerce, and others to address the City's economic needs and stimulate growth.

Transportation Element

The Transportation Element, Chapter 3, pursues a strategy to expand the street grid and enhance alternative transportation options, allowing for more connectivity and walkability between jobs, shopping and other activity centers. Making alternative transportation more pleasant, convenient, and accessible, can reduce vehicle trips and therefore greenhouse gas emissions.

TABLE 7-2: CROSS-REFERENCED GOALS AND POLICIES FROM THE TRANSPORTATION ELEMENT

TRANSPORTATION GOALS	
T-G-1	**A comprehensive transportation system—**A transportation system that is efficient, safe, removes barriers, (e.g. accessibility near freeways and rail lines), and optimizes travel by all modes.
T-G-2	**Universally accessible—**A transportation system that meets the needs of all segments of the population, including youth, seniors, persons with disabilities, and low-income households.
T-G-3	**Multi-modal—**A transportation system that eliminates the necessity of owning and/or driving personal vehicles because of the availability of convenient and accessible alternative modes of transportation.
T-G-4	**A walkable city—**A universally accessible, safe, pleasant, convenient, and integrated pedestrian system that provides links within the city and to surrounding communities, and reduces vehicular conflicts.
T-G-5	**A safe, comprehensive, and integrated bicycle system—**A system and support facilities throughout the city that encourage accessible bicycling for all community members.
T-G-6	**A safe, efficient, comprehensive, and integrated transit system—**A public transit system that allows for a reduction in automobile dependence for residents, employees, and visitors.
T-G-7	**A multi-functional street system—**A system that will ensure the safe and efficient movement of people, goods, and services and support a high quality of life and economic vitality.
T-G-8	**A balanced parking supply system—**Parking supply that balances economic development, livable neighborhoods, environmental and energy sustainability, and public safety, while reducing dependence on the automobile.
T-G-9	**Safe and efficient movement of goods—**Goods movement that supports commerce and industry while maintaining a high quality of life.
T-G-11	**Transportation demand management strategies—**TDM strategies that decrease single-occupant automobile demand and reduce vehicle miles traveled.
TRANSPORTATION POLICIES	
T-P-2	The design, construction, operation, and maintenance of city streets shall be based on a "complete streets" concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.
T-P-5	The City encourages development that minimizes Vehicle Miles Traveled (VMT).
T-P-6	To the extent allowed by law, the City's Traffic Impact Fee shall include bicycle, pedestrian, transit, and road improvements so that development pays its fair share toward a circulation system that optimizes travel by all modes.
T-P-11	Sidewalks shall be provided on both sides of all streets; pedestrian connections between new and existing development is required.

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The Transportation Element seeks to reduce barriers to pedestrian and bicycle connectivity in order to create safe and attractive places for walking and biking.

T-P-12 The city will plan, upgrade, and maintain pedestrian crossings at intersections and mid-block locations by providing safe, well-marked crosswalks with audio/visual warnings, bulb-outs, and median refuges that reduce crossing widths.

T-P-15 Walking will be encouraged through building design and ensure that automobile parking facilities are designed to facilitate convenient pedestrian access within the parking area and between nearby buildings and adjacent sidewalks. Primary pedestrian entries to nonresidential buildings should be from the sidewalk, not from parking facilities.

T-P-16 Safe pedestrian walkways that link to streets and adjacent bus stops will be required of new development.

T-P-19 Following completion of the new east span of the Bay Bridge, the west span should be retrofitted with a pathway to provide continuous pedestrian and bicycle access between San Francisco and the East Bay.

T-P-20 Safe and direct pedestrian access to Aquatic Park and the peninsula will be provided and maintained.

T-P-23 On-street bike routes in the City's Bicycle and Pedestrian Plan shall be designated as either Class II (bike lanes) or Class III (signed routes without lanes), as appropriate. These designations are not part of the General Plan and may be changed as circumstances dictate.

T-P-24 Safe, secure, and convenient short- and long-term bicycle parking shall be provided near destinations for all users, including commuters, residents, shoppers, students, and other bicycle travelers. Retail businesses in regional retail areas are encouraged to provide valet bicycle parking.

T-P-26 Bicycling will be promoted through public education, including the publication of literature concerning bicycle safety and the travel, health and environmental benefits of bicycling.

T-P-28 Existing public transit to BART, Amtrak, and regional destinations will be supported, and transit within Emeryville for residents, workers, and visitors will be promoted.

T-P-31 The City will develop and implement transit stop amenities such as pedestrian pathways approaching stops, benches, traveler information systems, shelters, and bike racks to facilitate transit stops as place-making destinations and further the perception of transit as an alternative to driving.

T-P-32 Transit stops will be sited at safe, efficient, and convenient locations, and located appropriately within the right of way.

T-P-33 The City supports transit priority on Transit Streets through features such as traffic signal priority, bus queue jump lanes at intersections, exclusive transit lanes, and other techniques as appropriate, with adjustments to technology as conditions change.

T-P-34 The City will continue to support free and/or subsidized transit for both local travel within the City and travel to the regional hubs located at the Amtrak Station, the MacArthur BART station, and San Pablo Avenue at 40th Street.

T-P-35 The City will support the expansion of the Emery Go-Round to accommodate workers, residents, and visitors.

T-P-36 The City supports Transit-Oriented Development with reduced parking requirements, and amenities to encourage transit use and increase pedestrian comfort around the Major Transit Hubs at the Amtrak station and the 40th Street/San Pablo Avenue intersection.

T-P-37 The City will advocate for frequent, direct transit service to all points in Emeryville, especially between the east and west sides of town.

T-P-38 The City encourages Amtrak to allow local travel on Amtrak buses that provide service from Downtown San Francisco to the Emeryville Station.

T-P-39 The City will advocate for AC Transit to provide frequent, direct, two-way service between downtown San Francisco and various points within Emeryville.

T-P-40 The City will investigate and implement, if appropriate, fixed guideway transit systems, such as streetcars or personal rapid transit (PRT).

T-P-41 The City supports a new BART line in the East Bay that includes service to Emeryville along the existing regional rail corridor with a stop at Powell Street.

T-P-44 The City supports grade-separated crossings and other appropriate measures to mitigate the impacts of increased rail traffic on Emeryville, including noise, air pollution, and traffic disruption.

T-P-47 The City supports "traffic calming" and other neighborhood traffic management techniques to enhance the quality of life within existing neighborhoods and to discourage through-traffic on bicycle boulevards and local streets.

T-P-48 The City will establish equal priority to bicycles and public transit (and discourage through-traffic by other modes) on streets in the vicinity of the Amtrak station that are designated as both Transit Streets and Bicycle Boulevards.

T-P-49 Quality of life and business viability will be promoted by maintaining an adequate supply of parking to serve growing needs, while avoiding excessive supplies that discourage transit ridership and disrupt the urban fabric.

T-P-51 The City supports parking supply and pricing as a strategy to encourage the use of transit, carpools, bicycles, and walking.

T-P-52 Flexible parking standards are encouraged that reflect calculated parking demand for proposed land uses and that allow for appropriate offsets to reduce parking demand and encourage walking, bicycling, carpooling, and transit use.

T-P-53 Employers are encouraged to offer "parking cash out", whereby employees who choose not to drive are offered the cash value of any employee parking subsidy, to be used towards commuting to work by other means.

T-P-57 The land area devoted to parking shall be reduced by supporting innovative technologies such as parking lifts and automated parking.

