
DEPARTMENT
OF THE
ENVIRONMENT

STRATEGIC
PLAN

2011 - 2013

The City and County of
SAN FRANCISCO, CALIFORNIA

DEPARTMENT OF THE ENVIRONMENT
STRATEGIC PLAN
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STRATEGIC PLAN

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The Department of the Environment creates visionary policies and innovative programs that promote social equity, protect human health, and lead the way toward a sustainable future. We put our mission into action by mobilizing communities and providing the resources needed to safeguard our homes, our city, and ultimately our planet.

SF Environment works to improve, enhance, and preserve our urban and natural environment and to ensure San Francisco's long term sustainability. By developing innovative, practical and wide-ranging environmental programs, fostering ground-breaking legislation, working collaboratively with key partners and educating the public on comprehensive sustainability practices, SF Environment makes it easy for everyone in San Francisco to protect their environment.

In the 2011-2013 strategic plan, the Department's vision and goals are detailed by program area, and include an outline of each program's background and opportunities for impact.

The Department's objectives for 2011-2013 will be carried out with the following principles as the guiding approach for our work:

- ***Engaging in multi-departmental, multi-stakeholder actions and initiatives***

Achieving the city's sustainability goals will continue to be an "all hands on deck" effort. Through the climate planning, zero waste measures, transportation demand management strategies, integrated pest management program, green business program and other projects, we will continue to collaborate and coordinate with key city departments to achieve our goals. These departments include but are not limited to the SFPUC, Rec & Park, DPH, DPW, and OCA. In addition, we will continue to foster and strengthen partnerships with various stakeholders including community organizations, local businesses, Recology, regional agencies and others. It is a top priority for the department to build and maintain strong collaborations with city agencies and other stakeholders to meet our sustainability targets.

- ***Quantifying and achieving measureable performance metrics***

In order to determine the success of our programs and our investment of time and resources, we will develop and/or expand our mechanisms for tracking goals in each program area. We will determine which aspects of our work are quantifiable and we will manage a system of tracking those metrics, both for setting goals and to evaluate our success.

- ***Involving the public in environmental decision making***

We cannot achieve a truly sustainable city without the help of and participation of the public. Whether it comes to complying with mandatory recycling or undertaking a home energy audit through our SFHip program, it takes individual choice and action for our programs to succeed. We will be working proactively to engage the public on what it will take to further create the behavioral change that we know is necessary in order to reduce our impact on the natural and urban environment.

- ***Embracing innovation and technology***

With the burgeoning clean tech sector in San Francisco and our proximity to Silicon Valley, there are countless opportunities to engage the clean tech community and identify ways in which technology and innovation can help further the goals of sustainability at the municipal level. We will continue to explore public/private partnerships in this area.

- ***Providing incentives for behavior change***

Understanding that behavioral change is dependent on many factors, SF Environment will continue to work on identifying key motivators for change. This will allow us to reach deeper into the communities that are difficult to access and find ways to remove the barriers to changing behavior that has a detrimental effect on the environment.

Our Values & Our Vision

- ***San Francisco is a global leader in sustainability.***

Throughout the history of SF Environment, we have always been willing and interested in taking risks that keep San Francisco in the lead on environmental issues. Examples include the plastic bag ban, the mandatory composting and recycling law and the precautionary principle. San Francisco prides itself of being first to incubate a new idea, and first to attempt an innovative way of tackling a problem.

This commitment, put into action through our laws, has helped establish San Francisco as a leader in sustainability both in the United States and around the world. We intend to continue to challenge the boundaries of what is possible legislatively and programmatically, considering the magnitude of the pressing environmental issues we face.

Departmental projects that continue to forward innovation at the local level include:

- Being one of the first cities to roll out an electric vehicle infrastructure program.
- Implementing one of the nation's first mandatory energy audit requirements for existing commercial buildings in the US.
- Leading the way on quantifying and addressing issues of consumption in our community-wide climate action plan.
- Heading up a task force to scope out achieving 100% renewable power in San Francisco.

- Continuing to spearhead one of the most robust green business certification programs in the nation.
- Launching a cutting edge home performance retrofit program to improve energy efficiency.
- ***San Francisco employs a holistic view toward reducing our carbon emissions, saving energy, conserving resources, reducing pollution and the consumption of resources.***

SF Environment works to mitigate the harmful environmental impacts our community has on our planet's natural life support systems. We achieve success in striving for this goal in a variety of ways: by lowering the amount of material that goes to landfill, by reducing the consumption of toxic and harmful materials, and by making our community, transportation networks, green and built environments as clean, healthful and resourceful as possible. The results of the majority of these actions can be measured through reductions in greenhouse gas emissions, a practice that also allows us to gauge progress in combating dangerous climate change.

- ***San Francisco is expanding the green economy and promoting green jobs through our environmental policies and programs.***

Many Department of the Environment programs work not only to achieve maximum environmental benefits, but are also focused on fostering job creation and creating market opportunities for green entrepreneurs. In order to revitalize our sagging economy as well as ensure the protection of our environment for future generations, we must marry our environmental and economic goals whenever possible.

The green jobs movement started in earnest in the Bay Area and has been developing ever since 2007. Now, four years later this green jobs effort—led in San Francisco by the Office of Economic and Workforce Development as well as by many workforce development professionals and providers in San Francisco—is in need of additional support if it is going to continue to grow.

Although our city understands the need to green our economy, we have a ways to go until our vision of every job being a green job is realized. The Department of the Environment is poised to play a useful role in this sector and will also focus on developing and expanding our own green jobs training and workforce development program, Environment Now.

Department of the Environment programs that are poised to create or sustain green jobs and help stimulate new markets include:

- A projected 74 laborer jobs through the Boiler retrofit program
- 45 energy audit jobs through our home performance retrofit program
- 180 energy retrofit jobs through our home performance retrofit program
- 120 jobs have been created through our Zero Waste Program
- 560-920 jobs in audits and retrofits through the Existing Commercial Green Building ordinance

- *San Francisco is addressing many of the environmental issues we face by promoting producer and consumer responsibility.*

Achieving green chemistry and zero waste will require producer and consumer responsibility. Producer responsibility means manufacturers and distributors take physical and/or financial responsibility for their products after selling or leasing them. This internalizes lifecycle costs and incentivizes companies to make products that are nontoxic, reusable, durable, repairable, with minimal packaging and maximum recycled content, and that are ultimately recyclable or compostable. Consumer responsibility means everyone consuming less, buying only the most environmentally-preferred products, reusing them until they can no longer be repaired, and then properly recycling and composting everything. Many of our programs identify ways in which producers and consumers can be held responsible for changing methods of production and consumption.

Department Wide Priorities and Impact Opportunities

- *Community Wide Climate Action Plan*

The reduction of carbon emissions in San Francisco is central to ensuring a sustainable future. If our carbon emissions continue at the current levels, we will be facing severe climate change impacts in San Francisco resulting in unstable weather patterns, rising sea levels and damage to our city's natural habitat and infrastructure. Consequently, a central priority for the Department is to address carbon emissions through a community-wide climate action strategy.

The Community Climate Action Strategy (CCAS) is a compendium of city ordinances, codes and programs that result in actual reduced greenhouse gas emissions or qualitative, positive climate impacts. In today's fossil fuel-based society, the majority of our daily activities, economic choices and policy decisions have an associated carbon cost. On account of this shared reality, CCAS cuts across all SF Environment program areas, and is designed to strengthen program functionality by illustrating how each program's specific and often separate actions link into the cumulative carbon balance of our intertwined economic, political and social systems. Housed within the CCAS are our greenhouse gas (GHG) reduction goals and community wide GHG inventory. The political genesis of the CCAS was the 2002 Board of Supervisors Resolution 158-02 that established the goal of reducing San Francisco's carbon emissions to 12 percent below 1990 levels. Subsequent related legislation is housed in the Environment Code, Chapter 9. We expect to have San Francisco's Community Wide Action Plan updated in summer 2011.

- *Community InSight Project*

The Department of the Environment manages and implements a wide array of programs that contribute to our resident's quality of life and to environmental sustainability. Many of those programmatic successes rely on public participation and broad scale behavior change. In order to further engage the public and help inspire the changes that are needed to achieve social change, we've launched the Community InSight Project.

The Outreach Team—in conjunction with Environment Now and many program staff that are involved in day-to-day outreach activities—is has developed a plan to create and identify opportunities to deeply engage our constituencies and others in a two-way dialogue about the future vision of a green San Francisco. The goal is to meet people where they are, joining into existing conversations or stimulating new conversations, listening to people’s concerns and ideas, sharing relevant information, and using the knowledge gained to inform the Department’s environmental programs and policies.

Through the InSight Project’s use of technology as one way to engage the public in our issues, the Department is supporting a larger movement in city government to innovate and engage using new tools and methods.

- ***Greening the Economy with the Cleantech Sector and Job Training***

Our programs need to deliver on multiple promises simultaneously. Yes, they must be good for the environment; but in order to have community-wide impact, they also have to address the economic needs of individuals, improve the local economy, and reverse social inequalities. SF Environment is more deeply engaging in the arena of green jobs and green economy to broaden our reach on integrated sustainability.

San Francisco is uniquely positioned to leverage the plethora of clean tech companies and technologies that existing in our city and the Bay Area. Honing in on ways to partner with clean tech companies can help us meet our carbon reduction goals. In collaboration with ChinaSF, the Office of Economic Development and the Mayor’s Office, we will be working to develop new programs that leverage new clean technologies, helping engage businesses with the city and finding ways to explore new technologies that can help San Francisco meet our goals, create new green jobs and strengthen the economy. We will also continue to invest significant resources in our Environment Now green jobs training program.

- ***America’s Cup***

The America’s Cup events are projected to bring 200,000 spectators per day to the waterfront of San Francisco, are likely to create over 9000 jobs and will influx the economy with millions in revenue for the City. The scale of this event will undoubtedly create a variety of impacts on the local community and the environment. The Department of the Environment’s role is to ensure that sustainability is incorporated into the core fabric of the event and that mitigations will have a lasting positive impact on the community.

With the world-renowned sporting event, America’s Cup, coming to San Francisco in 2012 and 2013 (and possibly beyond), SF Environment has a unique opportunity to ensure that this sporting event achieves measureable groundbreaking environmental objectives. Through the event sustainability plan that we are creating, as well as by working with the ACEA, the Environmental Council, the city staff and others, SF Environment is outlining the actions that must be taken for the event to minimize local impacts, as well as attain aspirational goals that will help increase the event’s potential long-term environmental benefits.

Overall, San Francisco is outlining how the AC can be a climate positive, zero waste event that develops buildings and grounds that meet or exceed the highest sustainability standards, all while leveraging this opportunity to educate the public about protecting our fragile ocean and bay ecosystems.

America's Cup will be transparent and accessible to the public. It will demonstrate how San Francisco and the Bay Area are taking the lead in implementing the world's most sustainable sporting event and how sustainability in such an event can be replicated globally.

Existing Program Priorities

While the Department manages many programs that are outlined below or which we will continue to seek funding, the following programs will need additional emphasis and funding support. The climate program, which functions as an "umbrella" issue for most of the work we do, needs more institutional and sustainable funding for the long term. The Environmental Justice program, which has traditionally been funded by a settlement grant will also need new sources of funding to continue to grow and thrive as a program that serves San Francisco's communities in need. And finally, the Urban Agriculture Program, needs additional funding and support to continue work in this cross-sector arena.

Partnership Opportunities

Through experience, SF Environment knows that one of the best ways to amplify our work and achieve greater programmatic success is through our broader partnerships and initiatives at the regional, national and even international level. Not only do these initiatives further San Francisco's goal of continuing to lead in the environmental arena, they also support the City in accelerating the achievement of local goals, as well as leveraging additional resources to maximize impact. Partnerships include collaborations with other agencies and governments, as well as public-private partnerships. The following partnerships are key to the department's success in reaching our goals and the public.

Green Cities California: San Francisco is one of the founders of Green Cities California, a partnership of 12 of California's largest municipalities most committed to sustainability. Green Cities California collectively works on state wide environmental initiatives such as producing master environmental assessments that can be used by all California municipalities instead of producing individual California Environmental Quality Act (CEQA) assessments (for example on bans and fees on plastic bags); adopting collective environmental goals (such as a commitment to purchasing only 100% postconsumer recycled paper by each participating city); and working with other levels of government such as the U.S. Environmental Protection Agency on projects such as designing a climate analysis framework that allows cities to quantify connections between consumption and greenhouse gas emissions. It is also a peer-to-peer networking resource for participating cities and counties.

San Francisco Public Libraries: In 2008, SF Environment, the SF Public Libraries and the Friends of SFPL created SFGreenStacks, which won the Urban Library Award for Innovation in 2010. This collaboration focused on environmental issues with programming, activities,

collections, operations and facilities. Since 50% of all San Franciscans have a library card, GreenStacks enables us to maintain a direct connection to our friends and neighbors throughout the City.

Business Council on Climate Change: This public - private partnership allows the City of San Francisco to work with private sector leaders on climate issues, and helps to maximize greenhouse gas reductions through private initiatives that are shared as best practices through BC3. Business Council on Climate Change (BC3) member companies believe that climate change offers corporate leaders an unprecedented opportunity to shift practices to realize economic growth, environmental sustainability, and social well-being. BC3 focuses on internal implementation of climate initiatives in the private sector, focusing on implementation, advocacy, dialogue and leadership.

Green Business Program: Working with the San Francisco Department of Public Health, the San Francisco Public Utilities Commission, SF Environment coordinates the Green Business program. The program's mission is to help San Francisco businesses adopt environmental practices that are sustainable as well as profitable. This mission is achieved by setting stringent criteria, providing technical assistance, and publicly recognizing and promoting Green Businesses with a seal that enables customers to shop in keeping with their values.

