



**SF Environment**  
Our home. Our city. Our planet.  
A Department of the City and County of San Francisco

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# San Francisco Department of Environment 2017-2019 Impound Account Funded Projects Summary

## ZERO WASTE

Zero Waste has long been one of San Francisco’s most successful environmental endeavors and is a primary reason the City has been nationally and internationally recognized as a sustainability leader. San Francisco adopted goals of 75% landfill diversion by 2010 and zero waste – sending no material to landfill or incineration by 2020. The City exceeded the 75% diversion goal two years early and cut disposal in half to the lowest amount on record, greatly delaying a more expensive landfill agreement. Recent economic and social factors, such as a construction boom and growing population, are contributing to increases in disposal. Additional resources and actions are needed to reverse this trend and get San Francisco closer to zero waste.

### Mandatory Recycling and Composting Ordinance

The San Francisco Department of Environment (Department) is responsible for managing compliance with San Francisco’s Mandatory Recycling and Composting Ordinance across all sectors—residential, commercial and city government. We work with San Francisco Public Works, the San Francisco Department of Public Health and Recology to ensure residences and businesses have and pay for adequate refuse service. Although we have brought recycling and composting collection service to almost all buildings citywide (something no other U.S. city has done), we strive to bring service to the last, most challenging locations and must continually monitor, reinstall and adjust service in such a dynamic urban environment.

Conducting outreach and educating a constantly changing and extremely diverse population that includes 850,000 residents and 650,000 employees is challenging, but crucial. Our outreach strategies are customized for different audiences, and we analyze service lists and conduct audits to target accounts needing additional attention. The Department provides technical assistance, trainings, information and signage to improve source separation. We also conduct broader campaigns ranging from traditional advertising to social media and experiential events to help educate the public about what goes where and how they can reduce waste at home, work or in their community. The overall goal of our outreach is to drive awareness about eliminating waste while providing tools and resources for success

### *Residential Curbside*

To reach residents in San Francisco, we identify barriers and demographic groups, and then execute campaigns targeting specific materials that often get sorted incorrectly, such as food scraps and paper. Outreach is tailored to various neighborhoods and integrates social media, advertising, door to door education and community events promoting the how-tos and benefits of composting and recycling. These outreach campaigns can have a significant impact on participation. For example, when the Department implemented a targeted campaign in the Bayview, composting participation doubled and diversion increased 50% in the neighborhood.

### *Apartments*

Multi-family housing presents different challenges than smaller, curbside residential homes. Annually, the Department targets about 500 apartment buildings where we conduct site visits and audits, provide technical assistance and connect owners with zero waste facilitators, educate managers and tenants, and verify improved separation. The work often includes assessing the building service needs with property management and Recology, along with face to face discussions with tenants in various languages (e.g., English, Chinese, Spanish and Tagalog).

### *Commercial*

The Department targets about 700 commercial accounts annually where we conduct audits, provide technical assistance, educate business management and employees about our three-stream system, and verify improved separation. Through outreach and assistance, we help thousands of businesses better understand how to reduce waste and save on their refuse bills.

### *City Government*

The Department helps the City and County of San Francisco lead by example and save money. We meet with key department heads, conduct site visits, provide recommendations based on audits, replace deskside bins with a centralized system, and reduce interior trash bins and service. The Department developed and supports a network of about 250 Zero Waste Coordinators, who are city employees at various department locations that help their colleagues achieve zero waste. The Department reaches about 1,000 employees annually through zero waste trainings.

### *Food Service and Packaging Waste Reduction Ordinances*

In 2007, San Francisco prohibited polystyrene foam foodware and required it to be compostable or recyclable at food establishments and events citywide. The Department continues to monitor food vendors and improve compliance, especially around smaller foodware items and front of house separation.

In addition, the Department began implementing an expanded ordinance that prohibits the sale of polystyrene foam and non-recyclable or compostable foodware, and other items including packing materials and marine products. The Department has already reached out to 12,000 businesses and visited large distributors, while also maintaining public lists of approved alternative products, and responding to compliance inquiries and waiver requests.

### Plastic Bag Reduction and Checkout Bag Charge Ordinances

Plastic bags and other plastic film are among the biggest problem materials for litter abatement, as well as for recycling and composting. The Department has achieved high levels of compliance from supermarkets and chain pharmacies with San Francisco's Plastic Bag Reduction Ordinance.