T-P-64 The City will work with local, regional and state agencies, the Chamber of Commerce, and the Transportation Management Association, as well as employers and residents, to encourage and support programs that reduce vehicle miles traveled, such as preferential carpool parking, parking pricing, flexible work schedules, and ridesharing.

T-P-66 The City supports and encourages the expansion of car-sharing programs in Emeryville.

T-P-67 The City supports and encourages conveniently located child care services with flexible hours.

Improving connections to transit, reliability, and frequency will encourage increased ridership and reduce vehicle miles traveled and, in turn, greenhouse gas emissions.

Parks, Open Space, Public Facilities, and Services Element

The Parks, Open Space, Public Facilities, and Services Element, Chapter 4, describes an increase in the amount and accessibility of parks and open spaces, proposing spaces for passive and active recreation, while improving air quality and managing stormwater runoff.

Parks and open spaces provide spaces for recreation and relaxation, while also cleaning the air and absorbing stormwater runoff.

TABLE 7-3: CROSS-REFERENCED GOALS AND POLICIES FROM THE PARKS, OPEN SPACE, PUBLIC FACILITIES, AND SERVICES ELEMENT

PARKS, OPEN SPACE, PUBLIC FACILITIES, AND SERVICES GOALS	
PP-G-1	**A comprehensive open space system—**A system that provides a diverse range of active and passive recreation and open space opportunities for residents, workers, and visitors.
PP-G-3	**Integration of parks and open space—**Parks that are coordinated with surrounding developments to form unified urban compositions and that are integrated into the redevelopment of underutilized areas.
PP-G-5	**Sustainable design—**Park designs that are consistent with sustainable design principles and practices, and efficient use of open space.
PP-G-6	**Locally accessible parks—**At least one park located within a five-minute walk of all residences.
PP-G-8	**A safe, nurturing and enriching environment—**An environment in which children and youth can flourish and become contributing members of society. The foundation of this vision is a strong and active partnership among the City, School District, and all segments of the community, so that powerful learning from the earliest years is a citywide experience and responsibility.
PP-G-9	**Accessible childcare—**An adequate and diverse supply of childcare facilities that are affordable and accessible for families, and provide safe, educational, and high-quality services for children.

PARKS, OPEN SPACE, PUBLIC FACILITIES, AND SERVICES POLICIES

PP-P-1 Increase park acreage to serve the needs of the growing population and address current-deficiencies in park and open space standards. Maintain a standard of three new acres of parkland per 1,000 new residents, and 0.25 acres per 1,000 new employees.

PP-P-2 Two new large parks (five acres or larger), one each north and south of Powell Street, shall be provided. Active recreation uses will be a component of these parks. The northern park site is bounded by 61st, 64th, Hollis, and Doyle streets. There are two potential southern park sites:

- One potential southern park site is shown on the PG&E site on Hollis Street, between 45th and 53rd streets. On this site, consideration shall be given as to how to incorporate the existing buildings, which are rated Tier 1 and Tier 2 in the Park Avenue District Plan, into future park uses.
- The second potential southern park site is located at the AC Transit bus yard between 45th and 47th streets, adjacent to the proposed Center of Community Life. Should this site become available, the City shall explore the possibility of a public park—along with other public uses. If a large park at this site is feasible and is considered desirable, all or part of the PG&E site may no longer be needed for a public park.

PP-P-3 New smaller open spaces—including public plazas and places, community gardens, and pocket parks—will provide local focus points and diversify the built environment. These should be developed through the identification of underutilized and strategically located parcels, and the redevelopment of larger sites.

PP-P-5 A system of greenways and Green Streets, as tree-lined open spaces, and as continuous recreational paths for bicyclists, joggers, and pedestrians, linking parks and activity centers.

PP-P-6 The north-south Emeryville Greenway will be expanded, enhancing its role as an open space corridor and connector across the City, and a source of inspiration and community pride. The City will support the expansion of a park at the Sherwin Williams site, in coordination with the development of Horton Landing Park and the Greenway.

PP-P-7 An east-west greenway located generally along the path of Temescal Creek will be created. This will include water features to celebrate the creek and improvements to the riparian corridor, where feasible, while maintaining existing drainage capabilities.

PP-P-10 Efficient use of open space will be achieved through techniques such as rooftop play courts and gardens, joint use of sports and recreation facilities at schools, co-location of parks with child care facilities, and possible use of underground parking below new plazas and parks.

PP-P-12 Design, landscaping, lighting, and traffic calming measures will be employed to create safe parks and open spaces.

PP-P-13 Open spaces that have deteriorated, have design features that limit access and use opportunities, and/or are in need of activity shall be revitalized.

PP-P-16 The City will continue to partner with Emery Unified School District to optimize the joint-use of school facilities for community use.

PP-P-19 A diversity of lifestyles, ages, and income-levels will be accommodated through zoning and community facilities and programming.

PP-P-20 The growing senior citizen community will be supported by providing appropriate cultural, recreational and assistance programs and services.

Several new open spaces are planned and proposed in the General Plan, including a new large park in North Hollis (top) and the extension of the Greenway (bottom).

Urban Design Element

The Urban Design Element, Chapter 5, outlines a form for walkable streets, appropriate building massing, and attractive landscaped streetscapes that invites pedestrians, allows for solar access, and creates a connected street grid. Enhancing the walkability of the street network, by adding additional streets and paths, amenable to pedestrians and bicyclists can potentially reduce the number of vehicle trips and vehicle miles traveled.

The General Plan envisions an intensive core centered in Powell Street/Christie Avenue areas (top), and neighborhood centers distributed throughout the city to provide residents easy access to everyday amenities (bottom).

TABLE 7-4: CROSS-REFERENCED GOALS AND POLICIES FROM THE URBAN DESIGN ELEMENT

URBAN DESIGN GOALS

UD-G-1 **An identifiable city structure**—A city structure comprised of a vibrant, intense, and pedestrian-oriented core, and distinctive neighborhood centers and districts augmented with parks and connected by greenways and green streets.

UD-G-2 **A diversity of building types and scales**—Variation to reinforce the identity of individual districts and foster a variety of options for living and working, with continuity in development scale and character and careful transitions between densities and design typologies.

UD-G-3 **A walkable and pedestrian-scaled environment**—A network of streets and connections that expands circulation opportunities for pedestrians and bicyclists.

UD-G-4 **New parks**—Strategically located new parks and outdoor open spaces to enhance Emeryville's livability and pedestrian orientation.

UD-G-7 **Expanded street grid**—A pedestrian and bicycle system with extensions that improve connectivity throughout the city.

UD-G-8 **A safe, attractive, and connected pedestrian environment**—Throughout the city, but particularly in areas with high volumes of pedestrian activity.

UD-G-11 **Sky Exposure**—Building form and massing that furthers sky exposure for adjacent sidewalks and public spaces, especially in gathering places such as the core and neighborhood centers.

UD-G-13 **Streets that support multiple functions**—Streets designed for all types of users, including pedestrians, bicyclists, public transit, and automobiles.

UD-G-15 **Development along streets offers a rich visual experience**—Development that is engaging to pedestrians, is unobstructed by parking facilities, and contributes to street life, vitality, and safety.

UD-G-17 **A walkable and connected city**—Neighborhood centers and other amenities in proximity to employees and residents throughout the city.

URBAN DESIGN POLICIES

UD-P-1 The city shall strive to accentuate activity and presence at the street level, particularly along pedestrian-oriented corridors and in residential areas.

UD-P-2 Parks and open space is required with new development, consistent with Figure 4-1 in the Parks, Open Space, Public Facilities and Services chapter.