SF Environment provides grants to a broad range of community based organizations such as the Jewish Community Center and Building Resource working in the areas of Zero Waste and Environmental Justice. In addition to granting funds for specific programs and activities, SF Environment relies on these organizations to be ambassadors for all of our programs and to help engage residents.

2013 and Beyond

Biodiversity: SF Environment is proposing to create a biodiversity program which will be responsible for initiating and establishing biodiversity policy and creating public education and action program for San Francisco. The mission will be to make the City a national leader in the management and stewardship of biodiversity in an urban area. The Biodiversity Director would work closely with SF Environment staff, all other relevant City Departments, e.g., Recreation and Parks, the Public Utilities Commission, Planning and the School District, other jurisdictions, the Mayor's Office, and the Board of Supervisors to transform the relationship of the City and County and its citizens to the indigenous nature of the Franciscan Bioregion and make whole the City's management of its own biodiversity.

CLEAN TRANSPORTATION

The Clean Transportation Program envisions a San Francisco where car ownership is more the exception than the rule, and where convenient, carbon-free mobility options are readily available and highly used by residents, commuters and visitors. As a step toward that vision, **our goal** is to reduce greenhouse gas emissions from the transportation sector in San Francisco to 20 percent below 1990 levels, while also working towards the City's and the State's longer term emission reduction goals. Additionally, we aim to enhance the City's livability by improving the environmental conditions and experience of San Francisco residents and visitors by promoting Clean Transportation programs that reduce congestion, improve safety for all modes of mobility, advance air quality and encourage healthy travel.

Clean Transportation is a major element of a vision for environmentally sound transportation. To effectively reduce the negative impact of our mobility on the environment, we need to move rapidly toward reducing dependence on the private automobile, no matter its energy source. Reducing the number of cars on the road means safer communities and lessens the incentive to displace habitat and other open space. Reducing the number of parking spaces frees up valuable land for other purposes and reduces the cost of providing housing. Discouraging car ownership, regardless of the kind of car, reduces the carbon footprint, resource depletion and toxics production involved in the manufacture and transport of those cars. While we strive to achieve the necessary land use and transportation improvements, there will still be those who must rely on the private car, and for those we encourage using the cleanest cars possible

The Challenge

Transportation, currently dependent largely on petroleum, is one of the largest contributors to greenhouse gas emissions. Nationwide, transportation accounts for 32 percent of GHG emissions, and in California, the statewide number is even higher at 36.5 percent. But in San Francisco, **transportation is the source for approximately 33 percent of locally-generated greenhouse gas emissions**. SFE's Clean Transportation Program is a critical component of San Francisco's greenhouse gas reduction strategies, and also for assuring healthy air quality and achieving a more livable urban environment less dominated by automobile and petroleum dependency.

Impact Opportunities

To achieve this goal, San Francisco needs to shift to forms of transportation that use energy more efficiently, rely on sources of energy that are renewable or have low carbon intensity, reduce petroleum consumption, and dramatically cut down on vehicle-miles-traveled. In part, this requires a technology focus, aggressively incorporating electric vehicles and other clean vehicle technologies and fuels, as encompassed by our **Clean Vehicle** sub-program area. But it also requires a focus on behavioral changes, encouraging major shifts in the modes of transportation that people choose. Our **Transportation Demand Management (TDM)** sub-program area focuses on moving away from single occupancy vehicles to much greater use of transit, ridesharing, biking, walking and telecommuting.

SFE's Clean Transportation Program functions within the framework of several City policies, most notably San Francisco's Transit First policy, the Healthy Air and Clean Transportation

Ordinance (Chapter 4 of San Francisco’s Environmental Code), and the City’s Climate Action Plan.

Long an anchor for San Francisco’s transportation and city planning, the **Transit First Policy**, adopted in 1973, identifies transit, bicycling, and walking as the city’s top transportation priorities. Since 2000, the **Healthy Air and Clean Transportation Ordinance** (originally named Healthy Air and Smog Prevention Ordinance) has, among other objectives, provided the basis for SFE’s actions to make San Francisco’s municipal fleet the cleanest of any major city in the country and to aggressively pursue TDM strategies. In 2002, San Francisco approved its **Climate Action Plan**, charting a course for the City to reduce greenhouse gas emissions by 20 percent from 1990 levels by 2012, and showing that reducing GHG emissions from transportation is critical for success in meeting the goal.

In the years since it was first put into place, the objectives of the Healthy Air and Clean Transportation Ordinance have been further advanced by mayoral Executive Directives specifying requirements for alternative fuel vehicles for city fleet purchases (2005) and for use of biodiesel by the municipal fleet (2006), by adoption of the San Francisco Green Taxi Policy (2008) resulting in the City’s taxi fleet rapidly transitioning to hybrid and natural gas vehicles in order to meet GHG targets by 2012, and enactment of San Francisco’s Commuter Benefits Ordinance (effective in 2009) requiring employers to make programs available to their employees to minimize single-occupancy commuting. Amendments to the Healthy Air and Clean Transportation Ordinance in 2010 updated and further strengthened the program by, among other things, specifically linking the purposes of the Ordinance to greenhouse gas reduction goals and requiring City departments to include Transit First policies within their annual operating plans.

Our Role

There are two functional roles that characterize the implementation of our Clean Transportation programs.

First, through our Transportation Programs, we conduct **direct outreach to consumers and stakeholders**. For many of the City’s clean transportation policies, the Clean Transportation Program provides the lead role for outreach and education directly to those whose participation and actions ultimately will determine the success of the City’s programs. Our Transportation Demand Management programs, for example, work directly with San Francisco employers, residents, and commuters to implement the assortment of options that provide commuters with alternative options to single-occupancy vehicle commuting. Similarly, as coordinator of the San Francisco Clean Cities Coalition, we work directly with fleet operators and other key stakeholders to advance the use of the cleanest and most energy efficient vehicles and fuels.

Secondly, SFE **leads and coordinates multi-departmental actions**. The tools for fully implementing clean transportation objectives often require cross-jurisdictional approaches by multiple departments, involving city planning, infrastructure development, consumer education, fleet management, regulatory and incentive programs, and more. The Department’s Clean Transportation Program works in partnership with the two San Francisco agencies that have principal transportation responsibilities, the San Francisco Municipal Transportation Agency

(MTA) and the San Francisco County Transportation Authority (SFCTA), as well as with other offices whose duties partially include transportation topics, such as the City Administrator, Planning Department, Fleet Management, and others. Regionally, we engage with the Metropolitan Transportation Commission (MTC), Association of Bay Area Governments (ABAG), and Bay Area Air Quality Management District (BAAQMD). In this cross-departmental function, the roles of the Department's Clean Transportation Program are to:

- Develop innovative programs and proposals where gaps may exist (as we did in proposing and implementing the Commuter Benefits Ordinance);
- Lead and coordinate implementation of programs and policies that cut across multiple agencies (as we are currently doing with the Electric Vehicle Initiative and the municipal Biodiesel Fleet Program); and
- Help assure a well-integrated, citywide, cutting-edge transportation strategy aimed towards achieving a 20 percent reduction in GHGs (as we are currently are doing by assisting other departments in incorporating transportation alternatives in their departmental Climate Action Plans).

GOAL #1

Reduce greenhouse gas emissions from transportation in San Francisco to 20 percent below 1990 levels, with attendant urban livability benefits in air quality, reduced vehicle congestion and increased mobility options.

Objective A: Through Transportation Demand Management strategies, reduce miles traveled in single-occupancy vehicles and increase the use of transportation alternatives.

ACTIONS:

1. Continue to implement and expand the Pre-Tax Commuter Benefits Program. (2011-13)
 - a. Promote and manage the commuter benefits programs for employees of the City and County of San Francisco.
 - b. Implement the City's program for education and outreach to motivate compliance with the Commuter Benefits Ordinance by San Francisco businesses.
 - c. Initiate direct outreach to commuters to stimulate their request for TDM options by their employers.
2. Expand the Emergency Ride Home program by conducting outreach to San Francisco businesses and commuters. (2011-13)
3. Coordinate with MTC's 511 Rideshare program to implement: (2011-2013)
 - a. A promotional program for the 511 Rideshare Matching Services to San Francisco commuters and residents to encourage the formation of carpools and vanpools
 - b. Expand consultation programs to promote 511 Rideshare Employer Services and other commute programs with San Francisco employers.
 - c. Initiate outreach to public and private schools in San Francisco to increase participation in MTC's SchoolPool program, a ride-matching service for students.
4. In coordination with San Francisco Bicycle Coalition, conduct the promotion of biking as viable means of alternative transportation to San Francisco businesses, commuters and residents. (2011-2013)

5. Integrate the various TDM programs (pretax commuter benefits, ridesharing and emergency ride home) into a comprehensive and cohesive outreach campaign that conveys the opportunities and benefits of being “carless” in San Francisco. (2011-2012)
6. With MTA, SFCTA and Planning Department, coordinate parking cash-out and private shuttle services with Transportation Management Associations to improve the Associations’ effectiveness in reducing vehicle use. (2011-2012)
7. Broaden the outreach for TDM promotion to include stakeholders from neighborhood organizations, business improvement districts and other organizations, using improved, user-friendly communication and trip-planning tools. (2011-2013)
8. Develop improved TDM monitoring and measurement metrics to assess the progress.
9. Assist City departments in instituting departmental transit-first policies in accordance with the Healthy Air and Clean Transportation Ordinance to. (2011-2013)
10. Contribute to America’s Cup sustainability planning by helping to incorporate TDM strategies that will minimize traffic impact from the series of events leading up to and during the competition.

Objective B: Shift vehicle use to the cleanest and most energy efficient technologies and fuels

ACTIONS:

1. Continue to implement the City’s Healthy Air and Clean Transportation Ordinance to assure that city fleets purchase the cleanest vehicles possible, and assist in instituting departmental fleet-reduction requirements. (2011-13)
2. Coordinate and lead implementation of the San Francisco Electric Vehicle (EV) Initiative, working with multiple City departments to make San Francisco and the Bay Area the top EV market in the nation, encouraging drivers of fossil fuel powered cars to replace them with EVs including: (2011-2013)
 - a. Plan and install public charging infrastructure on city-owned properties to ensure adequate availability to support EV market growth.
 - b. Conduct pilot and demonstration programs to assist the provision of charging facilities to serve residents of multi-unit dwellings and other residents without personal garages.
 - c. Obtain grant funding to enable purchasing of plug-in vehicles for the municipal fleet, in keeping with fleet reduction requirements.
 - d. In coordination with SFMTA, assist the implementation of a neighborhood EV taxi program, and the implementation of a demonstration program for battery-switch stations to serve specially manufactured taxis with swappable battery packs.
3. Implement Clean Cities Coalition education and outreach programs about EV, including provide information to consumers regarding the pros and cons of replacing an existing vehicle and other clean vehicle and clean fuel options, directed to businesses, fleet operators and other stakeholders in San Francisco area. (2011-2013)
4. Coordinate and manage an interagency Biodiesel fleet working group to monitor implementation and attainment of the City’s policy for use B20 by the municipal fleet, and to move to higher a percentage blend as key way of meeting City’s GHG reduction target.

5. Contribute to America's Cup sustainability planning by helping to incorporate clean vehicle/clean fuel strategies for vehicles related necessary to the competition.

Objective C: Expand programs and develop strategies that integrate Transportation Demand Management and clean fuels/clean vehicle technology efforts.

ACTIONS:

1. Grow the SF Clean Cities Coalition program to incorporate events and programs that promote both TDM, and clean and efficient technologies and fuels.
2. Develop a strategy and guide for sustainable transportation associated with large special events in the City, using the America's Cup planning as a starting point.
3. Assist City departments to integrate transportation demand management and clean fuels and technologies into their Climate Action Plans.
4. Promote the expansion of car-sharing and maximize its environmental and VMT-reduction benefits by coordinating the car-sharing efforts with:
 - a. TDM and transit programs
 - b. Fleet-reduction programs (municipal fleet and private fleets)
 - c. Electric vehicle and other clean vehicle/clean fuels programs.
5. Develop metrics, including reduction in GHG emissions and other environmental considerations, to track the progress of the Clean Transportation Program's entire suite of projects, including TDM and clean vehicles/clean fuels.

CLIMATE ACTION

The City and County of San Francisco was and continues to be a leader in US environmental policy. Locally, the City has been a leader in informing, shaping, and inspiring the progressive policies of the state of California.

The Municipality—combined City and County— benefits from the Hetch Hetchy water system by way of clean hydro power. Coupled with the Renewable Portfolio Mandates of the State of California, and the utility's progressive efficiency programs created under the policies of decoupling, the City and County of San Francisco is ahead of the nation in its clean energy supply. Our energy sources are less than 12% coal, nuclear, and large hydro. RPS mandated renewables make up the majority of The City's power supply.

Natural gas, the second fossil fuel and one largely touted as compromise between industry and nation, makes up the majority of the community's carbon footprint. Employing the simple solar water heating techniques, utilized by much of the third world, are a priority. Moving transportation to shared, self powered, non-fossil transit is also essential.

It is with the resources of past and precedent, the power of water, the will of this cities founders and current citizens, and the simple act of taking the next step that that we will meet our climate goals. These are the goals of a new, clean, sustainable economy.

The SFE Climate Team chooses to focus on; moving from natural gas to efficiency and renewable alternatives with our partners at PG&E and SFPUC, from single vehicles to multi modal systems in support with our partners at the MTA and CTA and in recognition that sea levels are rising and trees are in fact valuable infrastructure, with Parks and Recreation.