The more recent expanded Checkout Bag Charge Ordinance, extended the original restrictions to all retail and food establishments, and requires a 10¢ charge for any checkout bag. The Department has conducted outreach to the 14,000 affected establishments, and continues to raise awareness and help them comply. We provide businesses with resources such as ordinance information, vendor lists and signage. California voters recently upheld the state plastic bag ban and charge, which mirrors San Francisco's ground breaking ordinances. For efficiency, we integrate this work with our Mandatory Recycling and Composting Ordinance and Food Service and Packaging Waste Reduction Ordinance compliance assistance.

### Construction and Demolition Recovery Ordinance

San Francisco's economic boom is contributing to more construction and demolition debris, which are the heaviest and bulkiest materials generated. To implement the Construction and Demolition Recovery Ordinance, the Department has reviewed and approved hundreds of plans for full demolitions citywide, and has registered about 700 transporters and 23 facilities. We secure new registrations, renew existing ones, inspect job sites and facilities, provide information and collaborate with the Department of Building Inspection to ensure compliance. Our registered transporter and facility network would be critical in the event of a major disaster such as an earthquake.

### City Government Ordinances

We help city departments comply with the Resource Conservation Ordinance, Environmentally Preferable Purchasing Ordinance, Bottled and Packaged Water Ordinances and other policies. The Department also administers the city's virtual warehouse and scrap metal contract to reuse and recycle items in accordance with the Surplus Goods Ordinance.

### School Education

As San Francisco aims to achieve zero waste, it is imperative that schools adopt successful composting and recycling programs and that students are inspired and motivated to take positive action. The Food to Flowers (F2F!) program promotes waste diversion using the three-stream system in K-12 public and private San Francisco schools. In addition to promoting classroom recycling, the F2F! program places green bins in school cafeterias so students can compost their leftover lunches and food soiled paper. This comprehensive program involves staff meetings, planning meetings, in-class compost monitor trainings, school wide assemblies, classroom curriculum, program materials, lunchroom monitoring, follow-up assessments and reporting back to schools. We work closely with the San Francisco Unified School District (SFUSD) and Recology to ensure that schools are supported in their waste diversion efforts. We also provide compostable liners to schools as needed. In FY 2015-16, we reached more than 12,500 students and diverted more than 5,000 tons of organics from schools.

Since experiential education can greatly support student understanding, the Department provides 85-100 free field trips a year for Grades 2-12. These field trips give students the opportunity to see reuse, recycling and composting first hand, which further inspires their waste diversion efforts at school and at home. For teachers to be awarded a free field trip for their class, they need to attend our annual Teacher Workshop which promotes our programs and materials, and model curriculum we have on waste diversion for them to use in the classroom. Field Trip sites include:

- *Transfer Station + Recycle Central (34 trips):* Students visit the Transfer Station at the Recology Tunnel Avenue facility to see where our trash goes – and what it looks like – before being sent to landfill. They then take a tour of Recycle Central to see how recycling happens. All Transfer Station field trips come with a pre-trip classroom presentation during which Department staff go into the classroom to teach children about natural resources and how reducing, reusing, recycling and composting can help protect nature. This pre-trip presentation supports zero waste and prepares students for their field trip experience.
- *Art Lab (10 trips):* Students learn about the art of reuse by working with artists from Recology's Artist in Residence Program to make art from items sent to the Transfer Station.
- *Scroungers Center for Reusable Art Parts (SCRAP) (10 trips):* Students learn about the art of reuse when they go to SCRAP. There, they see a warehouse full of sorted items that would've been sent to the landfill if not for SCRAP. These items then get used as art materials for students to turn into sculptures during their field trip.
- *Garden for the Environment (15 trips):* Students visit Garden for the Environment to learn about backyard composting and the decomposition process. They get up close to investigate and study decomposers, and learn how compost builds soil and helps gardens grow.
- *Eco-Stewards at Candlestick Point (10 trips):* Students learn the concept of environmental justice and how toxics impact our land, air and health. They then embark on restoration work to support the native plants at Candlestick Point, and learn how native habitat restoration invites back the native species that once called that habitat home before it was polluted or destroyed.