UD-P-3 Parks and open space shall be accessible and available to the public through site design standards for minimum size/dimensions, visibility, and location along public rights-of-way, particularly Green Streets (Figure 5-3).

UD-P-4 New development will be required to extend the street grid or pedestrian connections wherever possible.

UD-P-20 The street grid shall be extended as redevelopment on larger sites occurs.

UD-P-22 The City shall maintain and enhance an integrated pattern of streets, pedestrian paths, and bike routes through a fine-grain street grid that enables efficient movement throughout the city.

UD-P-24 The City shall establish Pedestrian Priority Zones in regional and neighborhood centers, around schools, parks, and in other locations as indicated in Figure 5-3. While wider sidewalks, street lighting, bulbed crosswalks, and other pedestrian amenities should be employed throughout the city, they are prioritized in these locations.

UD-P-40 Neighborhood structure and pedestrian scale development should be prioritized. The scale and character of existing neighborhoods should be maintained to ensure connectivity and continuity of street design within each district.

UD-P-47 Streetscape landscaping shall follow Bay-Friendly Landscaping guidelines and serve the dual purpose of treating stormwater runoff and providing shade and beauty to the urban realm.

UD-P-53 Use of the greenways shall be reinforced by fronting entrances to both commercial and residential development to the public pathway.

- Encourage open spaces and plazas adjacent to the greenways.
- Encourage other public-oriented ground level uses such as workshops, lobbies, and common areas.

UD-P-58 Large surface parking lots shall be replaced with structured parking and incorporated into high density mixed-use developments. New or expanded large surface parking lots are not allowed.

UD-P-69 The pedestrian environment shall be enhanced with multiple neighborhood access points, through-streets, and pedestrian pathways.

UD-P-70 Street-level uses should reinforce neighborhood center streets and allow a vertical mix of a diverse range of land uses including offices, hotels and residential uses compatible with neighborhood center functions.

UD-P-72 Public space and plazas for gathering and expanded ground-floor retail activities are encouraged. These elements enhance the pedestrian realm and provide opportunities for social interaction.

The Urban Design Element describes provides for integrating open space into new development (top) and encouraging drought-tolerant plantings (bottom).

Conservation goals and policies address protection of air, water, biological and cultural resources.

Conservation, Safety, and Noise Element

The Conservation, Safety, and Noise Element, Chapter 6, describes strategies to maintain environmental quality within an urban environment, through stormwater management, creek restoration, water recycling and conservation, and preservation of biological and plant resources.

TABLE 7-5: CROSS-REFERENCED GOALS AND POLICIES FROM THE CONSERVATION, SAFETY, AND NOISE ELEMENT

CONSERVATION, SAFETY, AND NOISE GOALS	
CSN-G-1	**Public health—**A high level of public health and safety.
CSN-G-2	**Improved air quality—**Local ambient air quality levels that help meet regional attainment status and contain low levels of air pollutants.
CSN-G-3	**Water quality and conservation—**High-quality groundwater and surface water resources. Improved water conservation, increased use of recycled water, and reduced per capita water consumption.
CSN-G-4	**Reduced per capita water consumption—**By 2030, per capita water consumption will be reduced by 30 percent over 2008 levels.
CSN-G-5	**Preservation and protection of natural resources—**Preservation and enhancement of natural habitat, and protection of biological resources, particularly around the Emeryville Crescent.
CSN-G-8	**Protection from natural and manmade hazards—**Protection of life, natural environment, and property from natural and manmade hazards due to seismic activity, hazardous material exposure or flood damage.
CSN-G-9	**Protection from noise—**Protection of life, natural environment, and property from manmade hazards due to excessive noise exposure.

CONSERVATION, SAFETY, AND NOISE POLICIES

CSN-P-1 Air quality will be maintained and improved by requiring project mitigation, such as Transportation Demand Management (TDM) techniques, where significant air quality impacts are identified.

CSN-P-2 The City will budget for clean fuels and vehicles in the City's long-range capital expenditure plans, to replace and improve the existing fleet of gasoline and diesel powered vehicles.

CSN-P-3 The City will coordinate air quality planning efforts with local, regional, and state agencies and support the Bay Area Air Quality Management District's efforts to monitor and control air pollutants from stationary sources.

CSN-P-4 Dust abatement actions are required for all new construction and redevelopment projects.

CSN-P-5 All large construction projects are required to reduce diesel exhaust emissions through use of alternate fuels and/or control devices.

CSN-P-6 Adequate buffer distances shall be provided between offensive odor sources and sensitive receptors, such as schools, hospitals, and community centers.

CSN-P-7 New commercial and industrial activities, as well as construction and demolition practices, shall be regulated to minimize discharge of pollutant and sediment concentrations into San Francisco Bay.

CSN-P-8 The City will continue to support regional watershed conservation through local land use planning, open space policies, and water quality conservation efforts.

CSN-P-9 The City will continue programs to inform residents of the environmental effects of dumping household waste, such as motor oil, into storm drains that eventually discharge into San Francisco Bay.

CSN-P-10 New development is required to incorporate source control, site design, and storm water treatment to reduce pollutants in stormwater runoff.

CSN-P-11 Exterior uses of water for landscaping and other purposes to minimize or eliminate runoff and water waste.

CSN-P-12 The City promotes use of recycled water on landscaping and other non-food source plantings.

CSN-P-13 The City promotes construction and incorporation of cisterns, green roofs and other rainfall harvesting methods in existing, new and rehabilitation projects.

CSN-P-14 The City will allow homeowners to divert untreated rainwater for non-potable uses, such as outdoor irrigation and toilet flushing, through use of rainwater barrels or similar methods.

CSN-P-15 The City shall consider revising plumbing and building code requirements, as necessary, to allow for graywater and rainwater harvesting systems.

CSN-P-16 The City will continue to support the use of recycled water in new and rehabilitation projects, through the development process.

CSN-P-17 The City supports public education initiatives to encourage conservation of potable water.

CSN-P-18 The City will encourage protection of essential habitat for special status species and support habitat protection and enhancement within Emeryville that are within the City's control.

Continues on next page

Safety measures include prevention and reduction of seismic, flooding, hazardous materials, and fire risk.

Noise sources, particularly from trains and cars on the freeway, are addressed in the Noise Element to reduce their impacts on nearby residents and other building occupants.

CSN-P-19 The natural environment, including mature trees and landscaping, shall be protected from destruction during new construction and redevelopment. Adequate replacement shall be provided where protection is impossible.

CSN-P-20 The City encourages incorporation of native plants into landscape plans for new developments and City projects and parks and preservation of mature trees on new developments and City projects.

CSN-P-21 The City discourages use of non-native invasive species in any landscaped or natural areas.

CSN-P-22 Provide visual access to the Emeryville Crescent in a manner consistent with the protection of this fragile ecological system.

CSN-P-23 Where new trails or other improvements are proposed in the vicinity of the baylands and essential habitat for special-status species, require adequate avoidance and mitigation necessary to protect sensitive resources.

CSN-P-24 The City shall explore opportunities for habitat restoration and enhancement, particularly in larger parks and open space areas.

CSN-P-25 Appropriate avoidance measures will be implemented to minimize the loss of special status species nesting birds during new construction. This can be accomplished through timing of vegetation removal and building demolition during the non-nesting season or through preconstruction surveys where a potential for nesting remains on proposed development sites.

CSN-P-26 The City encourages developers to reuse existing historic or architecturally significant structures.