The Challenge

In 2008, total U.S. greenhouse gas emissions (GHG) were 6,956 million tons of CO₂ (equivalent). Overall, total U.S. emissions have risen by approximately 14 percent from 1990 levels. San Francisco, at approximately .26% of the U.S. population, produces approximately 6.97 million tons, less than .1% of the rest of the nation. Therefore, San Francisco is comparatively efficient – to be expected given the mild climate, dense transit-friendly urban form, and a very small industrial sector. Even so, San Francisco is far above the level needed for our share of global climate stability, approximately 1.46 million tons. In 2004, the San Francisco Climate Action Plan set a reduction objective for our community of 20% below the 1990 baseline by 2012 and 80% below by 2050.

Impact Opportunities

As of 2008 we have achieved a 7% reduction below the 1990 level. Almost a fifth of this comes from carbon sequestration in our urban forest. Other reductions have been seen in the following sectors: interregional road travel, residential electricity and natural gas, and commercial and municipal electricity. The decrease in emissions from road travel can primarily be attributed to the economic down turn. In-city vehicle emissions and overall electricity usage have remained relatively stable, in part due to the effectiveness of the City's transportation planning and energy efficiency efforts. The largest portion of emissions reductions has come from electricity becoming progressively cleaner due to the State's Renewable Portfolio Standard, the closing of the Hunters Point Power Plant and Hetch Hetchy's clean power.

To meet the 2012 objective we need to reduce emissions by another 13% or 973,968.3 metric tons of greenhouse gases. Closure of the Potrero Power Plant will provide another 1% reduction from the electricity sector. Efficiency and renewable programs are seeking an additional 5% reduction in GHG's from energy use in the building sector. Climate benefits of our Zero Waste Program are expected yield 3-5%. An additional 2-5% reduction is required to meet our overall reduction goal in the next three years. In light of this, we must continue to support and expand existing programs, while also targeting the areas of **transportation, natural gas consumption** and increased **local renewable power production and procurement**. Addressing the first two areas will be a challenge in light of Muni cutbacks and the current trend of natural gas increases in the commercial and industrial sectors. Local renewable energy production and procurement offers the largest single opportunity to reduce emissions. For this reason SFE is dedicated to working with SFPUC to bring about Community Choice Aggregation and a clear internal electricity rate structure.

Our Role

The City can advocate for strong action by federal and state governments, and even effect change globally as other cities look to our example. Because of the fossil energy and natural resource intensive nature of our society and economy changes must be made at all levels of the system; individual, private business and government. For local government this means creating a framework built on education, incentives and mandates to shape our daily choices, from what we buy to how we get around, to the primary sources of energy that power our community. As providers of social services, local security and transportation infrastructure we as a City also have the responsibility to plan and prepare for the effects climate change will have on our community. It is critical that we work to actively maintain and rebuild the ecosystems that act as climate stabilizers and provide other essential public services to our residents and businesses.

GOAL #1

To reduce San Francisco's greenhouse gas emissions 20% by 2012, 25% by 2017, 40% by 2030 and 80% by 2050 from a 1990 baseline.

OBJECTIVE A: Calculate and certify San Francisco's Municipal Green House Gas emissions, track and publicize results.

ACTION:

1. Incorporate emissions from waste and sinks from urban trees into municipal footprints in order to expand our GHG inventory to a systems based framework. (11)
2. **Implement Departmental Climate Action Plans (DepCAP). (11-13)**
 - a. Identify largest department GHG emitters by source and determine reduction objectives and strategies for each. (11)
 - b. Assist City Departments in messaging climate change to the public (Outreach)
3. **Create an enterprise wide data management system to support the DepCAP and Community Wide inventories by seeking the assistance of a 3rd party vendor. (11-13)**

OBJECTIVE B: Calculate and certify San Francisco's Community Green House Gas emissions, track and publicize results.

ACTION:

1. Update the Community Wide Climate Action Plan and goals. (11-12)

2. Create a systems based emissions inventory that incorporates materials management and land use. (Zero Waste, Urban Forestry, 11-12)
3. Incorporate criteria pollutants into reduction actions and planning. (11-12)
4. **Identify sub-categories of the emissions sources and determine reduction objectives for each. (11-12)**
5. Resolve policy issues on emissions factors and a CEQA compliant document then implement.
6. Make inventory information publicly available. (11)

OBJECTIVE C: Develop internal infrastructure and external strategic relationships to inform and support climate policy and community education.

ACTIONS:

1. Develop City's stance on climate policy framework and advocate in regional, state and national forums. (11-12)
2. **Explore increasing the local user's fee on natural gas. Consider a local application of the policy via ordinance or City Charter amendment.(11-13)**
3. **Support the SFPUC in enacting recommendations, 4 & 5 of the Electricity Resources Plan; develop an internal rate structure and implement CCA.**
4. **Develop a Climate Action Campaign with emphasis on personal consumption, natural gas reduction strategies, and private vehicle alternatives. (Outreach, Environment Now, Transportation) (11-12)**
 - a. Support community-based climate action activities.
 - b. Develop and coordinate City climate education campaigns. (Outreach, BC3)
5. Promote the San Francisco Carbon Fund to the public and hospitality sectors. Develop new funding sources, e.g CEQA GHG impact fees. (EJ, Outreach, BC3. SFO) (11-13)
6. Assist in development of a Community Risk Reduction Plan linking GHG emissions and criteria pollutants for public health purposes.

GOAL #2

To develop and implement a climate adaptation plan.

OBJECTIVE A: Coordinate climate adaptation planning

ACTIONS:

1. **Participate in the Mayors Office Adaptation Group (10-11)**
2. Assist in developing a climate adaptation plan. (11-12)
3. Integrate Peak Oil Task Force recommendations into climate adaptation work (10-12, EJ)

EDUCATION

SF Environment's Environmental Education team offers an award-winning program that serves over 225 public and private schools in San Francisco, annually reaching 20,000 students and 1,000 teachers that serve as catalysts for change in the community.

The Environmental Education Program originated in the 1980's as part of San Francisco's Solid Waste Management Program. As such, it focused solely on recycling, and relied upon waste-related curriculum supplied by the California Integrated Waste Management Board. The program transformed when it became part of the Department of the Environment in 2002 and started teaching about other topics like water pollution, thanks to funding from the San Francisco Public Utilities Commission. In 2003 with the hiring of a new Environmental Education Manager, the program underwent another major transformation with the development of a kids website and teacher listserve, a new mascot named "Phoebe the Phoenix" that brings charismatic branding to the program, as well as new teaching materials – all developed in house – that use narrative student fact sheets and CA State standards-based lesson plans to teach a variety of relevant environmental topics that shift the frame from "garbage and landfills" to "protecting nature." At that same time, the "School Organics Collection Program" was renamed the *Food to Flowers!* Lunchroom Composting Program, and assemblies and colorful materials were created to effectively teach the entire school population how to compost with the green bin system. In 2005, the Environmental Education Program was awarded the Governor's Environmental and Economic Leadership Award to recognize its ground-breaking work with the *Food to Flowers!* program.

Since then, the Environmental Education Program has continued to evolve, responding to program needs within the Department as well as requests from the Mayor and other City Departments. For example, the "Stop Litter" Assembly, plus the "Our Water" curriculum and classroom presentation were developed in partnership with Department of Public Works and the San Francisco Public Utilities Commission and are being implemented by the Environmental Education Program on their behalf. With a growing awareness of "green issues" the past several years, the demand for all of SF Environment's education programs and materials has increased.

The Challenge

Known for its environmentalism, San Francisco is home to a multitude of school-focused environmental education programs. In fact, the State Board of Education recently approved the Education and the Environment Initiative Curriculum for use in California classrooms. Still, teachers are pressed for time and schools are pressured for funds, rendering many of these opportunities challenging to participate in for even the most dedicated teacher. Because past and imminent budget cuts for the San Francisco Unified District, as well as the constraints of "teaching to the standards" make many environmental education opportunities unrealistic, programming that is free of cost, relevant to standards, and requires minimal time of teachers and/or administrators is essential.

As schools and teachers are limited by budget and time, much of available environmental education curriculum is limited by requests for unrealistic student action, static framing—addressing issues from the same point of reference again and again, or even misinformation due

to corporate involvement. To effectively encourage and inspire students to adopt environmentally sustainable behavior, programming that builds on student interests and exemplifies topics in innovative, interesting, and engaging ways is needed.

Since 2003, the Environmental Education Program has prioritized create programming that addresses these challenges—that is not only accessible to the pressured teacher in a school with limited funds, but also innovative in its approach to effectively reach students and motivate them to change their behavior.

Impact Opportunities

Educating San Francisco’s youngest citizens about the importance of protecting nature, while providing concrete actions they can take to make a difference is one of the most meaningful actions on behalf of environmental protection. Aware children not only grow up to become aware adults, but they also positively impact their families with their passion and newly acquired information for “doing the right thing.”

While the Environmental Education team works to educate and empower K-12 students about the importance of a healthy environment and how to protect it, the most strategic audience to work with is San Francisco’s **network of teachers**. Since they are the champions that repeatedly bring the Department’s programs to their schools and classrooms, the Environmental Education team will continue working with them to provide the most relevant programs and teaching materials possible. Many teachers highly value SF Environment’s curriculum and say it offers a fresh perspective in ways other curriculum doesn’t. Indeed, other educational organizations like NatureBridge, have been so impressed by the Department’s curriculum, that they have asked permission to use the curriculum in their own outreach programs.

To that end, the Environmental Education team will strategically develop new curriculum targeting consumption and explain concepts like “supply and demand.” This curriculum will underscore the need to reduce our consumption which will support the overall “Reduce, Reuse, Recycle, Rot” message the Environmental Education team teaches through the composting and recycling programs. The Environmental Education team will also create new curriculum on the biodiversity of San Francisco, specifically focusing on local and migratory birds that depend on San Francisco’s natural areas for habitat. Additionally, by 2013 and beyond, all the Department’s student narrative fact sheets will be translated into Spanish and Chinese to provide English Language Learners (ELL) full access to these learning materials.

By 2013, the Environmental Education Program will also achieve complete saturation of the Food to Flowers! Lunchroom Composting Program in all SFUSD public schools, with the vast majority of private schools also composting in the lunchroom.

Our Role

The Environmental Education team works to promote positive behavior change that increases composting and recycling at schools, protects our water from pollution, inspires sound environmental stewardship and helps stop litter. The Environmental Education team achieves this by offering dynamic school wide assemblies, interactive classroom presentations, a variety of field trips, teacher training workshops, cutting-edge environmental education materials,

technical assistance and other relevant special projects that are needed in San Francisco schools. Recognizing the powerful role teachers play in promoting environmental awareness and positive behavior at school and in the classroom, the Environmental Education team strives to invite new schools and new teachers to participate in its free programs, and celebrates their achievements at an annual School Award Ceremony. This helps maximize outreach to new teachers who then reach new students, who then often take the information and new behavior home to their families.

GOAL #1

Design and deliver educational activities for SF schools that will achieve the behavioral change goals of Department programs, as well as partner agencies (SPFUC, DPW)

OBJECTIVE A: Implement and improve *Food to Flowers!* lunchroom composting and recycling program.

ACTIONS:

1. Provide on-going technical assistance at over 100 schools to implement school recycling and composting programs. (ZW) (11-13)
2. Conduct school-wide composting and recycling assembly presentations at 60 schools by fiscal 11-13 reaching a total of approximately 27,000 students and 1,200 teachers. (ZW) (11-13)
3. Deliver in-class presentations to train 4,050 students to be compost monitors in the cafeteria. (ZW) (11-13)
4. Provide composting and recycling resources such as classroom recycling bins, compost posters, and compost monitor aprons. (ZW) (11-13)
5. Deliver waste assessments at 60 city schools, inputs data using SF Environment's waste calculator to calculate diversion rates, and rewards school custodians who have made 50 percent diversion possible, by giving them a one-time monetary stipend as funding allows. (ZW) (11-13)
6. Recognizes 12 schools that have excelled at composting and recycling by honoring them at annual School Award Ceremony. (11-13)

OBJECTIVE B: Provide students with opportunities to learn more about the urban environment.

ACTIONS:

7. Coordinate field trips to the Transfer Station and Recycle Central, so students can see where our trash, composting and recycling go, and also provide in class pre-trip presentations reaching 3,600 students that prepare students for their trip and teach how the 4Rs (Reduce, Reuse, Recycle, Rot) can protect nature. (ZW) (11-13)
8. Incorporate urban environmental overview in field trips and assembly and classroom presentations. (ZW, Toxics, Energy, EJ) (11-13)
9. Coordinate field trips to SCRAP (The Scroungers Center for Reusable Art Parts), pending ZW grant funding, so students can see the reuse warehouse and participate in a reuse art

- project, and also provide in class pre-trip presentations reaching 1,350 students that prepare students for their trip and teach how the 4Rs can protect nature. (ZW) (11-13)
10. Present water pollution and conservation curriculum presentations. (SFPUC) (11-13)
 11. Distribute water pollution and conservation curriculum to 180 teachers reaching 5,400 students. (SFPUC) (11-13)
 12. Present anti-litter curriculum presentations. (SF DPW) (11-13)
 13. Coordinate field trips to the Garden for the Environment, Alemany Farm, and Heron's Head Park, along with corresponding pre-trip presentations, so students can learn about the range of SF natural processes. (ZW, Rec/Park) (11-13)
 14. Arrange for schools to get free compost from Recology to use in their school gardens. (11-13)
 15. Promote school garden by participating in the SF Green Schoolyard Alliance. (11-13)

OBJECTIVE C: Cultivate and build upon relationships with teachers in order to create allies that catalyze change with students and within the school system.