### Additional Projects

The Department works to cultivate producer and consumer responsibility. At the top of the hierarchy, we do what we can to promote source reduction and reuse (e.g., reducing paper use and supporting food redistribution). A substantial fraction of our disposal is challenging items, often composite products, like carpet, textiles, film plastics, painted wood and diapers. We work to develop recovery of such materials and seek producer involvement where possible. We conduct strategic, long term program and facility planning. Recycle Central at Pier 96 was just substantially upgraded, and other facilities and programs need to be expanded and enhanced. Our nonprofit grant program helps strengthen our recovery (especially reuse) infrastructure as well. We work on other projects such as coordinating with permitting agencies and conducting quarterly zero waste

trainings for event producers. We are often looking at how zero waste policies can be implemented not only locally, but statewide.

Despite convenient programs, extensive outreach, financial incentives, mandates and enforcement, San Franciscans still do not participate properly all the time. Although our three-stream collection program is often considered the best in the United States, half of the material on average in our black trash bins is recyclable or compostable. To progress further toward zero waste, we need to maximize source separation for highest and best resource use.

We have also been working with Recology to develop low-temperature, mechanical/biological processes to recover additional material from the trash stream. We have researched all available technology, tested the most promising and plan to continue development until a facility can be built to process all trash to extract as much remaining organics for anaerobic digestion and recyclables as possible.

We hope to soon change which bin certain items belong, with more going to recycling, and undergo the most significant facility and program changes since the introduction of our three-stream collection system. San Franciscans must be informed of such changes citywide and it behooves us to take this opportunity to refresh everyone's commitment to composting and recycling. In an order to do that well, an increase in resources is needed to deliver culturally competent content on the changes, and how to comply with ordinances and increase zero waste efficacy at residences and businesses. In cooperation with Recology, we would roll out a multi-lingual, multi-touch engagement program that will not only focus on the what (new systems), the how (what goes where), but also the why (resource conservation, climate change prevention, etc.)

The Department assists Public Works in preparing for and completing complex, refuse rate processes. These processes set fair rates and provide resources vital to getting San Francisco closer to zero waste.

## TOXICS REDUCTION

The Department manages and delivers programs that help minimize the use of toxic and hazardous products and promote proper disposal of toxic and hazardous substances to protect human health and the environment. To those ends, we:

- Develop convenient and safe recycling and disposal options for common hazardous wastes generated by businesses, residents and city staff.
- Research and offer safer alternatives.
- Educate residents, businesses and city staff about how to minimize use of toxic and hazardous products, practices and materials.

## Residential Programs

### *Household Hazardous Waste Disposal Programs*

Over the past 25 years, the Department has developed a variety of options for San Francisco residents to safely recycle or dispose of unwanted or used hazardous consumer products. In partnership with Recology, the Department operates a permanent household hazardous waste (HHW) collection facility which is open to all San Francisco residents every Thursday, Friday, and Saturday. The permanent facility is located at the Tunnel Avenue facility. In Fiscal Year 2015-16, San Francisco residents made 8,265 visits to the permanent facility to deliver over half a million pounds of household hazardous waste.

San Francisco also has an extensive network of more than 165 neighborhood retail drop-off sites for residential disposal of certain household hazardous waste (HHW) such as used motor oil, batteries, paint, pharmaceuticals and fluorescent lamps. Department staff maintain this infrastructure, which includes ongoing recruitment of new drop-off sites, training site hosts, verifying compliance with applicable laws, and collecting and analyzing collection data. In FY 2015-16, the retail drop-off program collected over 246,000 pounds of HHW.

Since 2006, the Department has coordinated with Recology to provide a home collection program for San Francisco residents. This program is very popular with seniors and residents who do not have a car, or who otherwise do not want to use the permanent facility. Unlike the neighborhood retail drop-off program, the home collection program accepts almost all types of HHW with the exception of radioactives, asbestos, sharps, and pharmaceuticals. In FY 2015-16 almost 1,850 residents took advantage of the home collection program to remove over 214,000 pounds of HHW from their homes.

In addition to the permanent HHW facility, the neighborhood retail drop-off program, and the home collection program, the Department partners with Recology to offer curbside and apartment building battery collection, and collection of certain recyclable HHW at neighborhood clean-up events. In total, San Francisco's HHW programs kept 1.3 million pounds of hazardous consumer products out of collection carts, recycling facilities, and landfill in FY 2015-16. An additional million pounds of hazardous electronic waste was collected through other Recology programs with sponsorship by the Department.

