



Solid Waste

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Introduction

Garbage has always been an issue of controversy for San Francisco residents and elected officials. Local debates about using trash for fill in San Francisco Bay and the public health impacts of proposed municipal incinerators were a fixture of local politics for much of the first half of the 20th century.

The advent of modern landfills in neighboring cities, which provided a convenient means to export the problem, and the invention of packer trucks, which allowed "efficient" collection of solid waste, quelled local debate for a time. Unfortunately, these changes also displaced many of the traditional recycling activities performed by the local scavenger

For more information please visit SFEnvironment.org or call 415-355-3700.

SFEnvironment is a department of the City & County of San Francisco.

companies, whose prior practice was to sort trash for reusable commodities such as paper, rags and metals.

Beginning with Earth Day 1970, the environmental and recycling movement re-opened public debate by establishing the connections between the "throw-away" society, the dangers of landfilling and incineration, and broader resource-conservation issues. It became clear that Americans were burying in landfills unconscionable and often toxic quantities of natural resources, including the world's forests (in the form of paper and wood products), non-renewable petroleum reserves (in the form of plastics and tires), other limited natural resources (including semi-precious metals like aluminum). Even nutrients from diminishing agricultural top-soil were being buried in the form of food waste. Independent recycling centers were opened in the City to try to stem this colossal waste.

In 1989 the state legislature passed the Integrated Waste Management Act, requiring California counties to divert 50% of what they send to landfill by the year 2000. Around the same time, the City started its curbside residential recycling program and many businesses began establishing recycling programs in the workplace. There remains a fundamental challenge: local solid waste generation is increasingly the result of broader national and international market trends, including increased production of disposable products and the use of packaging as a marketing tool. Efforts to achieve sustainable urban waste management must tackle the difficult question of commodities and packaging arriving from distant sources, used and discarded locally, and processed and returned to distant manufacturers and agricultural users.

San Francisco has a remarkably high per capita waste-generation rate an average of 7 1/2 pounds of waste and recyclables per person per day, compared with a national average (and Americans are the biggest trash-producers in the world) of 5 pounds per person. Over 70% of this waste is generated by businesses and institutions. Although the City has a reasonably high recycling rate (29% by current estimates), San Francisco policy-makers, businesses and consumers must commit to drastic changes in the way resources are treated.

The three fundamental approaches to reducing waste are 1) to avoid creating waste in the first place, 2) to purchase durable, repairable products and reusable packaging, and 3) to purchase more products made from recycled materials in order to strengthen commodities markets for recovered materials. These strategies, in addition to expanding access to neighborhood recycling centers and improved recycling collection and processing programs that target more materials, will reduce San Francisco's waste stream.

A commitment to waste reduction will yield significant rewards beyond resource conservation and reduced landfilling. Recycling and waste reduction represent a major local-economy growth sector that is still largely untapped. Recycling and reuse are significantly more labor-intensive than garbage hauling, and create a new source of jobs in collection, processing, and repair or manufacturing the kind of jobs for people with low skill levels that have become increasingly scarce in San Francisco. Business taxes from such recycling and reuse businesses will also expand local government revenues.

The City has another major incentive to reduce landfill dependence. Without a municipal landfill within city limits, San Francisco depends on exporting waste to Alameda County for landfilling. The current, long-term landfill contract requires that San Francisco maintain a higher recycling rate than Alameda County. To meet this condition and to preserve the City's allocated landfill space, the San Francisco Recycling Program, in conjunction with other departments, such as the Bureau of Street Environmental Services, the Bureau of Water Pollution Control, and the Recreation and Park Department, has been working to implement many of the policies and programs suggested in this plan.

To date, waste reduction has been largely voluntary. A more effective approach must include economic incentives that make it more expensive to "waste," and more cost-effective to recycle and reuse. Eventually, consideration must be given to mandatory measures, including disposal bans on locally recyclable materials or mandatory recycling for businesses and residents. Finally, businesspeople in every economic sector including the construction, manufacturing, wholesale, retail and service industries must take responsibility for wise resource use.

True sustainability, which implies eliminating garbage collection service and landfilling will require dramatic changes to almost every economic transaction. Moving toward sustainability will transform many of the day-to-day activities of consumers, workers, and business people. There is no time like the present to begin.