ACTIONS:

16. Maintain communications with teachers through annual Teacher Workshops, email list-serve, school visits and website. (11-13)
17. Create and distribute 1,200 curriculum packets at school assemblies by fiscal 11-13 so that 1,200 teachers can teach standards-based environmental lessons in the classroom.

GOAL #2	Train future environmental professionals in order to promote sound and effective environmental education that teaches students to protect nature.
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OBJECTIVE A: Recruit, hire and train apprentice level employees to be skilled in administering various aspects of the Environmental Education Program.

ACTIONS:

18. Hire and train 4 Environmental Associates (9922) and continue training and developing skills of Associates. (11-13)
19. Hire 6 Environmental Aides (9920) and train them to give presentations, act as program mascot, help monitor composting program in school lunchrooms and be skilled in administering various aspects of the Environmental Education Program. (11-13)

ENERGY

The Challenge

Energy use in buildings is responsible for 49% of greenhouse gas emissions (GHG) in the U.S. Similarly, in San Francisco, there are approximately 195,000 buildings producing 49% of total annual GHG (2008): 3.76 million metric tons - 1.21 million metric tons in residential buildings, 1.40 million in the commercial sector, .40 million in industrial energy and .35 million in municipal facilities.

The Department's energy program is directed at energy use in private sector buildings, both commercial (25,000 buildings) and residential (170,000 buildings). The goal is to reduce energy use in these buildings through efficiency and conservation, and install renewable resources to achieve as close to zero net energy as possible and contribute towards achieving the City's Climate goals by reducing 330,000 metric tons over this three year period.

This effort is primarily focused on reducing energy use in buildings and secondarily on developing renewable resources. The Department has already made great strides establishing one of the largest city-run energy efficiency programs in California funded by PG&E ratepayers. Now the program is growing with Stimulus funds and adding a new component to address single-family homes (and 2-4 unit buildings). This is intended to build a new market in home performance retrofits that can serve as an entry point for graduates of TrainGreenSF. For emerging renewables, the largest opportunity is in wave energy where a preliminary study indicates over 30 megawatts of technical capacity.

Impact Opportunities

To achieve more GHG reductions for the dollar and overall impact, the Energy program is shifting towards natural gas reductions with both efficiency measures and renewables. Last year, the multi-family program gained significant traction in heating controls and continues to grow in spite of the severe economic downturn. Stimulus funds are providing additional incentives needed to move the market for boiler retrofits. The home performance program will primarily generate natural gas savings. The solar program is focusing on solar water heating, kicked off last June with a fair at the Golden Gate Park.

The Energy program's planned efforts will address 83,000 metric tons, and coordinate with SFPUC and PG&E that have additional robust programs that may deliver as much as 100,000 tons. Additionally, there is some hope that the thwarted Property Assessed Clean Energy financing will be revived, that the federal HomeStar residential retrofit program will be funded, and that Community Choice Aggregation will enable even larger investments in renewable energy measures. However, these may still leave the program short of its objective and more aggressive action is likely to be needed. The Department will continue to seek new technologies that provide greater savings as well as actively seek additional funding for strategies such as public information campaigns, innovative financing, and new legislation requiring higher levels of residential and commercial efficiency.

GOAL #1

Reduce greenhouse gas emissions in buildings to 20% below 1990 levels by 2012 (330,000 metric tons from 2008 level).

OBJECTIVE A: Maximize the energy efficiency (EE) of commercial and residential buildings, reducing 300,000 metric tons of eCO₂ by 2012.

ACTIONS:

1. **Implement Energy Watch to reduce 25,000 tons while integrating projects with demand response, boiler retrofits, co-generation, and renewables. (11-13)**
2. **Implement the Commercial Lighting Efficiency Ordinance to reduce 10,000 tons. (11)**
3. **Pass and implement the Commercial Energy Benchmarking Ordinance to reduce 35,000 tons. (Green Building)(11)**
4. **Implement ARRA programs to retrofit residential units and educate tenants on energy efficiency, waste reduction, safety, etc. to reduce 3,500 tons. (EJ) (11-13)**
5. **Advocate for conducive Calif. Public Utilities Commission rules on Community Choice Aggregation and develop appropriate EE programs. (11)**
6. Explore opportunities at the SF Housing Authority and Redevelopment Agency including district heating systems. (Toxics, Green Building) (11-12)
7. Develop a Zero Energy path for residential buildings by adapting home performance analysis to 2-4 unit and small multi-family buildings. Provide public access to the information. (11)
8. Provide home performance training for TrainGreenSF graduates. (EJ) (10-12)
9. Upgrade the Residential Energy Conservation Ordinance (13)
10. Support the Energy Efficiency Task Force and incorporate its recommendations. (11-12)
11. Support the SFPUC in enacting recommendations of the Electricity Resources Plan.
12. Advocate for a single statewide independent administrator as part of the EE funding re-authorization. (11-12)
13. Monitor PG&E's smart grid developments to ensure benefits for EE and RE. (11-12)

OBJECTIVE B: Develop renewable energy (RE) resources in San Francisco to displace 30,000 metric tons of CO₂ annually by 2012, and achieve 50 MW of renewable energy generation.

ACTIONS:

1. **Develop RE action plan to meet 100% of SF electricity demand in the shortest amount of time technically and economically possible. (Green Building) (11-13)**
2. Advocate for a Feed-In Tariff and/or a more robust net-metering program, including virtual net metering (11-13)
3. Expand legislation to require solar or solar ready design for all new construction and major renovations. (Green Building) (11-12)
4. Support incorporation of solar into SF's emergency preparedness plans.(11-13)
5. Develop solar access legislation to address shading of existing systems by new construction projects. (Green Building) (11)

6. **For solar water heating, develop streamlined permitting, identify financing options, and execute public outreach campaign to market the state incentive program. (11-13)**
7. Implement Urban Wind Task Force Recommendations: model SF wind resource, develop a webtool, clarify permitting requirements, develop informational materials, develop local testing facility. (11-12)
8. **Develop a plan for a community solar program through Community Choice Aggregation. (11)**
9. **Organize solar group purchases in coordination with organizations such as the SF Federal Credit Union. (11-12)**
10. Develop solar financing option for small commercial buildings in SF. (11)
11. Develop pilot projects for large-scale wave and off-shore wind power. (11-13)

ENVIRONMENT NOW!

Environment Now is a project-based green jobs training program designed to support soft skills development and technical job skills alongside eco-literacy and environmental stewardship. Participants in the program draw on these skills to conduct environmental outreach activities throughout San Francisco, with a heavy emphasis on neighborhoods in need. While there is a long history of training programs focusing on jobs in the green sector, the recent surge in green job training programs can be attributed to key federal actions.

The Green Jobs Act of 2007 authorized \$125 million per year to create an Energy Efficiency and Renewable Energy Worker Training Program as an amendment to the Workforce Investment Act (WIA). The Green Jobs Act was an initial pilot program to identify needed skills, develop training programs, and train workers for jobs in a range of industries. While the initial Green Jobs Act funding targeted all populations, it emphasized creating “green pathways out of poverty.”

In 2009, Congress appropriated an additional \$500 million for the Green Jobs Act through the American Recovery and Reinvestment Act. Also in 2009, the state of California defined Green Jobs as any activity or service that performs at least one of the following:

Generating and storing renewable energy

Recycling existing materials

Energy efficient product manufacturing, distribution, construction, installation, and maintenance

Education, compliance and awareness

Natural and sustainable product manufacturing

Building sustainable communities in San Francisco requires that residents from all walks of life and economic and educational attainment have opportunities to become environmental stewards; to add their voices to the environmental movement. Toward that end, in 2009, SF Environment launched Environment Now, a green job training program for those interested in working in energy, zero waste and other environmental fields. It provides opportunities for professional growth and advancement to residents who may face multiple barriers to education and employment.

Impact Opportunities

While workforce agencies around the country have begun adapting training programs to encompass skill growth in areas like those defined by California, programs are typically focused on the green collar aspects of the green economy. The education, compliance and awareness of the state’s green jobs definition are often an afterthought. Furthermore, there is still a significant need for the development of the green economy to **produce long term, stable employment**. Public policy and leadership are necessary to support environmental restoration, quality, justice, and to help build the burgeoning green jobs movement. These are both areas that the department can address through the Environment Now program.

Our Role

The Environment Now program's primary goal is to promote workforce readiness and eco-literacy through a combination of classroom workshops and practical, hands-on, project-focused work experiences. Participants work closely with department staff and engage in a variety of projects and outreach campaigns including; door to door canvassing, phone banking, waste auditing, urban forestry and public speaking. Environment Now projects effectively support SF Environment's programs to reach multicultural, multilingual neighborhoods in the City, and help to promote SF Environment's programs in energy conservation, zero waste, urban forestry, toxics reduction, clean air transportation and environmental justice.

GOAL #1

Advance social equity in the environmental field through job training opportunities to San Franciscans from diverse, multicultural communities

OBJECTIVE A: Continue refining and operating a job training program with an emphasis on education, compliance and awareness

ACTIONS:

- 1. Recruit and enroll program participants from among the City's low-income multicultural residents**
- 2. Conduct a project-based job training program and provide on-the-job work experience, initially focused on waste diversion, energy efficiency, toxics and urban forestry**
- 3. Help participants develop environmental values and behavioral change, while fostering the expansion of their identity to include "environmental steward"**
- 4. Provide leadership and project management opportunities**
- 5. Institutionalize a mentoring component to the program**
- 6. Empower participants to become more engaged in their own skills development, and pursue educational objectives**

OBJECTIVE B: Place Environment Now trainees into permanent and stable, living wage jobs

ACTIONS:

- 7. Provide access to job placement resources in and around San Francisco**
- 8. Develop resume and job application fundamentals of participants in program**
- 9. Network with potential employers to develop key skills tracts**

GOAL #2

Engage and strengthen communities by providing access to citywide environmental programs, projects and initiatives

OBJECTIVE A: Promote behavior change in those who work, live and play in San Francisco

ACTIONS:

- 10. Conduct grassroots outreach including; door to door canvassing, phone banking, event tabling, and networking, on SF Environment programs, initiatives and services to residents, businesses and visitors (Zero Waste, Energy, Toxics Reduction, Clean Air Transportation, EJ, Outreach 2010-13)**
- 11. Improve SFE’s reach into targeted and underserved communities through strategic community engagement and actions (Outreach)**
- 12. Support the environmental services and projects of other City departments and non-profit agencies**

OBJECTIVE B: Support and Promote SF Environment Programs and Initiatives

ACTIONS:

- 13. Conduct residential curbside “Fantastic Three” auditing of 30,000 residences in San Francisco for recycling and composting ordinance compliance (ZW)**
- 14. Support compliance of recycling and composting ordinance of 3,000+ currently non-compliant businesses (ZW)**
- 15. Introduce composting service to 150 apartment complexes in the city (ZW)**
- 16. Audit 200 special events for recycling and composting ordinance compliance (ZW)**
- 17. Audit 75 construction sites to ensure compliance with Construction and Demolition Ordinance (ZW)**
- 18. Support business energy efficiency upgrades by promoting Energy Watch program in Districts 1,2,4,6,7,8,11 (Energy)**
- 19. Support residential energy efficiency upgrades by promoting Home Performance program to 5000 homes (Energy)**
- 20. Promote the use of Integrated Pest Management in SF Housing Authority properties by coordinating best practices with residents, agency and contractors (Toxics, EJ)**
- 21. Conduct outreach and audit all 300+ city cell phone retailers to ensure compliance with “Cell Phones; Retailers’ Duty to Disclose Specific Absorption Rate Values” Ordinance (Toxics)**
- 22. Plant 500 trees in the city (Urban Forest, EJ)**

GOAL #3

Collaborate with outside partners to expand the Green economy in San Francisco by promoting employment training and job placement opportunities,

- 23. Collaborate with the City’s Green Academy and non-profit programs to promote and coordinate Green job training and placement services**

- 24. Serve as a supportive worksite for Green Academy graduates and other entry-level workers to help them launch careers in the zero waste, energy and other and environmental fields**
- 25. Encourage other City departments to integrate Ecoliteracy training for their Public Service Trainees**
- 26. Develop a fundraising plan and seek funding to sustain Environment Now! over the long-term**

2013 AND BEYOND

The most fundamental requirement of the Environment Now program's continued maturation and establishment as a formal institution of this Department is stable funding. The potential of this program to impact underserved communities and support the development of leaders from underrepresented neighborhoods is only limited by resources. A future of Environmental Ambassadors supporting behavior change in the very neighborhoods they grew up and live is a reality that is possible. Environment Now can be the training ground for these ambassadors, an opportunity for the growth of the environmental movement by allowing access to those who would have otherwise not had the chance.

ENVIRONMENTAL JUSTICE

Environmental Justice (EJ) is the fair treatment and meaningful involvement of all people – regardless of race, ethnicity, income, or education level – in environmental decision-making. SF Environment’s EJ Program promotes the protection of human health and environment, facilitates public participation in local decision making, and conducts outreach services and disseminates relevant information to inform and educate affected communities so that all San Franciscans have an equal opportunity to lead healthy, fulfilling, and dignified lives.

The Challenge

Residents in the City’s poorer and most vulnerable neighborhoods face barriers to transportation access, food security, affordable housing, health care and employment opportunities, in addition to being burdened by higher levels of toxins, air pollution and environmental stressors when compared to San Francisco’s more affluent neighborhoods. These barriers will become more difficult to overcome as the impacts of global warming unfold. Basic human necessities such as food, affordable housing, health care and energy are becoming more expensive and difficult to obtain. While Climate Change will affect everyone, it will disproportionately burden those who are most vulnerable and with the least amount of resources.