### *Residential Household Hazardous Waste Disposal Outreach*

In conjunction with the Department's zero waste outreach efforts, we inform residents on what to do with waste that does not belong in the green, blue, or black bins. To better target future outreach and messaging, in July 2016, the Department contracted with a professional services firm to conduct research on San Franciscans' current understanding of HHW and what they know about proper disposal. The survey revealed that more work is necessary to address disposal of multiple product categories including batteries, strong cleaning products, and indoor pesticides. In the coming years, we will conduct targeted campaigns to educate residents about proper disposal of these types of products.

### *Residential Toxics Reduction Outreach*

The Department has developed a series of "Healthy Homes Tips" to inform San Francisco residents about simple ways to reduce exposure to toxic materials in their homes. Topics include least toxic and safer cleaning methods, least toxic home pest management, and safer personal care products. The Healthy Homes Tips are continuously promoted to San Francisco residents at neighborhood outreach events throughout the year, including community and employer wellness fairs, Sunday Streets, and local sustainability-focused public events. The Department also developed an English as a Second Language (ESL) curriculum based on the Healthy Homes Tips, which is taught in 20 San Francisco ESL classes each year and supports a Safer Cleaning exhibit and activity for over 800 San Francisco 4th and 5th grade students at the Fort Funston Environmental Learning Center.

### *Residential Used Motor Oil Recycling Program*

The Department promotes used motor oil and filter recycling in San Francisco by recruiting retail businesses to be certified used motor oil collection centers. Program staff provide support to 27 participating recycling locations throughout San Francisco, as well as three waterfront drop-off locations for the boating community and an additional waterfront drop-off location planned for installation in 2017. In FY 2015-16, the certified collection centers and waterfront drop-off locations received and recycled almost 35,000 gallons of used motor oil from San Francisco residents who change their own oil.

Recent outreach efforts for this program have focused on promotion to San Francisco's Chinese-speaking community. A recent campaign featured in-language and culturally appropriate advertisements on transit, billboards, and the internet. We orchestrated a well-attended press event in the Inner Sunset neighborhood, garnering stories in several local media outlets. Other outreach targets are motorcycle owners who change their own oil, beginning ESL students, and high school and community college automotive technician students. The Department also works on illegal disposal of used motor oil and other HHW in San Francisco's Bayview Hunter's Point neighborhood. In FY 2015-16, the Department project managed the creation of a 100 x 25ft mural near a major transit hub on Third Street and Palou. The mural's twin messages discourage dumping of used motor oil and encourage reporting of abandoned and dumped oil to the City's 311 call center. The mural's message has resulted in a 32 percent increase in 311 calls about oil dumping from the previous two years.

### *Safe Medicine Disposal Program*

In 2015, the San Francisco Board of Supervisors passed legislation to require drug manufacturers to establish and fund a permanent pharmaceutical collection program. While that program is getting underway, the Department continues to implement a pilot medicine disposal program, which has been in place since 2012 and operates 23 collection sites throughout the City. We provide training at participating pharmacies and police stations, monitor the collection sites, oversee collection services, and collect metrics on volumes of medicine collected. The pilot program collects an average of 1,484 pounds per month, and through September 2016, the program has collected 80,473 pounds (over 40 tons) of unwanted medicine, preventing these medicines from being

abused or incorrectly disposed of in the landfill.

## Commercial Programs

### *Very Small Quantity Generator Program*

The Very Small Quantity Generator (VSQG) program targets small businesses of all kinds that need to dispose of hazardous waste, and offers instruction and options for legal and safe recycling or disposal. In FY 2015-16, over 187,000 pounds of non-electronic hazardous waste was collected from 244 San Francisco businesses. As part of the Department's direct outreach to businesses, we educate business owners and employees about hazardous waste and how to properly dispose of it. To better target our messaging and outreach, in July 2016, we contracted with a professional services firm to conduct research in the business community about their understanding of what HHW is, and how different wastes should be disposed. Similar to the residential results, the survey revealed that there is much outreach and education to be done to ensure proper disposal of batteries, hazardous cleaning products, and pesticides. In the coming year, we will use the survey results to identify a segment of the population for targeted outreach to educate and change disposal behavior.