CSN-P-33 In order to reduce light pollution and use less energy, lighting (including on streets, recreational facilities, and in parking areas) should be designed to prevent artificial lighting from illuminating natural resources or adjacent residential neighborhoods.

CSN-P-34 The City will continue to regulate development, including remodeling or structural rehabilitation, to ensure adequate mitigation of safety hazards on sites having a history or threat of seismic dangers, erosion, subsidence, or flooding.

CSN-P-35 The City will require geotechnical investigation of all sites proposed for development in areas where geologic conditions or soil types are susceptible to liquefaction. Require submission of geotechnical investigation and demonstration that project conforms to all recommended mitigation measures prior to city approval (as required by State law).

CSN-P-36 The City will continue to require soil erosion control measures during construction.

CSN-P-37 The City will enforce regulation of potentially hazardous structures to be retrofitted and made safe and encourage property owners to abate or remove structural hazards that create unaccepted levels of risk.

CSN-P-38 Prior to reuse, former commercial and industrial sites will be cleaned up, according to relevant State and federal regulations.

CSN-P-39 The City will enforce regulation of local and State laws regarding the production, use, storage, and transportation of hazardous materials and waste.

CSN-P-40 The City requires abatement of lead-based paint and asbestos prior to structural renovation or demolition, and compliance with all State, Federal, Occupational Safety and Health Administration, Bay Area Air Quality Management District, Alameda County, and local rules and regulations.

CSN-P-41 Development on sites with known contamination of soil and groundwater shall be regulated to ensure that construction workers, future occupants, and the environment as a whole, are adequately protected from hazards associated with contamination.

CSN-P-42 The City supports public awareness and participation in household waste management, control, and recycling.

CSN-P-43 Siting of businesses that use, store, process, or dispose of substantial quantities of hazardous materials shall be carefully restricted in areas subject to very strong levels of ground shaking

CSN-P-44 The City will continue to require development projects to implement on-site stormwater management measures through the City's development permit process.

CSN-P-45 Storm drains shall be maintained and replaced or upgraded as needed to reduce potential flooding.

CSN-P-52 Occupants of existing and new buildings should be protected from exposure to excessive noise, particularly adjacent to Interstate-80 and the railroad.

CSN-P-54 Developers shall reduce the noise impacts on new development through appropriate means (e.g. double-paned or soundproof windows, setbacks, berming, and screening). This noise attenuation method should avoid the use of visible sound walls.

7.3 KEY SUSTAINABILITY TOPICS

The following sustainability topics are grouped according to the Urban Accords' subject areas: Energy, Waste Reduction, Land Use and Urban Design, Urban Nature, Transportation, Environmental Health, and Water. Within each topic area, relevant strategies or standards from the City's Climate Action Plan, Urban Accords, and any other adopted policies are described in text boxes.

Topic 1: Energy

Greenhouse gases are released during energy production and consumption, such as electricity used to power homes and offices, and fuel used to power cars and trucks. Reducing the carbon content of the fuel source (e.g. solar or wind power versus fossil fuels) or reducing energy consumption (e.g. using energy efficient appliances or designing buildings for solar access) may limit negative impacts on global climate change.

Existing Policies and Programs

Climate Action Plan

As a first step toward preparing the CAP, the City completed a baseline inventory of greenhouse gas emissions. The analysis revealed that, in 2004, 178,832 tons of carbon dioxide equivalent (CO_2e) were released into the atmosphere. The inventory includes all energy consumed in Emeryville—even the energy and emissions associated with electricity consumed in the city, but produced elsewhere. As a result of this inventory, the City has set a goal to reduce community-wide greenhouse gas emissions by 25 percent below 2004 levels by 2020. The City currently has two formal energy conservation policies. The first supports programs providing alternatives to conventional private vehicles. The second policy promotes energy conservation and the use of renewable energy resources. The CAP was officially adopted by the City on December 2, 2008.

CLIMATE CHANGE

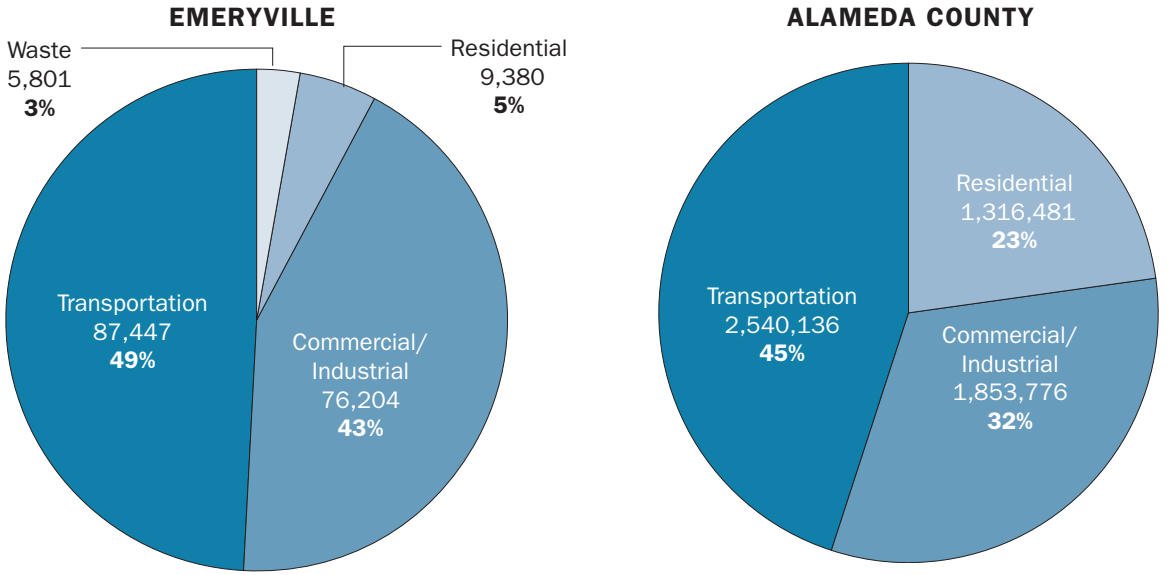
The Earth's atmosphere is naturally composed of gases that act like the glass panes of a greenhouse, retaining heat to keep the temperature of the Earth stable and hospitable for life at an average temperature of 60°F. These gases include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (NO_2), ozone (O_3) and halocarbons. Recently, elevated concentrations of these gases in the atmosphere have had a destabilizing effect on the global climate, fueling the phenomenon commonly referred to as global climate change. The Intergovernmental Panel on Climate Change (IPCC), a scientific intergovernmental body set up by the World Meteorological Organization (WMO) and by the United Nations Environment Programme (UNEP), predicts that global mean temperature increase from 1990-2100 could range from 2.0 to 11.5 degrees Fahrenheit. It projects a sea level rise of seven to 23 inches by the end of the century, with a greater rise possible depending on the rate of polar ice sheet melting.

Accelerating climate change has the potential to cause a number of adverse impacts in California, including: a shrinking Sierra snowpack; public health threats caused by higher temperatures and more smog; rising temperatures, eroding coastlines; sea level rise; increased wildfire risk; and increased electricity demands. Reducing greenhouse gas emissions—such as those that result from

Chart 7-1 shows the breakdown of emissions for Emeryville and Alameda County. In Emeryville, the transportation sector is the largest contributor to greenhouse gas emissions, responsible for nearly half of all emissions. The transportation sector represents vehicle miles traveled on local roads and state highways within Emeryville. The commercial/industrial sector accounts for nearly 43% of emissions, which is not surprising given the city's concentration of industrial, office, and retail uses. Residential uses and methane generated by waste account for five and three percent of total emissions, respectively. In comparison, the transportation sector in Alameda County is also the largest contributor, responsible for 45% of greenhouse gas emissions. The commercial/industrial and residential sectors account for 32 and 23 percent of total emissions, respectively.