Our Role

SF Environment works to promote environmental sustainability and economic opportunities in the city’s low-income neighborhoods in a variety of ways. We provide grant assistance and technical support to non-profit groups to help prepare workers for employment in the city’s green economy. The EJ Program administers a special city grant program that has granted more than \$11 million to community-based organizations and non-profit groups dedicated to promoting renewable energy, energy conservation and efficiency, food security, air quality and environmental justice in the Bayview Hunters Point and Potrero neighborhoods of San Francisco.

Impact Opportunities

Through the Environmental Justice program, we will continue to take a leadership role in helping to develop the green jobs sector and the green economy in San Francisco. Many of our programs offer opportunities for job creation while making our homes and neighborhoods healthier and more sustainable. As the City reduces its reliance on fossil fuels and strives towards a zero carbon and zero waste economy, we support and promote green job training programs and help to integrate resource conservation, energy efficiency and green building principles into training curriculum.

We will continue to work with neighborhood groups to reduce pollution, promote food security and build capacity to address community concerns. We help local groups to develop community gardens and urban farms, enabling low-income families to gain direct access to affordable, fresh produce. We also work to address health disparities and reduce indoor air pollution and asthma triggers in low-income housing.

GOAL #1	Protect the environment and public health in Environmental Justice (EJ) neighborhoods of San Francisco and support the capacity and education of local residents to address EJ concerns
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OBJECTIVE A: Improve air quality in EJ neighborhoods

ACTIONS:

1. Work with city agencies, SF Asthma Task Force and other stakeholders to undertake a comprehensive strategic planning effort and identify policies, strategies and actions that can be taken to address asthma disparities among low-income residents in the Bayview Hunters Point (BVHP) community, focusing on reducing indoor air pollution and asthma triggers in public housing (Toxics Reduction, 10-13).
2. Work with city agencies and nonprofit groups to support public awareness and change consumer behavior among low-income residents, to identify measures within the residents’ control that can reduce exposure to indoor air pollution, and promote the use of environmentally-preferred cleaning products and Integrated Pest Management (Toxics Reduction, 10-13).

OBJECTIVE B: Promote Neighborhood Resiliency and Improve Quality of Life

ACTIONS:

3. Provide EJ grants and technical assistance to non-profit organizations and community groups to develop community gardens, school gardens and urban agricultural projects in the Southeast area (Zero Waste, Urban Forest, 10-13).
4. Work with city agencies and non-profit groups, to promote healthy food policy and programs and participate in the Southeast Food Access (SEFA) Task Force to promote food security in the BVHP neighborhood (Urban Forest, 10-13)
5. Work with city agencies, non-profit groups and property owners to promote tree planting in EJ neighborhoods (Urban Forest; Environment Now, 10-13).
6. Provide training and support to Environment Now! in conducting outreach and home performance assessments in EJ neighborhoods (Energy, Environment Now, 10-11)
7. Convene stakeholders including those involved with job training projects, employers and government to identify strategies, policies and actions to expand the green economy in San Francisco and promote green collar job opportunities (10-13).
8. Facilitate SF Environment representation on Green Jobs advisory groups and communicate policy and market trends with potential to create Green Jobs (Development 10-13)

GREEN BUILDING

Green Building principles ultimately seek to integrate the natural environment with the built environment. A systems approach to building design and construction necessitates the communication between all parties involved in the process. Architects, engineers, interior designers, contractors, building occupants and policy-makers must not only define the project at the outset, but must continue to work closely together to ensure that the building functions and performs according to the standards set by the community. This concept of “integrated design” has transformed the building industry in San Francisco and beyond. San Francisco now finds itself with more LEED certified buildings than much larger cities like New York and Los Angeles. City departments, private developers, and residents have embraced these principles. While the enthusiasm for green building is substantial, much more work is still ahead. Our challenge is to take advantage of this momentum and identify the potential sticking points, whether they are financial, regulatory, or educational to maximize the uptake of this critical approach to building design and operation.

Public Sector: San Francisco was a true pioneer in 1999 when the Mayor and Board of Supervisors adopted Chapter 7 of the Environment Code which focused attention on the City’s own buildings. This ground breaking ordinance required sustainable upgrades and operations for municipal buildings and was later strengthened in 2004 to require new and renovated municipal facilities to achieve LEED Silver certification. The Green Building Program has been tasked with implementing these policies providing technical assistance, coordination, and training to key city agency partners. As a result, there are now 122 LEED Accredited Professionals in 11 City Departments, and 43 municipal projects seeking LEED Silver certification. Municipal LEED projects total 4.5 million square feet, are valued at \$3.5B, and include museums, hospitals, libraries, recreation centers, an airport terminal and a cruise ship terminal.

Private Sector: After adoption of the Green Building Ordinance targeting municipal buildings, the Green Building team worked closely with other city agencies to offer voluntary incentive programs to the private sector. Priority Permitting was one such incentive. To strengthen adoption of green building practices, the Department was asked to staff and facilitate two multi-stakeholder taskforces. The first such taskforce resulted in the adoption of the most comprehensive green building ordinance for private sector projects of any large city in the country. This law, passed in 2007, requires that all new construction meet credible, third-party verified green building standards. Now in 2010, the results of the second taskforce have led to the completion of a law addressing existing buildings in the commercial sector. This law will focus specifically on energy efficiency and had yet to be voted on by the full Board of Supervisors.

The Challenge

The design, construction, and operation of buildings in the United States contribute significantly to the overall use of resources and emissions of pollutants. Specifically, buildings in the United States are responsible for approximately 40 percent of total energy use, 65 percent of total electricity use, 40 percent of air pollution and 38 percent of greenhouse gas emissions. The impacts of buildings in San Francisco reflect similar pattern

to the national picture. In 2005, 45% of the climate emissions from our community resulted from the construction, operation, and demolition of buildings. Examining this number more carefully revealed that commercial and industrial buildings account for 49% of those emissions, residential buildings account for 37%, and municipal buildings account for 14%.

SFE's Green Building program has emphasized the goal of reducing the environmental impacts of the built environment. While the Program began as one of the country's pioneers in 1999, it now finds itself as part of a much larger movement. For example, U.S. Green Building Council (USGBC) membership has increased from roughly 3,500 entities in 2005 to 18,000 in 2010. Further, as of November 2010, the total footprint of commercial projects certified to the USGBC's LEED standards surpassed one billion square feet. At the municipal level, local governments across the country have adopted LEED standards as part of their building codes and the Bay Area has become a focal point for adoption of GreenPoint Rated for the residential sector. Such mainstream adoption of third party standards attests to a consensus that green building construction and operations are an effective way to achieve local greenhouse gas reduction, reduce building operating costs, increase energy security and foster job creation.

Impact opportunities

- **Integrate current policies and communicate effectively to affected parties**

Intra- and Interdepartmental: Green Building addresses the full range of environmental impacts. Thus many of the Department's programs have a role to play in education and enforcement of green building practices. From Transportation to Zero Waste to Energy to Toxics and more; the Green Building program provides an integrating and unifying framework for many of SFE's programs. The green building team collaborates closely with programs within SFE as well as with sister agencies like the PUC to ensure the City's environmental initiatives are coordinated for maximum impact.

Building Codes and Rules: Within the building industry, rating systems such as LEED have become a common language, and are supported by professional training, accreditation, continuing education, and reference materials. These standards also provide consistency and predictability to building practitioners. However, these standards are often amended locally to reflect the environmental priorities of a particular jurisdiction. The introduction of California's first statewide green building code ("CALGreen") adds significant complexity. Given these various and sometimes competing approaches, it is critical that all stakeholders receive objective and understandable information about how the various programs, standards and codes overlap and conflict, and to help set the direction for their further improvement. SFE's Green Building Team will continue to engage at appropriate scales (City, regional/state, national) to identify ways to align different approaches to minimize confusion and achieve greater certainty for project sponsors, designers, contractors and code officials.

- **Enforce and incentivize current green building requirements**

To ensure achievement of policy goals, SFE's Green Building team will assist other responsible departments in developing robust enforcement processes for existing green building policies. In recognition of the jurisdictional interests of multiple city departments

the focus will be on collaboration, communication and training in order to foster a common approach to green codes implementation (city, regional, statewide, national).

To enhance compliance with building sector performance targets, the Green Building team will actively develop and promote local incentives. These incentives will come from a range of sources and will be designed to provide valuable time benefits, capital, and other key resources to motivate building project teams to achieve higher performance. Specific examples include: City’s LEED Gold Priority Permitting Program; innovative financing for green upgrades (offered by “Energy Upgrade California” and the GreenFinanceSF program); other new tax-based incentives (such as the Section 179D federal tax deduction for energy efficient buildings).

- **Quantification and communication of green building outcomes and benefits**

Wide adoption of green building practices depends on a thorough analysis and quantification of benefits derived from green building implementation. Examples include: energy use reporting as proposed in the pending Existing Commercial Buildings Performance Ordinance; collecting data about real estate value analyzed in terms of “green premiums” for certified an/or energy efficient properties; or by increasing awareness about existing market success in terms of “green certified” buildings within the City (LEED, ENERGY STAR, GreenPoint Rated, etc.). The Green Building will focus its efforts on gathering meaningful performance data and communicating the findings as appropriate to public and private sector partners.

Our Role

The over-arching goal for the Green Building program is that all new and existing buildings in San Francisco are built and operated according to third-party verified standards such as LEED, GreenPoint Rated. The Department’s role in this far-reaching goal is to serve as the technical resource for standards setting and project development, to facilitate and stimulate on-going training for a wide range of building professionals, and to educate and build support for green building policies with the public, tenants, and building owners.

Green Building Program: Goals, Objectives, Actions

GOAL #1	Enhance environmental performance of buildings in San Francisco to reduce costs while increasing efficiency and livability.
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Objective A: Develop and implement policies and practices that will require all new and existing buildings in San Francisco to be built and operated according to third-party verified standards

ACTIONS:

1. Work with appropriate City departments to implement Chapter 13C of the San Francisco Building Code: “Green Building Requirements” and relevant State Green Building Code (“CALGreen”) provisions (11-13) (ZW)

2. **Coordinate the development and implementation of legislation requiring energy benchmarking and energy efficiency audits for commercial buildings, and supportive information interface that is accessible to the public. (11-12) (Outreach, Energy)**
3. **Collaborate with the key City agencies and private sector partners to improve/streamline communication and implementation of interrelated green development policies, as resources allow. (11-13, ZW, Energy, TR, CA, UF)**
4. Provide implementation assistance for Chapter 7 of the Environment Code to ensure municipal buildings achieve LEED certification, and coordinate the Resource Efficient Building (REB) Task Force (11-13) (ZW, TR, CA, UF, and EJ, Energy)
5. **Introduce amendments to Chapter 7 of the Environment Code raising the level of certification for municipal projects to LEED Gold for new projects (11) (ZW)**
6. **Work closely with State and Regional partners on the development of green building policies to maximize effectiveness and coordination of green building codes and implementation strategies. (CA, Energy)**

Objective B: Provide green building incentives and technical assistance to project teams.

ACTIONS:

6. **Coordinate launch and implementation of GreenFinanceSF (or other alternate financing programs as needed) (10-12) (Energy)**
7. Manage Citywide professional services contract to provide City Departments access to as-needed Green Building Technical Assistance (11-13)
8. Assist Departments of Building Inspection and Planning in the administration of the City's Priority Permit Processing program (11-13)
9. Advise and support green building initiatives within Planning Department, San Francisco Redevelopment Agency, Mayor's Office, Transbay Joint Powers Authority, Treasure Island Development Authority, Department of Public Health, and others. (11-13)

Objective C: Support green building educational efforts for public and private building industry stakeholders.

ACTIONS:

10. **Coordinate CALGreen code and related green building rating system training for Department of Building Inspection and affected private practitioners. (11-13, ZW, Energy, TR, CA)**
11. **Measure and document cost savings, environmental impacts, increased property values or leasing rates, and other benefits resulting from the implementation of green building practices. Communicate outcomes to stakeholders in public and private sectors. (Energy, ZW, Climate, Toxics, Outreach, 11-13)**
12. **Support training and educational efforts for building owners, tenants, and operators to ensure that green building and energy efficiency gains are realized and continue over time. (Energy, ZW, Climate, Toxics, Outreach, 11-13)**
13. Coordinate with local partners such as SPUR and Stopwaste.Org to promote market recognition of green building labeling systems (11-12) (Energy, ZW)

- 14. Coordinate and host technical green building educational opportunities for public and private building industry stakeholders including: Green Building Professionals Guild (monthly); Certified Green Building Professional/GreenPoint Rater; LEED Technical workshops, LEED Exam prep workshops, and meetings of the REB Task Force (11-13)**
15. Promote green building education opportunities offered through other organizations, such as US Green Building Council, Bay Area LEED Users Group, Build it Green, Pacific Energy Center, etc. (11-13)
16. Review opportunities to protect habitat values through our green building efforts.

OUTREACH

The overall goal of SF Environment's Outreach Program is to further position the city and Department as environmental leaders and to advance the Department's program and policy goals. We strive to deepen our relationship with the public through outreach methods that are as cutting edge as the Department's programs.

SF Environment's Outreach Program supports the goals of the Department and its programs by providing clear, objective, and compelling information about San Francisco's environment to the public and policy-makers. The Outreach team collaborates with and provides educational resources to a wide variety of San Francisco constituencies, and strives to motivate every San Franciscan (including those who visit or work here) to act as good stewards of our homes, our city, and ultimately, our planet.