### *Healthy Nail Salon Program*

The Department designed this program to reduce the use of toxic chemicals in nail salons, improve disposal of toxic and hazardous wastes, while positively impacting the health and safety of nail salon workers. Program staff recruit nail salons to participate in the program, conduct audits of current practices and products in use, conduct trainings for all technicians working in a salon seeking recognition, and then help salons select safer products and improve practices. As of November 2016, we have 37 recognized salons and 10 additional salons in the process of obtaining recognition.

### *Green Business Program*

The Green Business Program assists businesses in reducing waste, selecting safer and less-toxic cleaning products, ensuring proper disposal of hazardous waste, and conserving energy and water. Program staff offer customized support to help local businesses complete sector-specific checklists of measures that improve their business sustainability profile. In addition to providing technical assistance to businesses, program staff conduct ongoing outreach to increase brand awareness and recruit more businesses. We currently have more than 300 businesses that are either recognized or actively pursuing recognition, and in the past 12 months, we conducted 135 site visits and through a targeted recruitment campaign, we contacted 500 businesses through emails, phone calls and in person meetings. In FY 2015-2016 alone, we helped businesses reduce 2,510,170 pounds of waste, reduce GHG emissions by 9,614,034 pounds, save 2,330,781 KWH of energy, and 3,238,451 gallons of water.

In FY 2016-17, we plan on continuing our recruitment efforts to enroll businesses in the program. We also plan to further collaborate with other programs at the Department that work with businesses to leverage existing business relationships and leads.



As part of the Green Business Program, we developed a Green Cleaning program to assist the janitorial services sector in selecting less-toxic cleaning products, establishing practices that reduce the use of toxic cleaners, promoting proper disposal of toxic products, and protecting worker health and the environment. Program staff developed multi-lingual and multi-media training materials, a sector-specific Green Business checklist, and recruited five janitorial businesses into the program. Once recruited, program staff delivered trainings and helped the businesses make significant changes in their cleaning products and practices. In the coming year, we plan to conduct outreach to approximately 80 janitorial companies in San Francisco and recruit 15 of them to enroll in the Green Business Program.

## Municipal Programs

### *Green Purchasing Program*

As part of the Precautionary Purchasing Ordinance, city employees are required to buy less-toxic products that in turn will reduce the volume of hazardous waste generated by city departments. Program staff research a wide range of products to help city employees identify and choose safer alternatives. In addition, we develop new regulations, specifications and product lists that city purchasers can incorporate into city contracts. During FY 15-16, program staff assisted departments with greening janitorial services and products, and analyzed products available on the citywide janitorial contract, office supply contract, and industrial supplies contract. Staff also completed a new set of recommendations for high performing rechargeable batteries. On an ongoing basis, staff develop and maintain a directory of green products at [SFApproved.org](http://SFApproved.org) for city purchasers to find green products. The directory contains over 1,000 green products.

In FY 15-16, the Department conducted outreach to over 200 city employees through presentations and one-on-one consultations. In the future, we will be reaching out directly to 500 city employees per year and adding carpeting, furniture, and (revised) information technology equipment specifications to the list of required green products.

### *Green Christmas*

The Green Christmas tree project is an annual event that features living Christmas tree rentals for residents. The program reduces the number of cut Christmas trees that end up in the waste stream, encourages residents to reduce waste throughout the holidays, and supports San Francisco's urban forestry program.

### *Integrated Pest Management Program*

The Department has managed the city's Integrated Pest Management (IPM) Program since 1996. Program staff research products and identify safer alternatives, conduct outreach, train, and educate city employees regarding pesticide use and disposal, and help city employees reduce the use of toxic products. The program has reduced the use of insecticides by 94% since 1996, reduced highest hazard herbicides by 81% since 2010, and removed the most hazardous products from use on city properties.

To extend the reach of the IPM program beyond city employees, in September 2016, the Department launched a Pollinator Protection Program. The program seeks to reduce the use of toxic gardening products in residential and commercial settings, and encourages residents and businesses to reduce green waste by selecting site-specific plants. The program uses friendly messaging and imagery that motivates residents to play a role in protecting pollinators such as butterflies, hummingbirds, and bees.

## ENVIRONMENTAL JUSTICE

### *Reduce Household Hazardous Wastes*

Working in collaboration with the Toxics Reduction program, the Environmental Justice program manages and delivers educational workshops and community outreach to low-income residents about household hazardous waste collection services and the use of safer, less-toxic household cleaning products. Presentations are made at senior centers, community meetings and special events with focused outreach to low-income families at affordable housing development sites and in disadvantaged communities.