Sustainability Strategy

GOALS		
To convert our waste-minded culture and attitudes to a resource-efficient ethic.		
To maximize sustainable uses of natural resources and to eliminate solid waste generation.		
LONG-TERM OBJECTIVES TO REACH SUSTAINABILITY	OBJECTIVES FOR THE YEAR 2001 (5-year plan)	ACTIONS
Waste Generators		
A. The San Francisco public has been educated about the value of natural resources and motivated to reduce their consumption and disposal.	A-1. Public education programs have been expanded - targeting students, residents, workers, and visitors - demonstrating the value of natural resources and instilling a resource-efficient ethic.	<p>A-a. Continue working with homeowner associations, neighborhood groups, building managers, and recycling providers to encourage residents to recycle. <i>(Action for city agencies)</i></p> <p>A-b. Increase the use of hands-on environmental education in schools to promote the value of natural resources and the need for waste prevention and recycling.</p> <p>A-c. Expand "shop environmentally" programs to increase consumer awareness about resource-efficient products and packaging.</p> <p>A-d. Develop waste reduction training and education programs for businesses.</p> <p>A-e. Educate visitors about San Francisco's recycling programs. <i>(Action for the tourist industry)</i></p> <p>A-f. Advertise and promote the successes of city-wide efforts to reduce disposal and increase waste reduction and recycling. <i>(Action for the San Francisco Recycling Program)</i></p> <p>A-g. Promote community-based programs that recycle materials, provide jobs for disadvantaged individuals, and educate residents about waste prevention.</p> <p>A-h. Educate designers, architects, and contractors about resource-efficient design and building for reuse and recyclability.</p> <p>A-i. Increase the use of multi-lingual educational and promotional materials that focus on waste reduction.</p>
B. <i>Per-capita</i> waste generation has been reduced by 100%.	<p>B-1. <i>Per-capita</i> waste generation has been reduced by 50%.</p> <p>B-2. 85% of households participate in a recycling program.</p>	<p>B-a. Increase and publicize incentives to encourage residential participation in recycling and waste-reduction programs.</p> <p>B-b. Promote home composting and develop convenient composting options for apartment dwellers.</p> <p>B-c. Encourage involvement in community-based composting projects such as community gardens.</p>
C. All San Francisco businesses and institutions have eliminated solid waste generation.	<p>C-1. 75% of San Francisco businesses and institutions participate in a recycling program.</p> <p>C-2. The use of reusable products and packaging</p>	<p>C-a. Increase and publicize incentives to encourage commercial participation in recycling and waste-reduction programs.</p> <p>C-b. Create a refuse rate structure that encourages commercial recycling and waste reduction.</p> <p>C-c. Coordinate promotional and outreach messages and technical assistance to</p>

	<p>has increased.</p>	<p>businesses. <i>(Action for city agencies and local business organizations such as the Bay Area Council's Environmental Committee and the Recycled Paper Coalition)</i></p> <p>C-d. Gather and publicize success stories on how much money local businesses and institutions have saved by systematically implementing recycling and waste-reduction programs.</p> <p>C-e. Promote San Francisco as a business-friendly community by:</p> <ul style="list-style-type: none"> • Promoting the City's Recycling Market Development Zone, • Issuing business recycling awards, • Gathering data and case-study information on local success stories, • Working closely with local business organizations, and • Offering free technical assistance, such as audits of businesses' waste streams. <p>C-f. Encourage suppliers to ship goods in returnable packaging. <i>(Action for businesses and institutions)</i></p> <p>C-g. Organize a summit between manufacturers, recyclers, and materials suppliers to discuss ways to incorporate "design for recycling" into product development.</p> <p>C-h. Update The Bay Area Green Pages and promote environmentally friendly businesses.</p> <p>C-i. Increase use of diaper services at institutional settings (such as hospitals and clinics).</p> <p>C-J. Require newspaper and magazine distributors with public boxes to recycle over-issue publications.</p> <p>C-k. Develop an educational program focused on fast-food packaging alternatives.</p> <p>C-l. Develop procurement policies that require minimal packaging, and reusable and returnable packaging. <i>(Suggested for businesses)</i></p> <p>C-m. Develop green purchasing criteria and distribute it to businesses and institutions. <i>(Suggested for city government)</i></p>
<p>D. City government is a model of resource efficiency and it lobbies, coordinates, and leads others to achieve sustainability.</p>	<p>D-1. City government purchases only paper products with an average of 50% post-consumer recycled content.</p> <p>D-2. City government diverts 60% of its current waste generation.</p> <p>D-3. City government has increased the promotion of the City's accomplishments to the community.</p> <p>D-4. All City departments participate in a recycling</p>	<p>D-a. Pass a resolution that calls on the City to be a model of waste reduction and recycling.</p> <p>D-b. Develop specifications for products that contain at least 50% post-consumer recycled content. <i>(Action for City purchasing agents)</i></p> <p>D-c. Create financial incentives for departments that recycle and reduce waste, including a system whereby disposal cost savings are passed through to individual departments.</p> <p>D-d. Develop a tracking system for city departments to document and quantify waste reduction.</p> <p>D-e. Increase internal and external publicity and promotion of San Francisco's accomplishments in the areas of recycling, waste reduction, and recycled-</p>