The Challenge

As San Francisco strives to be an environmental leader, both within and beyond the borders of the city, the Outreach team is dedicated to engaging the public to promote positive environmental change, and presenting, offering and producing top-notch communications that establish the Department and the City as models for environmental action. We collaborate with other city departments, neighborhood and merchant associations, businesses, and the public in general to highlight San Francisco's best practices, as well as ensure that the public can participate in solutions to our common concerns including environmental justice, the precautionary principle, the green economy, and the challenges of climate change, adaptation, and resiliency.

The Outreach team understands the importance of reaching all San Franciscans, including those who may stand to benefit from participation in our programs but don't respond to environmentally themed information or offers. In order to ensure that everyone in San Francisco has the opportunity to take advantage of the city's environmental programs and improve their health and well-being, the Department embraces and celebrates the city's diverse population, which includes diversity in language, ethnicity, income, cultural identification, and immigration status. We strive to craft customized incentives, messages, and promotional efforts that effectively engage and motivate each unique community to take action.

Our Role

The Outreach team historically has employed a combination of public relations, community-based social marketing, traditional and guerilla advertising, and grassroots outreach to advance Departmental goals. With an eye on efficiency, the Outreach team strives to pool resources and leverage talents, working cross-programmatically whenever possible.

The Outreach team works in partnership with community groups, the recycling company Recology, as well as other city departments and regional agencies, and engages contractors to ensure our diverse communities are aware of and participating in the Department's programs.

We see the networks of San Francisco's diverse and dynamic communities as key to any outreach efforts.

The Outreach team includes a community or grassroots component as part of any comprehensive outreach project/campaign, incorporating elements such as phone banking, door-to-door, tabling, as well as developing trainings, skills building, and leadership programs. Outreach shares the Department's commitment to investing considerable resources into grassroots efforts, both with the EnvironmentNow program, and activating its volunteer base. Many such efforts have led to green employment opportunities for participants, both at the Department and with partner organizations such as Recology and Macy's.

Outreach has been instrumental in developing the EnvironmentNow program, helping train staff and develop programs and projects, ensuring a meaningful program for staff, business, and residents. Outreach and EnvironmentNow have successfully partnered in efforts to serve and motivate participation from underserved, hard-to-reach, or underperforming neighborhoods and businesses, such as Bayview Hunters Point, the Excelsior, and businesses with refuse service that are not in compliance with the new Mandatory Recycling and Composting law. Such collaboration has also been successful in implementing the SF Energy Watch Neighborhood Campaign, a grassroots campaign in which EnvironmentNow representatives visit targeted businesses to help them save energy, money, and natural resources.

According to Forbes Magazine, San Francisco is one of the most wired cities in the nation, with nearly 70 percent of households hooked up to the internet, and this number is increasing across all demographics. Digital communications play an important part in our outreach efforts, with websites and online communications tools conveying more and more departmental, program, and project content.

When communicating citywide, the Department is required to communicate to the residents of San Francisco in the most commonly spoken languages, including English, Spanish, Cantonese/Mandarin. The Outreach team serves and collaborates with Department programs, grantees, partners, and professional translators to ensure outreach strategies and messages are both culturally appropriate and accurately translated.

Impact Opportunities

Research and experience tell us that many San Franciscans are open to our messages, and need either the information to participate correctly or the motivation to enable them to participate willingly (connecting the environment to issues that they already care about: money, family, health, safety, social acceptance, and others).

The Outreach team will continue to use a combination of outreach strategies to raise awareness and encourage participation, with a focus on grassroots organizing, community-based social marketing, and community-building strategies, always supported as needed with traditional marketing strategies. In particular, Outreach will focus on activating existing networks within the city's communities. In what the team is currently referring to as its **Community InSight project**, we hope to strengthen our relationships with networks and communities in San Francisco, with

the ultimate goal of catalyzing and increasing two-way dialogue—between the Department and the public, as well as among members of the public—sharing best practices.

Another Outreach focus will be “**silo-busting**” within and between programs. In Energy, for example, Outreach will continue its marketing integration work, training and managing a new marketing staff person to cross-promote all residential energy programs, and to collaborate with other programs, where a common audience indicates marketing by potential participation based on interest/needs, rather than by issue/program. Outreach will ensure messages are simple and compelling, and guard against too many messages diluting overall effectiveness of any outreach effort.

New and expanded online projects will be a growing part of the Outreach team’s efforts. Guiding principles about open government and information sharing—both between government and the public, and amongst the public—will inform the ways the team provides information to public. In addition to encouraging them to participate in our programs via online and mobile means, the team will strive to enable the public to develop their own environmental solutions using government data. Examples of this include a redesigned website, mapping technologies, databases (such as the regional recycling database), and mobile phone and online applications developed by the Department and the public.

The Outreach team anticipates that messaging to the public will need to get more sophisticated as public awareness and participation increase. We will take our messages to the next level in terms of action, and to a deeper level in terms of audience. Among other messages, we expect to celebrate and thank San Franciscans for their environmental achievements, and engage them around concepts of consumer and producer responsibility (zero waste and toxics), transportation alternatives, green building, green jobs, and green business. We anticipate expanded capacity to promote energy efficiency and renewables. Within our own city family, will expect to work with departments on climate change to affect behavioral change within daily operations.

Finally, Outreach sees as critically important its continuing role to encourage quantification of outreach efforts, working with programs and partners to identify universally meaningful metrics and benchmarks.

GOAL #1	Design and deliver outreach activities that will achieve the behavioral change goals of Department programs
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Objective A: Work collaboratively with programs and partners to create communications strategies for Department that are achievable and measurable.

ACTIONS:

1. Initiate, maintain and review opportunities to engage, share information and build consensus among the city’s residents (neighborhood and other affinity groups), city government agencies (SFPUC, Library, DPW, DPH, others), non-profits (JCC, BC3), businesses (BOMA, Recology, Chamber of Commerce, Small Business Commission, Green Businesses), and other critical players (Apartment Association, Convention and Visitors

- Bureau) on issues facing both The City’s environment and Department programs, with a goal of reaching a minimum of 90 groups each year. (All programs) (11-13)
2. Define priority audiences for Department program areas in collaboration with program staff. (All programs) (11-13)
 3. Develop key messages for Department program areas. (All programs) (11-13)
 4. Identify preferred media and outreach methods for each targeted constituent group. (All programs) (11-13)
 5. Identify points at which objectives are complementary across program areas, and integrate outreach as appropriate. (All programs) (11-13)
 6. Determine expectations, metrics and means of measuring success so programs and partnerships can be revisited at key milestones. (All programs) (11-13)
 7. Conduct research—such as door-to-door, person on the street surveys, phone banking and focus groups—to test market acceptance of proposed outreach approaches to assure maximum success, minimum twice yearly. (Energy, ZW, Toxics) (11-13)

Objective B: Provide internal and external social change tools and programs to ensure that Program activities meet established Department goals.

ACTIONS:

8. Develop and maintain internal communications tools such as marketing plans, mailing lists, trainings, Department meetings and trainings to efficiently support successful Programs and strengthen staff knowledge and investment. (All programs) (11-13)
9. Maintain Department look and feel and messaging (letterhead, business cards, logo), print and electronic media (brochures, postcards, posters, website, Powerpoint templates), and marketing (print, outdoor, online, broadcast) that represent the Department and appeal to targeted constituent groups. (All programs) (11-13)
10. Concept, write, and oversee production of Department and Program communications, including events (Green Business Awards, Earth Day Breakfast, InSight, with a goal of four signature events each year), websites, online newsletter (monthly, with the goal of growing the subscriber list to 8,000), print, direct mail, transit, broadcast, and online social media (weekly Facebook and Twitter updates). (All programs) (11-13)
11. In partnership with Environment Now and the Green Guru program, help identify leadership in communities for establishing Eco-Districts. (An EcoDistrict is a neighborhood within a city that is committed to sustainability through its empowered constituents, green buildings and sustainable infrastructure. These EcoDistricts are at the right scale to spread sustainability throughout major cities: they are small enough to innovate quickly but large enough to have an overall impact on the surrounding environment.)
12. Update presentations for use throughout year in speaking before constituent groups. (All programs) (11-13)
13. Establish and reinforce media connections to gain coverage of Department and City programs, with tactics as media advisories, press conferences (1 each month), opinion editorials and neighborhood newspaper columns (6 each year), meetings with editorial boards and individual reporters. (All programs) (11-13)
14. Provide well-trained spokespeople to deliver Department and Program messages. (All programs) (11-13) Four trainings with staff per year.

15. Maintain and report monthly on program metrics including recycling tons per day, new service requests, number of businesses visited, tabling events, website traffic, and more.

Objective C: Provide support for policy initiatives that advance Department and citywide sustainability goals.

ACTIONS:

16. Work with Mayor's Office and Board of Supervisors to provide support for legislation that supports program goals, as well as legislation approved by the Commission or Department. (All programs) (11-13)
17. Maintain internal legislation tracking spreadsheet.

Objective D: Assure compliance with reporting requirements and oversee other communications with oversight bodies.

ACTIONS:

18. Prepare and publish Department Annual Report, as required by city code. (11-13)
19. Develop, track, and report performance measures to Controllers office. (11-13)
20. Review and approve program staff communications with oversight bodies and officials, including regular reports required under the Environment Code, and others. (All programs) (11-13)

TOXICS REDUCTION

San Francisco was the first City in the country to adopt the **Precautionary Principle** as a foundation for its environmental and public health policy. San Francisco's Precautionary Principle Ordinance requires City government to seek out the safest alternatives when making choices ranging from products and services to building designs and landscape management. The Toxics Reduction Program implements the Precautionary Principle most directly through its programs in green purchasing, green business, and integrated pest management. Program staff are also actively involved in regional, national and international policy efforts that seek to reduce toxic pollution and exposures in the San Francisco area.

The Challenge

There are currently over 80,000 industrial chemicals in commercial use in the U.S. As a consequence of long-standing weaknesses in federal policy, the health and environmental effects of the great majority of these chemicals are unknown. Even when the effects are known, public agencies' efforts to protect their citizens are hampered by the lack of disclosure of the chemical ingredients in products. Historically, environmentally harmful activities have only been stopped after they have manifested extreme environmental degradation or exposed people to harm. In the case of PCBs, DDT, lead, and asbestos, for instance, regulatory action took place long after the clear evidence of destructive impacts.

To compound the challenges, the latest scientific findings demonstrate that even extremely low doses matter. For example, some hormone-disrupting chemicals can alter biological systems at concentrations as low as parts per trillion and persistent bioaccumulative chemicals become concentrated to toxic levels as they move up food chains. These findings highlight the inadequacy of end-of-pipe solutions such as better landfills or sewage treatment plants as we can never sufficiently capture the diversity of chemicals released into the environment.

In setting its priorities, the Toxics Reduction Program considers a matrix of factors including new data on chemical risks, availability of safer alternatives, degree of concern by the San Francisco community, opportunities for partnerships and potential to affect state or national policies.

Our Role

In order to reach its goals, the Toxics Reduction Program relies heavily on **alternatives assessment** to identify the safest, most environmentally sensitive products and practices. Alternatives assessment involves collecting all available data on a particular product or process and its alternatives, including chemical hazards, known data gaps, costs, product availability, and product performance. The program supplies information on safer alternatives through a variety of outreach methods, including trainings, web resources, site visits and educational events.

In addition, the program **coordinates a wide-range of hazardous waste collection and recycling services** for spent or leftover hazardous household products such as batteries, paint, pesticides, motor oil, fluorescent lights and electronics. San Francisco offers one of the country's most expansive and convenient collection programs by partnering with more than 100 retailers

stores to collect hazardous waste products, and by offering a free home collection service. The program continues to expand its hazardous waste services to ensure a clean and safe environment. But while doing this, the program is also a strong advocate of producer responsibility whereby the manufacturers of these consumer products join in the responsibility for their collection and recycling. To achieve this end, the program is actively involved in the design and passage of product stewardship legislation at the local, state and federal level.

Impact Opportunities

The program has produced tangible benefits over the years, including an 80% reduction in pesticide use on city properties, the certification of 172 green businesses with 240 additional businesses in process, and more than \$8.6 million/year in green products purchased by City agencies. Last year, the program recycled more than 3.5 million pounds of hazardous waste from San Francisco residents and small businesses, 65% of which was electronics. Other quantities included 65,000 gallons of paint, 140,000 pounds of household batteries and 113,000 fluorescent tubes and bulbs. The program has also been a leader in state and national campaigns relating to green chemistry, heavy metals and phthalates in children's toys, and community right-to-know for cell phone radiation levels.

In the coming three years, the Toxics Reduction Program will continue expanding and refining its projects and resources. In order to meet a large unmet demand for certification, the Green Business Program aims to certify 50 new businesses per year, while developing new green business standards for three new business categories. The Green Purchasing Program will continue updating its existing product specifications, while developing science-based criteria for an additional seven product categories and expanding the new SF Approved List database - a catalog of City-reviewed green products. Other new, high-priority initiatives include safe disposal of pharmaceutical waste, safer practices at nail salons, and creation of pest-preventive building design guidelines and implementation of the first-in-the-nation Cell Phone Right to Know Ordinance.

GOAL #1	Safeguard human and environmental health from exposure to toxic chemicals in products used by households, businesses and municipal operations.
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Objective A: Through an alternatives analysis process, develop and apply science-based criteria to identify environmentally preferable products.

ACTIONS:

Develop science-based criteria and (as appropriate) product lists to identify environmentally preferable alternatives for the following categories:

1. Garment cleaning technologies (11)
2. Household and institutional (commercial and municipal) cleaning products (11-12)
3. Lighting (11-13)
4. Cellular telephones and accessories (11-13)
5. Pesticide products (11-13)
6. Building maintenance chemicals (11-13)

7. Information technology (11-13)
8. Carpet (11-12)
9. Nail salon products (11-13)

Objective B: Facilitate use of safer alternatives through training, outreach and legislative mandates.