### *Promote Integrated Pest Management*

Program staff conduct outreach to property managers, affordable housing developers and low-income tenants to promote Integrated Pest Management (IPM). This effort seeks to address asthma disparities burdening low-income families by reducing exposure to toxic pesticides and pest infestations that can cause or trigger asthma. We provide training workshops and perform door-to-door outreach at affordable housing sites and in disadvantaged communities.

### *Reduce Toxic Pollution*

The Department provides educational workshops and training to community groups and local residents to reduce pollution and increase awareness of environmental services and programs in San Francisco's most vulnerable neighborhoods. This effort includes performing outreach to low-income tenants at affordable housing development sites and conducting workshops and training at community meetings. This work also involves supporting the Bayview-Hunters Point Environmental Justice Task Force, and local efforts to identify and cleanup illegal dumping hot spots and brownfield sites in the Southeast area of San Francisco.

### *Address Illegal Dumping in Southeastern Neighborhoods*

The Department conducts prevention, deterrence and educational activities to reduce illegal dumping in the southeastern neighborhoods. Program staff work with the San Francisco Conservation Corps (SFCC), the Bayview Hunters Point Environmental Justice Task Force and other non-profit organizations serving Bayview Hunters Point and surrounding southeastern neighborhoods, to train residents on the safe and proper disposal options and reporting of dumping to the city's 311 customer service hotline. In addition, the Department will install and monitor security cameras at illegal dumping "hot spots." Program staff work closely with the District Attorney's office to support enforcement actions against violators. This work will help deter

dumping, support Public Works, and promote Recology's Bulky Item Recycling and Abandoned Materials Collection services.

## GREEN BUILDING

San Francisco's Green Building program provides policy support, program development, technical assistance, training, and compliance support to municipal and private buildings in San Francisco to ensure compliance with San Francisco's Environment Code Chapter 7 and the San Francisco Green Building Code.

### Municipal Programs

#### *Green Building Task Force*

The Department convenes the Municipal Green Building Task Force which is comprised of 12 city departments. The Task Force advises on green building policy, green building best practices, and lessons learned across city departments.

#### *San Francisco Environment Code Chapter 7 Implementation*

The Department oversees the implementation of Chapter 7 of the San Francisco Environment Code which was adopted in 1999, updated in 2004 to require LEED Silver certification for municipal projects, and updated in 2011 to require LEED Gold. Currently, LEED Gold certification is required for all municipal new construction and major renovation projects greater than 5000 square feet. Chapter 7 requires a minimum 75% diversion rate for construction and demolition debris for all municipal projects. During FY 15-16, 15 LEED certified city projects diverted over 24,000 tons of construction and demolition debris from landfill for an overall diversion rate of 98%. Chapter 7 also requires that all municipal buildings are designed to provide adequate space and equal access for storage, collection and loading of compostables, recyclables and trash.

#### *San Francisco Environment Code Chapter 5 Implementation*

The Department oversees the implementation of Chapter 5 of the San Francisco Environment Code which requires the use of non-PVC plastics to reduce procurement of halogenated organic compounds and persistent bioaccumulative toxins (PBTs) in municipal construction projects, and reduce these contaminants from the waste stream.

#### *Green Building Training and Education*

- **City Staff Training:** Provide regular training sessions for city design professionals focused on responsible resource utilization, building reuse, recycled content building materials, toxic materials reduction, operational recycling, energy and water efficiency, etc.
- **LEED Accreditation Support:** Assist 134 LEED Accredited Professionals on city staff to achieve and maintain their accreditation and USGBC (US Green Building Council) chapter membership.

- **Oversee LEED Certification:** San Francisco's municipal portfolio includes 50 LEED certified projects totaling 6.9 million square feet. There are currently 25 LEED registered city projects in planning and design totaling over 3 million square feet. The Department collaborates with municipal project architects, engineers, project managers and consultants to advise and consult on city requirements and best practices. We manage and administer professional services contracts for as-needed Green Building Technical Services available to all city departments.