The CAP addresses energy issues through policies promoting fuel and energy efficiency and renewable energy to achieve its emission reduction goal. Measures include promotion of energy efficient appliances and practices for new construction and retrofit projects. Using renewable fuel sources to accommodate the city's power needs can substantially reduce greenhouse gas emissions, compared with production from conventional coal-fired power plants. The CAP seeks to increase the availability of renewable energy sources by offering incentives for individual homeowners to install solar photovoltaic (PV) systems and by constructing a PV system on the roof of City Hall.

CHART 7-1: 2004 GREENHOUSE GAS EMISSIONS, BY SECTOR (METRIC TONS CO_2)



Source: City of Emeryville Greenhouse Gas Emissions Analysis, July 2008 (Emeryville) and City of Emeryville Baseline Greenhouse Gas Emissions Inventory Report, December 2006 (Alameda County).

EMERYVILLE CLIMATE ACTION PLAN ENERGY EFFICIENCY POLICIES

CITYWIDE POLICIES

- Use Energy Star equipment: computers, monitors, printers, copiers, refrigerators, vending machines, water coolers, dishwashers, clothes washers; high efficiency water heaters; and energy efficient chillers and boilers.
- HVAC fan upgrade and maintenance tune-ups
- Switch electric heat to natural gas
- Adopt a High Performance Local Energy Code (such as green building ordinance) for new construction and renovation of facilities
- Adopt strict commercial and residential energy code requirements
- Distribute loans to citizens to make energy efficiency improvements
- Implement energy efficient weatherization of low-income housing and new public/affordable housing projects
- Perform energy efficiency retrofits of existing facilities
- Require energy upgrades of facilities at time of sale
- Distribute free CFL bulbs and/or fixtures to community members
- Install LED exit signs
- Install lighting occupancy sensors
- Retrofit T-12 lamps to T-8 lamps
- Promote energy conservation through campaigns targeted at businesses and residents
- Promote green building practices through a local green building assistance program or incentives
- Promote participation in a local green business program
- Adopt water conservation ordinance
- Install low-flow faucets, low-flow shower heads, and high efficiency toilets
- Use low maintenance landscaping
- Install green and/or reflective roofing
- Install solar photovoltaic panels, solar heating panels, and wind turbines (including via incentives)

MUNICIPAL POLICIES

- Use Energy Star equipment: computers, monitors, printers, copiers, refrigerators, water coolers; high efficiency water heaters; and energy efficient chillers and boilers.
- HVAC fan upgrade and maintenance tune-ups
- Adopt a High Performance Local Energy Code (such as green building ordinance) for new construction and renovation of facilities
- Perform energy efficiency retrofits of existing facilities
- Install LED lighting: exit signs, street lights, and traffic signals
- Install lighting occupancy sensors
- Use low maintenance landscaping
- Install green and/or reflective roofing
- Install solar photovoltaic panels, solar water heating at swimming pool, and solar water heaters

Source: City of Emeryville, Climate Action Plan, December 2008.

URBAN ACCORD ENERGY ACTION ITEMS

- **Action 1:** Adopt and implement a policy to increase the use of renewable energy to meet ten percent of the city's peak electric load within seven years.
- **Action 2:** Adopt and implement a policy to reduce the city's peak electric load by ten percent within seven years through energy efficiency, shifting the timing of energy demands, and conservation measures.
- **Action 3:** Adopt a citywide greenhouse gas reduction plan that reduces the jurisdiction's emissions by twenty-five percent by 2030, and which includes a system for accounting and auditing greenhouse gas emissions.

Source: Urban Environmental Accords. United Nations Environment Programme World Environment Day, 2005.

Topic 2: Waste

Diverting waste from landfills by promoting reduction, reuse, recycling, and composting of materials can also have a substantial impact on reducing greenhouse gas emissions. Recycling and waste prevention programs reduce energy and transportation needed to manufacture and ship resource-intensive products and packaging. Composting food and yard waste, instead of sending them to landfills, reduces the amount of methane produced in landfills.

Existing Policies and Programs

Climate Action Plan

Through the CAP, the City has committed to a goal of reducing waste sent to landfills by 75 percent from 1990 levels by 2010. The City of Emeryville is working closely with Alameda County's StopWaste.org, which has already taken a lead role in developing strategies to divert waste and improve recycling and composting services. The CAP outlines a series of policies to reduce waste generation by increasing participation in County and City compost, recycle, and reuse programs; educating residents about the benefits of sustainable landscaping; and encouraging businesses to participate in the County Green Business program. The City has already adopted an ordinance requiring that restaurants and food vendors use compostable materials for all disposable food service-ware, a clear step toward achieving the waste reduction goal.

New Policies and Programs

Building on existing programs and success, the City can join the growing community of jurisdictions that have adopted the goal of Zero Waste. Zero Waste (or nearly zero) is a set of policies that promote upstream changes to products and services by the manufacturers, instead of letting the consumer and government agencies try to figure out what to do with the discards of society. Extended Producer Responsibility, Take-Back programs and Cradle to Cradle Design are some of the concepts that the City could promote and incentivize in its business community as well as at the State and Federal level. The franchise agreement that the City oversees with its hauling company can also be a powerful tool by setting material disposal rates that incentivize waste reduction, recycling and composting.

EMERYVILLE CLIMATE ACTION PLAN WASTE REDUCTION POLICIES

CITYWIDE POLICIES

Reduce Landfilled Waste in half by 2020 over 2004 levels by:

- Increasing participation in commercial recycling/ reuse programs for paper, cardboard, metal, glass and plastics – rigid and film
- Participating in StopWaste.org's audit and technical assistance program
- Encouraging businesses to participate in the County Green Business program
- Increasing participation in residential recycling programs
- Educating residents and businesses about the benefits of Bay-Friendly Landscaping and Gardening
- Increasing participation in commercial and residential food waste collection program (for composting)

MUNICIPAL POLICIES

Reduce Landfilled Waste in half by 2020 over 2004 levels by:

- Implementing a duplex copying/printing policy in municipal office buildings
- Reducing Landscape Waste in City landscapes by implementing StopWaste.org's Bay-Friendly Landscaping Program. Include practices such as: Increase on-site composting and mulching of municipal plant debris, using compost as a soil amendment, mulch for weed suppression, including the use of drip irrigation systems, a diverse plant pallet to resist pests, and reducing turf and sheared hedges.
- Increasing recycling and composting in municipal facilities

Adopting policies that support reduced waste (and which support other environmental priorities) including the following:

- Environmental purchasing policy
- 75% Diversion Goal
- Construction & Demolition materials recycling ordinance
- Civic Bay-Friendly/Green Building Ordinance
- Residential green building resolution
- Consider mandatory residential & commercial recycling/composting ordinance

Source: City of Emeryville, Climate Action Plan, December 2008.

URBAN ACCORDS WASTE REDUCTION ACTION ITEMS

- **Action 4:** Establish a policy to achieve zero waste going to landfills and incinerators by 2040.
- **Action 5:** Adopt a citywide program that reduces the use of a disposable, toxic, or non-renewable product category by at least fifty percent in seven years.
- **Action 6:** Implement "user-friendly" recycling and composting programs, with the goal of reducing by twenty percent per capita solid waste disposal to landfill and incineration in seven years.