ACTIONS:

Garment Cleaning:

10. Maintain the alternatives assessment of garment cleaning solvents. (11-12)
11. Research and develop a list of the most environmentally preferable detergents and spotting chemicals to clean garments and stains. (11-12)
12. Offer a financial incentive program for local cleaners switching to environmentally preferable garment cleaning technologies and identify cleaners most qualified for the incentive program. Track number of dry cleaners converting to wet cleaning. (Outreach, 11-12)
13. Implement a multi-lingual outreach campaign to reach the remaining **40 perc dry cleaners**, including press events, public workshops, door-to-door outreach, and presentations at trade associations and non-profit organizations to promote the use of safer garment cleaning solvents and the City's financial incentive program. (Outreach, 11-12)

Cleaning Products:

14. Prepare appropriate outreach documents and publications on disinfectants. (Outreach,11-12)
15. Screen household cleaning products and prepare appropriate outreach documents on the results. (11-13)
16. Improve access to environmentally preferable household cleaners for San Francisco residents and businesses by developing an outreach campaign with public agencies and community-based organizations to encourage retail stores to offer and promote such safer products. (Outreach, 11-13)
17. Update the citywide contract for environmentally preferable cleaning products, and add green specifications for at least **three new categories of cleaning products**. (11)
18. Implement a pilot green cleaning program at **three commercial janitorial service companies** that includes training on green cleaning practices, and measure the resulting environmental benefits. (EJ, 11-13)

Lighting:

19. Complete the establishment of new standards and citywide contracts for long lasting, energy efficient, and low-mercury lighting products. Include **environmental standards for at least three new categories of lighting products** in the contract. (Energy, 11)
20. Work with City staff and the Public Utilities Commission to increase purchases of SF Approved Lighting products by City Departments by at **least 50%**. (11-13)
21. Develop and maintain a publicly available list of long-lasting, energy-efficient, and low-mercury lighting products (11-13).

Cellular Telephones and Accessories:

22. Complete an analysis on cell phones purchased by City agencies and work with the Department of Technology to select phones and accessories that minimize exposure to cell phone radiation. (Outreach, 11)
23. Work with the Mayor's Office to implement the "Cell Phones; Retailers' Duty to Disclose Specific Absorption Rate Values" Ordinance and develop an educational campaigns aimed at minimizing exposure to cell phone radiation for children and the general public. To assist with compliance, prior to implementation date of May 2011; **conduct two rounds of site visits to the 300+ San Francisco cell phone outlets.** (Outreach, 11-12)
24. Work with the San Francisco Unified School District and other San Francisco schools to implement recommendations of Commission on the Environment's "Cell Phone Radiation Safety and Disclosure" Resolution to educate students, parents and teachers on how to minimize their exposure to cell phone radiation. (Outreach, 11-12)

Pesticide Products:

25. Track the use of pesticides on City property through the development and implementation of a web-based pesticide use reporting system. Ensure City agencies continue to **maintain pesticide reduction levels of 70%** in overall pesticide active ingredient use compared to 1996 baseline levels. (11-13)
26. Provide oversight and assistance to City departments through trainings (**4 per year**), product evaluation (SF Approved lists), and interdepartmental working groups such as the Integrated Pest Management (IPM) Technical Advisory Committee. (11-13)
27. Work with other city agencies and interested parties nationwide to develop guidelines for the design of buildings that prevent pest infestations and so decrease the need for chemical pesticides. (GB, 11-12)
28. Work with the Public Utilities Commission and Bay Friendly Coalition to host the Bay Friendly Landscaping Conference, and establish landscape design requirements for all City properties that decrease the need for chemical pesticides (GB, 11-13).
29. In partnership with the Environment Committee of the San Francisco Asthma Task Force and the Northeast IPM Center, **implement the practice of IPM at two buildings** operated by the SF Housing Authority (SFHA), and work to develop an effective IPM for all SFHA properties (11-13).

Building Maintenance Chemicals:

30. Develop a list of preferable building maintenance chemicals (including lubricants, caulks, adhesives, paints and coatings, floor finishes) and disseminate to City departments, and to property management companies and lodging properties through trade associations (such as the Building Owners and Managers Association) and the Green Business Program. (11-13)

Information Technology (IT):

31. Work with city agencies and IT vendors to **increase by at least 10%** City government purchases of IT equipment that meets standards established in the SF Approved lists. Update these standards to include at least one new category of IT products.(11-13)

Carpet:

32. Work with Zero Waste staff to establish criteria for purchase and end-of-life management of carpet purchased by City agencies. (ZW, 11-13)

Nail Salon Products:

33. Develop health and environmental criteria to evaluate nail polishes. (11-13)
34. Develop regulation language and explore a recognition program for nail salons using safer products and practices in partnership with the California Healthy Nail Salon Collaborative. (11-13)
35. Develop multilingual training materials and conduct workshops for nail salon workers and owners on the hazards posed by nail salon products. (11-13)
36. Conduct outreach to **200 local nail salons, 1500 nail technicians and consumers** about safer nail products and the nail salon recognition program. (11-13)

General Green Purchasing:

37. Complete rollout of the SF Approved List website to make it easier for City departments to purchase environmentally preferable products by identifying lists of OCA/SFE approved products as well as those screened for health and environmental attributes by our Department. (11)
38. Add product performance reviews to the SF Approved website to increase its usefulness for identifying green alternatives. (Outreach, 11-13)
39. Add at least **50 environmentally preferable products** to the SF Approved List.

Objective C: Increase the number and environmental impact of local Green Businesses.

ACTIONS:

40. Continue implementation of the Green Business Program to **reduce energy use by 8 GWH/yr, water use by 3,000,000 gal/yr, hazardous materials used by 20,000 gal/year and GHG emissions by 15,000 tons/year.** (ZW, Clean Air, Energy 11-13).
41. Update the online management and measurement database (“database”) to improve efficiency and reflect the latest measurement protocols and factors. (ZW, Clean Air, Energy 11-13)
42. Quantify and track the environmental savings (energy and water saved, mercury recycled, hazardous waste properly disposed, and green house gas emissions reductions) achieved by all newly recognized green businesses. (ZW, Clean Air, Energy, 11-13)
43. In conjunction with technical consultants, **enroll 150 new businesses per year, complete onsite assessment and training at at least 30 businesses per year, recognize 50 new green businesses each year, and recertify existing participants on a 3-year cycle.** (ZW, Clean Air, Energy, 11-13)
44. On an annual basis, update and improve recognition standards for **six business sectors** currently eligible for the program, using the database and website. (ZW, Clean Air, Energy, Outreach, 11-13)
45. Develop and publish GB standards for **four new business sectors** - catering companies, janitorial services, commercial printers and property management businesses, and launch pilot programs with the new business sectors. (ZW, Clean Air, Energy, Outreach, 11-13)
46. Develop and launch a fee structure for the Green Business Program based on size, sector and complexity. (ZW, Clean Air, Energy, Outreach, 11-13)

47. Develop and implement the Green Business marketing plan to increase visibility of the program brand and to promote recognized green businesses through the website, newsletter, online advertising campaign, social media and public events. **Increase visits to the website by 100% per year, get 1000 fans/year on GB face book page, host at least 2 networking opportunities per year** and track effectiveness of marketing efforts as outlined in the marketing plan. (ZW, Clean Air, Energy, Outreach, 11-13)

Objective D: Maintain and enhance opportunities to recycle and dispose of unwanted toxic products.

ACTIONS:

48. Oversee regulatory compliance and program implementation of the City's household hazardous waste collection services, including the household hazardous waste collection facility, door-to-door collection service, and 100+ retail collection partners. To ensure continued participation and proper compliance, conduct twice yearly site visits to all retail partners. (11-13)
49. Ensure implementation of the goals and commitments under the 2006 Refuse Rate Agreement with Recology, including staffing, outreach, waste collection rates, and program development. (ZW, 11)
50. Through the next Refuse Rate setting process and special agreement, establish Recology's goals for household hazardous waste collection services, approve the resources needed to meet the goals, and develop a process to redirect funds from unmet commitments and programs funded through alternative methods (e.g. product stewardship.). (ZW, 11-13)
51. Work with the Mayor's Office, SF Public Utilities Commission, SF Police Department and other stakeholders to develop a system for the safe collection of unwanted and expired medications. By 2011, set up at least **10 pharmacies as drop-off locations**. (11-13)
52. Partner with the Department of Public Health and private collection entities to provide training, outreach, and collection options for the recycling and disposal of hazardous wastes (fluorescent tubes, batteries, and electronic waste) from City facilities. (11-13)
53. Increase and document the collection of hazardous wastes from small businesses through the Conditionally Exempt Small Quantity Generator (CESQG) collection program with special emphasis on outreach to low participation industries and collection of electronic devices. (Outreach, 11-13)

Used Motor Oil and Filters:

54. Increase recycling of used motor oil by **10% (at least 4,000 gallons)** at O'Reilly-Kragen collection centers and by **15% (at least 675 gallons)** at other, non-auto part store collection centers. Increase **filter collection by 100%** at each O'Reilly-Kragen store located on San Bruno Ave., Mission@ Precita Sts., and Geary St. (increase from one drum collected per year to at least two) (Environment Now, Outreach, 11-12).
55. Decrease amount of abandoned used oil from "do it yourselfers" (DIYers) through a) direct public outreach to Shade Tree Mechanics in the Southern neighborhoods of San Francisco, b) support and improvement of existing collaborative collection options and events for vehicle and boat owners, and c) recruit three (3) additional collection centers (Outreach, Environment Now, 11-13)

56. Initiate tracking system for Shade Tree Mechanics via a direct contact by collecting baseline data on amounts recycled (Environment Now, Outreach, 11-12).
57. Promote source reduction among DIYers by encouraging them to lengthen the time between oil changes, with the aim of decreasing the use of virgin motor oil. (Outreach 12-13).
58. Work with distributors on increasing the availability to consumers of re-refined motor oil (11), and encourage DIYers to use re-refined motor oil when it becomes readily available (Outreach, 12-13).

Objective E: Increase the availability and use of safer alternatives through the support of regulatory changes and the promotion of product stewardship among manufacturers and retailers.

ACTIONS:

59. Product Stewardship: Support local, state and national efforts to expand manufacturer and retailer product stewardship of consumer products containing toxic chemicals by creating funded systems to collect and recycle unwanted consumer products at their end of life. (ZW, Outreach, 11-13).
60. Green Chemistry: Support local, state and national efforts to reduce the toxicity of products in commerce by active participation in efforts to revise current regulatory systems including: the submission of technical comments, participation in key committees, and sharing model ordinances and policies. (ZW, Outreach, 11-13)
61. Environmentally Preferable Purchasing: Participate in local, state and national efforts to coordinate development of product purchasing specifications and standards that lead to reformulation and/or product take-back provisions. (GB, ZW, 11-13)

URBAN AGRICULTURE

Urban agriculture has experienced a recent resurgence of interest in the United States. Liberty Gardens during WWI, Depression relief gardens of the 1930s, and the Victory Gardens of WWII are some prime examples of how urban gardening addresses resource scarcity and economic depression. Before San Francisco reached its current state of highly developed landscape it was home to many farms, including those focused on animal husbandry. However, given current land use and infrastructure, farming opportunities that may have existed within city-limits in the past are not opportunities we can take advantage of today. The Recreation and Parks Department's 37 community gardens do not have the ability to adequately serve the city's roughly 800K residents; RPD reports a 7 year average wait for a garden plot.

Our Role

Building upon Mayor Newsom's 2009 Directive on Healthy and Sustainable Foods, SFE has played a key role in increasing access to urban gardening as well as support existing programs. The UA program has assisted with access to resources, such as compost; advised the Food Policy Council as part of a subcommittee focused on urban agriculture; supported the development of individual projects, such as Hayes Valley Farm; and contributed to the development of the San Francisco Urban Agriculture Alliance.

Community benefits of urban agriculture projects may exceed the goal of food production. These benefits include opportunities for community building, youth and adult education, green jobs skills training, increasing access to healthy food for food insecure populations, activation of otherwise unusable land, and supporting city residents' self-sufficiency.

Impact opportunities

The recent audit of San Francisco's public lands provided an initial overview of city lands that are available and appropriate for urban agriculture projects. The land audit may be expanded in the future, though the land describe in this audit can not meet current demand for gardening by San Francisco residents. The UA program will work towards increasing access to land and resources, until **every San Franciscan who wants to garden is be able to do so** within walking distance of their homes. The Urban Agriculture program will map the current baseline of opportunities and resources as well as resource gaps, support existing programming and projects, and increase access to gardening opportunities, including garden education and training, through development of new programs and projects.

GOAL #1

Increase food production and the opportunities for urban gardening in San Francisco.

Objective A: Policy

ACTIONS:

1. Conduct an existing resource and resource gaps assessment to establish the baseline of current activities and opportunities for improvement within existing productive gardening opportunities. (11)
2. Work with the Presidio School of management to assess barriers facing production focused models . (11)
3. Support Planning Department and Mayor's office efforts of adoption of urban agriculture zoning code changes. (11-12)
4. Conduct a study on common environmental toxins that may affect produce quality. (12-13)

Objective B: Build capacity of existing city programs.

ACTIONS:

5. Coordinate Alemany Farm stakeholder groups to develop a strategic plan for the site. (11)
6. Engage partnerships for pilot community resource centers to provide compost and other garden resource needs. (10-12)
7. Coordinate the multi-agency effort CityGlean, planting community orchards and supporting gleaning programming. (11-13)
8. Support the Mayor's Office of Economic and Workforce Development in re-locating Hayes Valley Farm.
9. Work with Department of Public Works and the San Francisco Public Library to open tool lending library.