## Private Sector Programs

### *San Francisco Green Building Code Implementation and Re-adoption*

This Ordinance requires large commercial building construction projects to divert at least 75% of construction and demolition debris from landfill and requires that all buildings are designed to provide adequate space and equal access for storage, collection and loading of compostables, recyclables and trash. It also requires the use of environmentally preferable materials (such as high recycled content materials) which promotes upstream reuse of materials, while reducing toxics in the waste stream and reducing occupant exposure to harmful chemicals. Ultimately, green building code development and implementation minimizes waste through construction and demolition debris diversion, re-use of buildings and building materials, and use of recycled content materials.

The Department collaborates with and directly supports the Department of Building Inspection (DBI) on code development and implementation in support of waste reduction in the built environment in the following ways:

- Provide technical evaluation of the impact of 2016 California Building Code (CBC, aka Title 24 Parts 1 through 11) on San Francisco's green building requirements – particularly Part 11, California's Green Building Standards Code aka 'CALGreen'.
- Gather stakeholder input to inform code updates harmonizing San Francisco requirements with the 2016 CBC (effective January 1, 2017), version 4 of the US Green Building Council's Leadership in Energy and Environmental Design (LEED) Rating System, the current version of the GreenPoint Rated residential rating system, and applicable San Francisco requirements in Municipal, Public Works, Public Utilities, Health, and Planning codes.
- Update regulations as needed (Administrative Bulletin, submittal forms, and summary tables).
- Deliver training and technical support for DBI staff enforcing green building requirements.
- Deliver San Francisco 2016 Green Building Code outreach and training to ensure practitioners are prepared to meet and exceed local requirements.
- Analyze and recommend new policies supporting San Francisco's environmental commitments, and draft legislation upon request. Example: San Francisco's Better Roof requirements require installation of a living roof and/or solar energy systems on new buildings that apply for permit on or after January 2017; living roofs and solar extend roof

life by keeping roof temperatures more consistent and shielding the roof from UV rays. Harmonize implementation of related local code requirements (construction and demolition debris recovery requirements; water conservation/metering; stormwater management; recycled water and graywater).

- Assist DBI with technical questions about Green Building submittals, forms, or processes, as needed. Participate in and advise the Green Building Subcommittee of the Code Advisory Committee.
- Coordinate Green Team meetings for Green Building Priority Permit projects with Planning Department and DBI and administer provision of Priority review to projects that substantially surpass San Francisco's green building requirements.
- Manage citywide contract to provide ongoing technical support to DBI and Planning Department as needed.
- Partner with local organizations (USGBC-NCC, SPUR, BOMA-SF, Urban Land Institute) to offer continuing education.
- Continue municipal Green Building Task Force and training programs for city building professionals.

#### *Existing Commercial Buildings Energy Performance Ordinance*

The Existing Commercial Buildings Energy Performance Ordinance, signed by Mayor Ed Lee in 2011, requires commercial buildings over 10,000 square feet to:

- Annually benchmark energy performance, which will show how the building's energy use compares to similar buildings, and track improvement. Buildings in San Francisco that have complied consistently have reduced their energy consumption by an average of 2.5% per year.
- Obtain an energy audit once every five years.
- File the results with the Department, which makes benchmark results available to the public via DataSF.org.
- Increase participation in GreenFinanceSF, a building retrofit financing program.
- Provide property owners the information and tools they need for effective decisions, identifying specific cost-effective opportunities to improve building operations, reduce energy waste, support the growth of efficient technologies. According to conventional inventories, buildings account for 56% of greenhouse gas emissions in San Francisco, which are reduced by improving energy efficiency.
- Encourage building owners to take the further step of achieving LEED for Existing Buildings Operations & Maintenance certification (LEED EBO&M), which recognizes exemplary management of solid waste, energy, and water. Buildings that meet and exceed the Existing Commercial Buildings Energy Performance Ordinance, Commercial Water Conservation Ordinance, and composting and recycling requirements are well on their way to qualifying for national recognition via LEED EBO&M.

- Help building owners control energy costs - typically the largest controllable operating expense for a commercial building.
- Ensure energy retrofit projects comply with all applicable standards for construction and demolition debris recovery and hazardous materials disposal.

#### *GreenFinanceSF – San Francisco’s Property Assessed Clean Energy (PACE) Program*

GreenFinanceSF provides long-term financing for energy efficiency, renewable energy, water efficiency, and green roof retrofits to residential and commercial buildings secured by property assessment which is paid back via property taxes. The Department works to ensure energy and water retrofit projects comply with all applicable standards for construction and demolition debris recovery and hazardous materials disposal.