Source: Urban Environmental Accords. United Nations Environment Programme World Environment Day, 2005.

Topic 3: Land Use/Urban Design

Land use and urban design patterns can have a substantial impact on greenhouse gas emissions. The Land Use and Urban Design elements outline a mixed-use land use structure, such that residents, workers, and visitors can easily link multiple trips to residential neighborhoods, workplaces, shopping and public services. Architecture and construction practices are also essential determinants of sustainability in the short- and long-term. For example, recycling waste during the demolition process and implementing energy efficient design principles and appliances, have immediate and long-term benefits to the environment—and potentially to reducing costs. For a discussion of the land use pattern and urban design framework, see Chapter 2 and Chapter 5, respectively. Green building and construction practices are described in the section below.

Existing Policies and Programs

Climate Action Plan

Land use policies, combined with transportation policies, can have a key impact on reducing greenhouse gas emissions. The CAP encourages efficient land use development through focused growth and transit oriented development. The CAP builds on many initiatives that the City is already undertaking, including building on infill and brownfield sties. These measures are consistent with the goals and policies in the Land Use Elements.

LEED™ for Neighborhood Development

Emeryville is also participating in the Leadership in Energy and Environmental Design (LEED™) for Neighborhood Development pilot program, an initiative that seeks to reduce the impacts of urban sprawl, by creating more livable communities, through smart growth and transit-oriented strategies. As a participant, Emeryville obtained LEED™ Platinum certification for the Marketplace Redevelopment Project in 2008. This project will add 674 multi-family housing units and 300,000 square feet of office and retail development.

Green Building and Construction

The City has already taken the initiative to support green building, landscaping, and construction. In May 2008, the City Council adopted a resolution requiring new building or renovation projects with construction costs of at least $3,000,000 or new or renovated landscaping greater than 2,500 square feet or $50,000 in construction costs, to meet green building and landscaping standards. These standards are identified by LEED™ and Bay-Friendly Landscaping, respectively (see text boxes).

New Policies and Programs

Since the City's 2004 emissions inventory revealed that the residential, commercial and industrial sectors together account for nearly half of the City's emissions, improved efficiency in buildings can go a long way toward meeting greenhouse gas reduction goals. Buildings and landscapes that are constructed, maintained and ultimately deconstructed according to sustainable principles need fewer imports and produce fewer exports. Green buildings and landscapes also use local sources for imports and feed their exports back into the local economy for recycling.

Investment in energy-efficient buildings and proper demolition and construction practices can result in a reduction in energy consumption and greenhouse gas emissions. They can also improve indoor air quality and reduce long-term maintenance costs as less energy is required to operate more efficient buildings. With the amount of new construction and rehabilitation projected by the General Plan, this is a great opportunity for the City to initiate policies for green building and construction.

GREEN BUILDING AND CONSTRUCTION

"Green building" refers to creating an energy-efficient building through design and choice of low-impact materials. "Green construction" encompasses the demolition and construction processes, such as the energy used in machines and vehicles, the waste generated at construction sites, runoff, and water and air quality impacts associated with the construction phase of the project.

BAY-FRIENDLY LANDSCAPING: GREEN BUILDING GOALS AND POLICIES

"Bay-Friendly Landscaping" is a whole systems approach to the design, construction and maintenance of the landscape in order to support the integrity of the San Francisco Bay Watershed. "Bay-Friendly Landscapes" reduce greenhouse gases waste, and pollution, conserve water and other natural resources and create healthier communities. Key components of Bay-Friendly landscaping include the following:

- Reducing waste and using materials that contain recycled content;
- Use of native and water conserving plants;
- Nurturing healthy soils with mulch and compost while reducing fertilizer use;
- Conserving water, energy and topsoil;
- Using Integrated Pest Management to minimize chemical use and prevent pollution;
- Reducing stormwater runoff; and
- Creating wildlife habitat.

GOAL

- To encourage, promote, practice and where feasible require Bay-Friendly landscaping practices as defined in the Bay-Friendly Landscape Guidelines, Sustainable Practices for Landscape Professionals within the City of Emeryville.

POLICIES

- All newly designed public and private projects containing landscapes excluding those not subject to landscape review shall use the Bay-Friendly Landscape Guidelines, Sustainable Practices for the Landscape Professional as a reference guide.
- All landscapes maintained by City staff shall be maintained using Bay-Friendly practices to the greatest extent practicable.
- All public landscapes privately maintained shall incorporate Bay-Friendly landscaping practices to the greatest extent possible. Existing contractors shall be asked for voluntary compliance.
- City shall work with Alameda County Waste Management Authority staff to ensure that existing and new landscaping staff obtain adequate training in Bay-Friendly practices/principles.

Source: Alameda County Waste Management Authority.

EMERYVILLE CLIMATE ACTION PLAN LAND USE POLICIES

CITYWIDE POLICIES

- Support transit oriented development
- Establish a Walk-Friendly City - Improve / Expand Pedestrian Infrastructure (e.g., slow traffic, improve sidewalks and safety, ped-only areas)

Source: City of Emeryville, Climate Action Plan, December 2008.

LEED™ NEW CONSTRUCTION POINT CATEGORIES

CATEGORIES	CRITERIA TO EARN POINTS
Sustainable Sites	› Density › Brownfield Remediation › Alternative Transportation Access › Open Space Protection, › Stormwater Management › Heat Island Effect Reduction
Water Efficiency	› Water Efficient Landscaping › Innovative Wastewater Techniques › Water Use Reduction
Energy & Atmosphere	› Optimized Energy Performance › Green Power › Refrigerant Management
Materials & Resources	› Storage & Collection of Recyclables › Building and/or Materials Reuse › Construction Waste Management › Recycled Content › Regional Materials › Certified Wood or Rapidly Renewable Materials
Indoor Environmental Quality	› Performance Measures › Construction Management Plan › Increased Ventilation › Low-Emitting Materials › Controllability of Systems (lighting, thermal comfort) › Thermal Comfort (design, verification) › Daylight & Views
Innovation & Design Process	› Innovative Design › Involvement of LEED™ Accredited Professional

Source: LEED™ for New Construction v2.2, Registered Project Checklist.

URBAN ACCORDS URBAN DESIGN ACTION ITEMS

- **Action 7:** Adopt a policy that mandates a green building rating system standard that applies to all new municipal buildings.
- **Action 8:** Adopt urban planning principles and practices that advance higher density, mixed use, walkable, bikeable and disabled-accessible neighborhoods which coordinate land use and transportation with open space systems for recreation and ecological restoration.
- **Action 9:** Adopt a policy or implement a program that creates environmentally beneficial jobs and "green collar" job training.

Source: Urban Environmental Accords. United Nations Environment Programme World Environment Day, 2005.

Topic 4: Parks, Open Space, and Urban Nature

Parks and open spaces are a vital part of Emeryville's sustainability strategy, adding to the livability of the city and the health of air, water and the city's inhabitants. As a small city, Emeryville contains few parks. As the city continues to grow, in terms of residents, workers, and visitors, Chapter 4: Parks, Open, Space, and Public Facilities Element outlines a strategy to add more parks (small and large), greenways, plazas, and other public open spaces. In addition, the Conservation, Safety, and Noise Element includes policies that seek to preserve existing habitat and special species to ensure that they continue to thrive within the city.