Objective C: Support community organization and public education and information campaigns

ACTIONS:

10. Partner with the San Francisco Urban Agriculture Alliance to forward community based initiatives. (11-13)
11. Coordinate farmer's market and farm stand distribution points. (11-12)
12. Organize an annual symposium of cross-sector urban agriculturists. (11-13)
13. Provide information to the general public through development of an information website on San Francisco's urban agriculture policies. (11-13)

URBAN FOREST

The urban forest is a vital component of San Francisco's ecosystem. Trees provide environmental and economic benefits through improving air and water quality, increasing property values, increasing commerce, lowering building energy use. Trees reduce the speed of traffic and increase the vitality of street life, creating safer public spaces. Trees improve public health and well being by providing an experience of nature amidst expanses of concrete, which positively affects the mental and physical health of urban residents.

The Challenge

Comprehensive planning or coordination of urban forest activities has been fragmented among various city, state and federal agencies, non-profit groups and private property owners. Together with inadequate program funding, the absence of coordinated management and planning has led to inconsistent maintenance and conservation efforts, insufficient enforcement of existing laws related to trees, loss of healthy and significant trees due to vandalism and disease, and limited public awareness of the importance of trees. For example, the most study of our urban forest suggests that San Francisco has approximately 12% canopy coverage as compared to the national average of about 27%. While San Francisco's specific climate and infrastructure limitations may restrict the possibility of reaching a similar level of canopy coverage as the national average, there are many opportunities to increase canopy coverage from our approximately 670K trees and, just as importantly, to preserve our existing urban forest through improving stewardship of individual trees.

Impact Opportunities

Insufficient resource allocation frequently requires choosing between funding planting and establishment of new trees or funding care of mature trees. To achieve a sustainable urban forest, San Francisco needs dedicated funding for both: While planting programs are important to highlight and support, without sufficient resources for ongoing care, funding and staffing applied to new tree planting may be lost. For example, the Street Tree Action plans calls for more than doubling the number of street trees from the 2004 level, by planting an additional 5K trees per year for 20 years. The Trees for Tomorrow campaign started this work by committing to plant 5K street trees per year for five years and ultimately resulted in 26K trees planted, including replacement trees in locations where trees failed or were otherwise removed. However, with the closure of this program in March of 2009, no new funding has been identified to continue to reach the goal of over 100K new street trees within 20 years. Additionally, insufficient funding for necessary ongoing care and maintenance continues to be a chronic problem, resulting in the loss of a significant portion of our urban forest that would have otherwise provided valuable environmental, economic, and social benefits. Notably, newly planted trees have been lost due to insufficient resources dedicated to their care. To prevent loss of new trees, fewer established trees are receiving the care they need; City staff are being redirected from pruning of mature trees to watering of young trees. This practice endangers San Francisco's larger trees, which provide more significant environmental benefits than new trees. Consequently, the community has been unable to realize the full extent of the benefits that trees provide.

Our Role

The Urban Forest program addresses these issues by supporting the Urban Forestry Council, an advisory body that was formed to create a platform for the city's urban forest managers to synchronize efforts. The Urban Forest program supports coordination, provides feedback and guidance on projects and programming, drives legislation and reporting, and serves as an information hub to other agencies and the general public to improve the health of the urban forest and increase the benefits that urban residents derive from it.

GOAL #1	To promote a healthy and sustainable urban forest.
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Objective A: Implement the Urban Forestry Council Ordinance (Environment Code Chapter 12).

ACTIONS:

1. Streamline and improve efforts and effectiveness of the Urban Forestry Council's operations. (10-13)
2. Provide program-staffing support for the Urban Forestry Council and subcommittees. (10-13)
3. Steward the nomination process of the city's landmark tree program. (10-13)
4. Report on citywide urban forestry activities through the Annual Urban Forest Report, as well as other opportunities for study as funding permits. (10-13)
5. Provide training opportunities for municipal forest managers on best practices. (10-13)

Objective B: Promote education and outreach programs, and provide information on city tree management and related activities.

ACTIONS:

6. Provide information to members of the public, city departments and community groups regarding city services, policies and project related to the urban forest. (Outreach) (10-12)
7. Promote and innovative and engaging events and programs that highlight the importance and value of the urban forest, e.g. San Francisco Arbor Day, Dreaming of a Green Christmas program. (Outreach) (10-13)
8. Support continuing development and participation in the Urban Forest Map, as funding permits. (Outreach) (10-13)

Objective C: Develop innovative long term funding strategies for urban forestry programs.

ACTIONS:

9. Research and analyze potential funding sources for urban forestry programs, such as working with the Climate Change Coordinator, to include urban forest initiatives in climate change goals and programs, including the Local Carbon Fund. (Climate) (10-13)

ZERO WASTE

San Francisco continues to lead the nation toward zero waste. Zero waste means products are designed and used according to the waste prevention (source reduction) recycling/composting hierarchy (reduce and reuse first then recycle and compost) and principle of highest and best use, so no material goes to landfill or high-temperature destruction. While the U.S. has long generated the most waste per capita in the world and only diverts about a third of its discards from landfills and incinerators, San Francisco achieved 77% diversion in 2008, exceeding its goal of 75% by 2010.

The Challenge

The plan below outlines the strategy over next three years toward achieving our audacious, ultimate goal of zero waste by 2020. San Francisco disposed 475,800 tons in 2009. This was 15% below the year before and the least amount on record. But it's still a long way from zero waste, which will be even more challenging if the consumer economy takes off again.

Impact Opportunities

About 35% of what we still landfill is compostable (primarily food scraps) and 30% is recyclable (mostly construction and demolition debris and paper). Capturing all of this material through our current programs would decrease landfill to only 10% of generation. We need to increase consumer responsibility (such as through reducing unnecessary consumption and enforcing our Mandatory Recycling and Composting Ordinance), deal with single refuse chutes in buildings and further develop low-temperature, mechanical/biological mixed-material recovery processes.

The remaining disposal is largely composite items (about 7%, 34,000 tons per year), plastic film (5%, 25,000), textiles/apparel (4%, 18,000), asphaltic roofing (4%, 17,000), hazardous waste (mostly treated/painted wood, 3%, 14,000), diapers (2%, 10,000), carpet/upholstery (2%, 8,000), animal by-products (1%, 7,000), furniture (<1%, 3,000), expanded polystyrene (<1%, 1,000), rubber (<1%, 1,000) and ceramics (<1%, 1,000). Programs can be created for such materials, but require funding and are aided by the cooperation of manufacturers and retailers. Producer responsibility policies are needed to engage brand owners in redesign and recovery, and achieve true zero waste.

Our Role

The Zero Waste program has instituted a wide array of policies and convenient services. We encourage all sectors to follow policy and use our services properly. Our primary focus is securing everyone's compliance with the Mandatory Recycling and Composting Ordinance. We continue to adjust financial incentives for generators and service providers. The program promotes waste prevention and environmentally preferable purchasing. We will also continue pushing for additional local and state legislation increasing consumer and producer responsibility.

GOAL #1	Decrease disposal 9% (about 44,000 tons) annually to achieve zero waste by 2020 and protect ecosystems, conserve resources and energy, and reduce pollution and climate change.
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Objective A: Decrease residential disposal by 15,000 tpy (tons per year).

ACTIONS:

1. Reduce waste by decreasing phone book deliveries and other unnecessary consumption (Outreach, 11-13).
2. Double reuse at the Public Recycling & Disposal Area to 2,800 tpy, and award and manage grants to nonprofits diverting over 2,000 tpy of reusables and other materials while creating green jobs (11-13).
3. **Decrease disposal by 13,600 tpy initiating composting at 1,250 apartment buildings and reducing disposal by 1 pound per week at apartments and 2 pounds per week for curbside households (Outreach, EN, 11-13).**
4. Increase beverage container redemption convenience for San Franciscans and work with Recology, the Police Department and District Attorney to enforce anti-poaching laws against organized vehicles (11-13).
5. Ensure that 200 events recycle and compost and 100 events exceed 50% diversion each year (Outreach, 11-13).
6. Work with Recology to restore Fantastic 3 recycling residuals below 10% while optimizing market prices (Outreach, EN, 11-13).

Objective B: Decrease commercial disposal by 25,000 tpy.

ACTIONS:

7. Promote waste prevention (e.g., double-sided printing and copying, food redistribution) and purchasing recyclable/compostable products with recycled content such as through presentations, the Green Business program and promoting SF Approved (Outreach, Toxics, 11-13).
8. **Reduce disposal by 15,000 tpy through bringing recycling and composting to the remaining commercial accounts by conducting outreach (such as presenting at merchant associations and property management companies), providing assistance and coordinating with service providers, owners/managers, employees, janitorial companies, unions and others (Outreach, EN, 11-13).**
9. Achieve Food Service Waste Reduction Ordinance compliance through on-site monitoring and assistance, and coordinating with the City Administrator on enforcement (EN, 11).
10. **Reduce disposal by 10,000 tpy by continuing to implement the Construction and Demolition Debris Recovery Ordinance by registering facilities and transporters, conducting outreach and in-field monitoring, working with the Department of Building Inspection (DBI), promoting material reuse, identifying additional material markets, revising Environment Code Chapter 7, training City employees and contractors, and participating in disaster debris recovery planning (Green Building, EN, 11-13).**
11. Work with service providers, City agencies and others to expand zero waste eco-industrial developments that benefit the community, including providing green jobs. (EJ, 11-13).

Objective C: Decrease City government disposal by 4,000 tpy and further facilitate departments leading by example.

ACTIONS:

12. Advance waste prevention through compliance with Mayor's Executive Directive 08-02 to reduce paper use by 20%, working with the Office of Contract Administration (OCA) to secure second-generation multi-function devices and Department of Technology and IT managers to network them at 20 department locations and fully utilize their capabilities (including double-sided printing and copying), institutionalizing paperless paystubs and electronic distribution of forms at 10 departments, and installing 62 electric hand dryers (11-13).
13. Decrease purchase of new items and increase reuse and recycling of office furniture, equipment and supplies, and divert 1,500 tons of scrap metal per year through managing and promoting the Virtual Warehouse and metal recycling contract by making presentations to 1,200 employees annually who are moving, renovating or unfamiliar with these services and further developing relationships with Real Estate, OCA and the Recreation and Park Department. Increase Virtual Warehouse overall transactions, ones that provide 30 days notice and the proportion of items redistributed to departments by 15, 20, and 20% respectively (11-13).
- 14. Reduce disposal 4,000 tpy by facilitating compliance with the Resource Conservation Ordinance, conducting 50 site visits, making recommendations and improving programs, expanding recycling and composting at 50 new locations, training 75 recycling coordinators, presenting on zero waste principles and procedures to 2,500 City employees, ensuring all departments report on recycling and composting in their Climate Action Plan, providing feedback to 15 key department Directors or upper managers and assisting departments in saving \$100,000 annually (11-13).**
15. Facilitate compliance with the Precautionary Purchasing Ordinance and Extended Producer Responsibility Resolution to promote purchasing reusable, recyclable/compostable products with recycled content by assisting OCA with incorporating environmental specifications in 3 bid processes, working with departments to reduce packaging and increase takeback, training 200 end-users on City purchasing requirements and environmental benefits of preferable products, collecting sales data and evaluating progress (Toxics, 11-13).
- 16. Develop strategies to divert street sweepings that passed toxicity testing to composting and assist the SF Public Utilities Commission in developing sewage sludge diversion contingencies (11-13).**
17. Showcase key department efforts as models of zero waste to encourage other agencies and the private sector (11-13).

ACTIONS (for all 3 sectors):

- 18. Implement the Mandatory Recycling and Composting Ordinance by educating all generators about its requirements and providing assistance or enforcement where necessary (Outreach, EN, 11-13).**
19. Work with DBI to implement the administrative bulletin and Green Building Ordinance requiring adequate and convenient space for recycling and composting in new buildings, and convert or close trash chutes in existing buildings (Green Building, 11-13).
- 20. Test and evaluate low-temperature, mechanical/biological processing technologies (such as autoclaves, presses and anaerobic digestion), increase material types recycled and composted, and further develop markets (11-13).**

21. Keep the ecofinder updated, and improve and expand web-based and other information that motivates people to achieve zero waste (Outreach, 11-13).

GOAL #2

Advance towards zero waste by holding producers and consumers responsible for their waste.

Objective A: Require diversion program participation in all sectors.

ACTIONS:

22. Work with the Mayor’s Office, Board of Supervisors and others to support State legislation mandating recycling and composting at apartments and businesses, and regionally to ban materials such as cardboard from landfills (Outreach, 11-13).

Objective B: Decrease use and encourage re-engineering of disposable products, increase reuse, recyclability, compostability and recycled content of selected categories, and secure producer participation or funding for recovery.

ACTIONS:

23. Work with the Mayor’s office, Board of Supervisors and others to introduce and support local and State policies targeting problem products (e.g., plastic film, textiles/apparel, asphaltic roofing, disposable diapers, carpet/upholstery) and improving labeling of compostable products. Seek additional research on the impacts of “biodegradable” plastics. (Outreach, Toxics, 11-13).

GOAL #3

Assist with landfill agreement, refuse rate and other processes.

Objective A: Help secure any disposal capacity needed beyond the current Altamont agreement while incentivizing achieving zero waste by 2020.

ACTIONS:

24. Aid in negotiating new landfill agreements and obtaining Board of Supervisors approval prior to the next comprehensive rate process (11).

Objective B: Help set refuse rates, incentives and program funding leading to zero waste by 2020.

ACTIONS:

25. Assist in preparing for and completing public processes on rates, the special reserve, Department of Public Works costs and producer responsibility (Toxics, 11-13).