## CLIMATE

The Department is responsible for tracking and reporting the City’s greenhouse gas emissions, and for developing and implementing the San Francisco’s Community Climate Action Strategy and Departmental Climate Action Program. The City’s zero waste goal as outlined in the City’s Climate Action Strategy is an integral component of reducing community-wide and municipal emissions. The key performance indicators as reported in the 2013 Climate Action Strategy regarding zero waste include:

- Achieve zero waste to landfills through recycling and composting
- Reduce upstream waste through material management and producer responsibility policies

#### *Advancing a Consumption-based Inventory Approach*

Scientific studies prepared for the Lawrence Berkeley National Laboratory (LBNL) have determined that more than 39% of all greenhouse gas emissions in San Francisco come from the production, use and disposal of food and goods consumed by San Franciscans. A consumption-based emissions inventory is a better tool for communicating how meeting the City’s zero waste goal can also help the City meet GHG emissions reduction targets. Consumption-based inventories can also provide a more detailed understanding of the emissions than a conventional geographic inventory because it tracks the production and consumption of hundreds of industrial sectors and commodities, and reflects the total upstream and downstream emissions embodied in the consumption of goods and services by San Franciscans. This more holistic look can provide the detailed information needed to understand where to focus planning and policy efforts that can help accelerate a transition to sustainable consumption practices. For example, a 2010 consumption-based emissions inventory for San Francisco investigated the emissions associated with the lifecycle of four sectors; “Food and Goods,” “Transportation,” “Services” and “Housing.” This effort found that the consumption of the “Food and Goods” sector made up the largest emissions share,

including emissions embedded in the production, processing and distribution of food consumed inside and outside of homes as well as the waste landfilled.

Since 2010 the City's population and economy has grown, which likely has had significant impact on the consumption-based emissions. The Department's Climate Program is working with peer cities, counties and states to exchange knowledge and share best practices for measuring, tracking and messaging consumption-based emissions. Over the next two years the Climate Program will continue to work with peer networks and key partners on best practices for creating and maintaining an up-to-date consumption-based inventory; will use the information provided to further investigate key consumption sectors; and will identify policy options for reducing GHG emissions associated with the production, use and disposal of food and goods consumed by San Franciscans. These efforts are critical for the City to maintain progress on meeting increasingly more stringent GHG reduction and zero waste goals.

#### *Climate Action Strategy Update and Implementation*

The San Francisco Climate Action Strategy, last updated in 2013, outlines San Francisco's progress and approach towards reducing greenhouse gas emissions. To this end, "0-50-100-Roots" is San Francisco's climate action framework guiding the work necessary to meet the challenge of climate change through innovative policies, programs, and partnerships. The "0" goal is to move San Francisco towards zero waste. Reducing landfilled waste is an integral part of San Francisco's long-term climate strategy. Materials from the waste stream that are captured for reuse, recycling, and composting close an important energy loop and keep carbon in industrial and soil nutrient cycles. In addition, reducing low-value consumption can be achieved by encouraging reuse and purchasing more durable products. The Department through the implementation and regular updating of the Climate Action Strategy will continue to lead the way in reducing, reusing and recycling. In addition, an update to the Climate Action Strategy can help promote sustainable and local consumption, encouraging wiser purchasing choices that avoids upstream production emissions long before it presents a waste management problem downstream.

#### *Annual Departmental Climate Action Planning*

In 2008, the City and County of San Francisco Board of Supervisors passed Ordinance 81-08, Environment Code Chapter 9 mandating all city departments work to reduce greenhouse gas emissions. Included in this resolution was the following guidance, "all City Departments shall assess greenhouse gas (GHG) associated with their activities and submit, in a format specified by the Department of the Environment, a written action plan that identifies and makes recommendations on GHG emission reduction measures..." The Department, through collaboration with the Mayor's Office and many city departments such as the San Francisco Public Utilities Commission, General Services Agency Fleet Management Central Shops, and the Real Estate Division, ensures all city departments track and report their greenhouse gas emissions annually, which helps the city make

informed decisions to reduce emissions and conserve resources. In addition, this program has evolved to encompass all the environmental regulations, mandates, and executive orders that the city follows, such as green building requirements, the commercial lighting efficiency ordinance, transit first policies, and mandatory recycling and composting to help achieve the City's zero waste goal.