Bay-Friendly Landscaping Standards help to ensure that parks are designed and built using environmentally sound practices.

Existing Policies and Programs

As of 2008, the City enjoys 15 acres of parks, as well as joint-use recreation facilities and the Emeryville Greenway, which is currently undergoing expansion. In addition, the East Bay Regional Parks District manages the Emeryville Crescent, a marsh area that contains plant and wildlife habitat. The City continues to work with regional agencies to protect these species.

URBAN ACCORDS PARKS, OPEN SPACE, AND URBAN NATURE ACTIONS ITEMS

- **Action 10:** Ensure that there is an accessible public park or recreational open space within half-a-kilometer of every city resident by 2015.
- **Action 11:** Conduct an inventory of existing canopy coverage in the city and then establish a goal based on ecological and community considerations to plant or maintain canopy coverage in not less than 50 per cent of all available sidewalk planting sites.
- **Action 12:** Pass legislation that protects critical habitat corridors and other key habitat characteristics (e.g. water features, food-bearing plants, shelter for wildlife, use of native species, etc.) from unsustainable development.

Source: Urban Environmental Accords. United Nations Environment Programme World Environment Day, 2005.

Topic 5: Transportation

An effective transportation network, that accommodates cars, public transit, walking and biking, is an essential component to achieving Emeryville's mobility and sustainability goals. With half of the City's greenhouse gas emissions coming from transportation sources, transportation provides a significant challenge and opportunity to meet the City's sustainability goals. Since automobiles contribute to greenhouse gas emissions, air pollution, and traffic congestion, the Plan seeks to reduce the necessity of driving, by improving alternative transportation modes, and to reduce emissions by reducing the carbon content of fuels and the fuel efficiency of vehicles. Reliable and affordable public transit, along with enhanced pedestrian and bicycle routes and facilities, can reduce these negative impacts, while having the added benefit of improving public health. Chapter 3, the Transportation Element, provides a full description of goals and policies.

Existing Policies and Programs

Climate Action Plan

The CAP outlines four major strategies for reducing emissions from transportation on a citywide basis and within the municipal government: increasing the fuel efficiency of vehicles, promoting the use of alternative fuels (with lower carbon content), implementing trip reduction strategies and transportation demand management practices, and investing in alternative modes of transportation, such as walking, biking, and public transit.

Alternative Transportation

As described in Section 7.1, the City has a legacy of providing free and convenient local transportation service successfully, with the Emery-Go-Round shuttle—which the Transportation Element seeks to build on and expand.

EMERYVILLE CLIMATE ACTION PLAN TRANSPORTATION POLICIES

CITYWIDE POLICIES

- Construct electric vehicle recharging facilities in new large parking facilities
- Allow bikes on trains/buses
- Educate citizens on options for utilizing local low-carbon transportation
- Expand bicycling infrastructure (e.g., lanes, storage facilities)
- Expand EGR bus service in range and / or frequency
- Implement bus rapid transit or shuttle programs
- Implement parking cash-out program
- Increase AC Transit, BART and AMTRAK ridership
- Initiate a car sharing program
- Increase ride-sharing (e.g., carpools)
- Increase telecommuting
- Institute a "safe routes to school" program
- Provide bicycles for daily trips
- Provide high school students with free bus passes
- Procure of hybrid vehicles
- Incentive hybrid vehicles with parking or lane priority
- Procure smaller fleet vehicles
- Install low-flow faucets, low-flow shower heads, and high efficiency toilets
- Use low maintenance landscaping
- Install green and/or reflective roofing
- Install solar photovoltaic panels, solar heating panels, and wind turbines (including via incentives)

MUNICIPAL POLICIES

- Expand bicycling infrastructure (e.g., lanes, storage facilities)
- Implement a police on bicycles program
- Implement parking cash-out program
- Increase EGR & AC Transit, BART & AMTRAK ridership
- Initiate a car sharing program
- Promote telecommuting
- Provide bicycles for daily trips
- Procure Hybrid vehicles
- Procure of smaller fleet vehicles
- Retire old and under-used vehicles
- Utilize fuel-efficient vehicles (e.g., scooters) for parking enforcement

Source: City of Emeryville, Climate Action Plan, December 2008.

URBAN ACCORDS TRANSPORTATION ACTIONS ITEMS

- **Action 13:** Develop and implement a policy which expands affordable public transportation coverage to within half-a-kilometer of all city residents in ten years.
- **Action 14:** Pass a law or implement a program that eliminates leaded gasoline (where it is still used); phases down sulfur levels in diesel and gasoline fuels, concurrent with using advanced emission controls on all buses, taxis, and public fleets to reduce particulate matter and smog-forming emissions from those fleets by 50 per cent in seven years.
- **Action 15:** Implement a policy to reduce the percentage of commuter trips by single occupancy vehicles by ten per cent in seven years.

Source: Urban Environmental Accords. United Nations Environment Programme World Environment Day, 2005.

URBAN ACCORDS ENVIRONMENTAL HEALTH ACTION ITEMS

- **Action 16:** Every year, identify one product, chemical, or compound that is used within the city that represents the greatest risk to human health and adopt a law and provide incentives to reduce or eliminate its use by the municipal government.
- **Action 17:** Promote the public health and environmental benefits of supporting locally grown organic foods. Ensure that twenty per cent of all city facilities (including schools) serve locally grown and organic food within seven years.
- **Action 18:** Establish an Air Quality Index (AQI) to measure the level of air pollution and set the goal of reducing by 10 per cent in seven years the number of days categorized in the AQI range as "unhealthy" or "hazardous."

Source: Urban Environmental Accords. United Nations Environment Programme World Environment Day, 2005.

Topic 6: Environmental Health

Providing a healthy and safe city for all residents, workers, and visitors is critical to the livability of a city and the quality of the natural environment. As a post-industrial city, Emeryville has been a leader in cleaning up contaminants on industrial properties and seeks to continue this legacy of environmental responsibility. In many ways, the City has already accomplished many of the most arduous and costly endeavors to improve environmental health. This section describes smaller-scale programs and policies for prioritizing safe and low-impact supplies as part of municipal purchasing practices, as well as healthy food systems.

Existing Policies and Programs

Brownfields Remediation

As described in Section 7.1, the City has shown great leadership in financing, cleaning up, and redeveloping brownfield sites successfully.

New Policies and Programs

Purchasing

The goods and services purchased by a municipality impact costs, energy consumption, and ultimately greenhouse gas emissions. Sustainability goals may be met through prioritizing Environmentally Preferable purchasing of products, such as post-consumer recycled content office products; Green Seal® certified products and EnergyStar® rated equipment; and standards for city contractors, such as local businesses or companies that are certified green businesses. The City should initiate a purchasing program that addresses the effects of goods and services on pollution, waste, energy consumption, recycled material content, natural resources and public health, and provides a guide for appropriate vendors. The purchasing program should describe a process and identify suppliers for products and services that include recycled content, are durable and long-lasting, conserve energy and water, reduce greenhouse gas emissions, use unbleached or chlorine free manufacturing processes, are lead-free and mercury-free, and use wood from sustainably harvested forests. These products should meet US EPA minimum recycled content standard guidelines and US EPA energy star certification, when practical. The City can also encourage the use of recycled materials and low-impact purchasing among residents and businesses.

Food

As an urban city, Emeryville imports most of its food from farms and purveyors in other parts of the Bay Area and around the world. Agriculture practices often rely on synthetic fertilizers and pesticides, artificial hormones, large amounts of water, long-distance trucking, and factory-style practices for raising livestock and crops. These impacts may be damaging to public health, increase emissions, and use up precious natural resources. Purchasing locally grown and organic foods cuts down on many of these negative impacts.

The City can prioritize sustainable food purchases as a municipality, as well as encourage residents and business to do the same: through providing space for community gardens, fruit-bearing trees, and farmers' markets, and incentivizing relationships with community supported agriculture groups which deliver local fresh produce. With several headquarters for food businesses within its boundaries, food is already a vital part of the City's economy and economic development strategy. City policies can ensure access to local and organic foods, affordability, and cultural relevance for all its residents. In this way, food purchasing exemplifies the 3 E's of sustainability, promoting good ecological practices, supporting a vibrant economy, and ensuring equal access.

Topic 7: Water

From the Bay to the taps, water is an essential resource that City policy can help to protect. Through the management of stormwater, potable and recycled water, Bay-Friendly Landscaping, and conservation initiatives, the City, in collaboration with its water provider, can ensure high-quality water and sufficient supply for years to come. Emeryville's policies for ensuring water quality and supply are detailed in Section 6.1 of Chapter 6: Conservation, Safety, and Noise. The City's leadership in stormwater management and policies for conservation, reclaimed water use, and flood and drainage management, are detailed in Section 6.2 of Chapter 6.

Existing Policies and Programs

Stormwater Management

As described in Section 7.1, the City has shown leadership in stormwater management by providing guidelines for developers and requiring on-site treatment as part of the building permit process.

URBAN ACCORDS WATER QUALITY AND CONSERVATION ACTION ITEMS

- **Action 19:** Develop policies to increase adequate access to safe drinking water, aiming at access for all by 2015. For cities with potable water consumption greater than 100 liters per capita per day, adopt and implement policies to reduce consumption by 10 per cent by 2015.
- **Action 20:** Protect the ecological integrity of the city's primary drinking water sources (i.e., aquifers, rivers, lakes, wetlands and associated ecosystems).
- **Action 21:** Adopt municipal wastewater management guidelines and reduce the volume of untreated wastewater discharges by ten per cent in seven years through the expanded use of recycled water and the implementation of a sustainable urban watershed planning process that includes participants of all affected communities and is based on sound economic, social, and environmental principles.

Source: Urban Environmental Accords. United Nations Environment Programme World Environment Day, 2005.

GOALS AND POLICIES

GOALS

OVERALL SUSTAINABILITY

ST-G-1 **A balance among the three E's of sustainability—**A healthy environment; equity in access to and distribution of goods, services and resources; and a vibrant economy for local businesses and the municipality.

ST-G-2 **Continuous environmental improvement—**Sustainable development through implementation of existing policies and programs.

ST-G-3 **Salient and current—**A municipality and citizenry informed of evolving technology and new approaches to sustainability.

ST-G-4 **Collaboration in sustainability initiatives—**Coordination and collaboration with efforts outside the City to improve local conditions.

ST-G-5 **An advocate for sustainability—**The City will serve as an advocate for sustainability for the municipality and the community.

ENERGY

ST-G-6 **Energy conservation—**Fifty percent reduction in energy consumption for all sectors—transportation, industrial/commercial, residential, and waste, over 2008 levels, by 2017.

The Climate Action Plan describes additional energy goals. This document should be referenced for details.

WASTE

ST-G-7 **Waste reduction—**Fifty percent reduction in waste to landfill, over 2004 levels, by 2020.

The Climate Action Plan describes waste reduction goals. This document should be referenced for details.

LAND USE AND URBAN DESIGN

The Climate Action Plan and Land Use Element of the General Plan sufficiently describe land use goals. The Urban Design Element of the General Plan describes urban design goals. These documents should be referenced for details.

GREEN BUILDING

ST-G-8 **Environmentally-friendly and energy-efficient buildings and landscaping—**Green building and Bay-Friendly Landscaping practices throughout Emeryville in new construction, redevelopment and retrofit projects.

TRANSPORTATION

The Climate Action Plan and Transportation Element of the General Plan describe transportation goals. These documents should be referenced for details.

ENVIRONMENTAL HEALTH

ST-G-9 **Purchasing and consumption to improve public health—**Increased purchasing of Environmentally Preferable products such as those that are biodegradable, recycled-content, reused less-toxic and other low-carbon materials in municipal and community purchasing.

ST-G-10 **Access to healthy foods—**A food system where all residents have financial and physical access to culturally appropriate, affordable, nutritious foods that were grown and transported in an environmentally preferable system.

WATER

The Conservation, Safety, and Noise Element of the General Plan describes water quality, supply, and conservation goals. This chapter should be referenced for details.

POLICIES

Implementing actions supporting each policy are described in Chapter 8: Implementation Program.

ENERGY

ST-P-1 The City shall maintain Climate Action Plan to achieve energy efficiency and conservation goals.

WASTE

ST-P-2 The City shall maintain a Climate Action Plan to achieve waste reduction goals.

ST-P-3 The City shall adopt a Zero Waste Plan and actions for the year 2030, by 2010.

ST-P-4 The City shall negotiate a new Zero Waste Franchise Agreement with a hauling company that uses waste reduction programs and the disposal rate structure to monetarily incentivize recycling and composting which will result in zero tons of methane-producing materials going to landfill by 2030.

LAND USE AND URBAN DESIGN

The Climate Action Plan and Land Use Element of the General Plan describe policies to achieve land use goals. The Urban Design Element of the General Plan describes policies to achieve urban design goals. These documents should be referenced for details.

Green Building

ST-P-5 The City shall encourage, promote, practice, and where feasible, require Bay-Friendly landscaping practices as defined in the Bay-Friendly Landscape Guidelines, Sustainable Practices for Landscape Professionals.

ST-P-6 The City shall collaborate with residents, businesses, and other members of the community, including architects, builders and contractors, to encourage private development within the City to use green building methods and practices and to achieve standards set by LEED™ for commercial buildings and the Alameda County Residential Green Building Guidelines for residential projects.

ST-P-7 The City shall adopt a construction and demolition waste recycling ordinance which will require that, except in unusual circumstances, all construction, demolition and renovation projects meeting a certain size or dollar value, to divert from the waste stream, 100% of all portland cement concrete and asphalt concrete and an average of at least fifty (50) percent of all remaining debris from construction, demolition, and renovation projects.

ST-P-8 The City shall establish incentives for energy retrofits to support implementation of photovoltaic and other renewable energy technologies that result in an energy savings of at least 20 percent when compared to consumption that would occur with traditional energy sources.

ST-P-9 The City shall support companies working in the sustainability sector (such as materials recycling or green building) to locate in Emeryville.

TRANSPORTATION

The Climate Action Plan and Transportation Element of the General Plan describe policies to achieve transportation goals. These documents should be referenced for details.

ENVIRONMENTAL HEALTH

ST-P-10 The City shall develop and implement an Environmentally Preferable Product Purchasing program for municipal purchases that targets products and services, which minimize environmental impacts, toxics, pollution, and hazards to worker and community safety to the greatest extent possible.

ST-P-11 The City shall support education initiatives that encourage private companies and residences to purchase Environmentally Preferable products and services

ST-P-12 The City shall support community outreach and education to improve organic and local food systems in the city.

ST-P-13 The City shall incorporate local and organic food as part of the proposed municipal purchasing program.

WATER

The Conservation, Safety, and Noise Element of the General Plan describes policies to achieve water quality, supply, and conservation goals. This chapter should be referenced for details.