	program.	<p>product purchasing through a multi-media educational campaign.</p> <p>D-f. Systematically incorporate attentiveness to recycling, waste reduction, and purchase of recycled or reused products into job descriptions and performance evaluations.</p> <p>D-g. Organize meetings of department leaders to promote sharing of information about department accomplishments.</p>
E. Litter and illegal dumping have been eliminated in San Francisco.	E-1. The volume of litter generated and materials illegally dumped in San Francisco has been reduced by 50%.	<p>E-a. Increase the enforcement of litter and illegal dumping laws.</p> <p>E-b. Increase the penalties for illegal dumping, particularly of hazardous materials.</p> <p>E-c. Increase the number and visibility of public trash receptacles, and increase collection frequency.</p> <p>E-d. Require litter clean-up programs for public institutions and properties.</p> <p>E-e. Continue school-sponsored neighborhood clean-up events.</p> <p>E-f. Create a hot-line for reports of illegal dumping.</p> <p>E-g. Create a reward program for those reporting illegal dumping (where the dumping is ultimately prosecuted).</p> <p>E-h. Expand <i>Clean San Francisco</i> campaigns into several languages.</p> <p>E-i. Expand promotions of the existing "free neighborhood cleanup" program.</p> <p>E-j. Reduce litter and other negative environmental impacts from trucks transporting materials to and from the City's transfer station and other large material processing facilities; consider less-polluting alternatives to diesel recycling and refuse-hauling trucks.</p>
Materials-Handling Infrastructure		
F. San Francisco maintains a diverse and competitive reuse, repair, and recycling infrastructure (That is, more materials are reprocessed and more methods are used to collect them and restore them to a useful condition).	F-1. The diversity of options for recovering materials has increased and systems have been created that make it easier to recycle.	<p>F-1-a. Expand the variety of materials accepted for curbside recycling.</p> <p>F-1-b. Ensure access by all neighborhoods to full-service recycling and reuse centers.</p> <p>F-1-c. Allow small businesses to participate in the residential curbside recycling collection program.</p> <p>F-1-d. Increase the availability of recycling in apartment buildings.</p> <p>F-1-e. Increase salvage operations at the City's transfer station, including salvage of materials collected by the neighborhood cleanup program.</p> <p>F-1-f. Provide incentives and/or subsidies for collection and processing of low-value recyclable and/or reusable materials when viable markets for these materials exist.</p> <p>F-1-g. Promote and/or expand local and statewide waste exchanges.</p> <p>F-1-h. Install beverage-container recycling receptacles on or next to every public trash bin (if an appropriate design can be identified).</p>
	F-2. The legal and	F-2-a. Utilize progressive enforcement measures (education, warnings,

<p>regulatory environment promotes maximum source reduction and recovery of materials.</p>	<p>citations) to ensure that recyclable materials are not placed in the garbage. Enforce compliance with city requirements regarding waste reduction and recycling.</p> <p>F-2-b. Create refuse collection and disposal rate structures and recycling fee structures that encourage waste reduction, recycling, composting and reuse.</p> <p>F-2-c. Provide the City's Refuse Rate Board with the authority to regulate commercial refuse collection rates (since there is a <i>de facto</i> exclusive commercial refuse collection franchise).</p> <p>F-2-d. Consider increasing the cost to dispose of garbage, potentially through:</p> <ul style="list-style-type: none"> • A transfer station surcharge on disposal, • A franchise fee on gross refuse-collection receipts, and/or • Financing recycling program costs through refuse collection rates. <p>(Consider and/or mitigate the impacts of any disposal rate increases on recycling and reuse businesses.)</p> <p>F-2-e. Consider incentives for permitted refuse haulers to reduce the tonnage of material landfilled, including linking profit margins to reductions in tonnage of material landfilled.</p> <p>F-2-f. Require businesses and institutions that generate a substantial weekly volume of waste to perform a solid waste audit, consistent with ISO 14000 standards. Make renewal of business licenses contingent on performance of such an audit and development of a plan to reduce waste. (ISO 14000 standards are voluntary international standards devised by the International Standards Organization [Geneva, Switzerland] that establish environmental management system methodologies and review process.)</p> <p>F-2-g. Consider removing legal impediments in local regulations that restrict competition among commercial recycling service providers.</p> <p>F-2-h. Encourage standardized permitting and land application regulations for organic materials, including treated sewage sludge, at the state level.</p> <p>F-2-i. Consider requirements for retail outlets to accept packaging materials from consumers for recycling.</p> <p>F-2-j. Lobby to include reusable containers in California's beverage-container deposit law.</p> <p>F-2-k. Mandate collection of recyclables as well as garbage if economic incentives and education programs fail to achieve diversion goals.</p>	<p>F-3-a. Provide funding and technical support to reuse and repair businesses.</p> <p>F-3-b. Develop more jobs-skills training opportunities in repair businesses, especially for disadvantaged individuals, perhaps through high school or community college trade programs.</p> <p>F-3-c. Invest in development of new recycling/reuse technology (market development).</p>
<p>F-3. The number, use, and awareness of repair facilities has increased.</p>	<p>F-4. The recovery of organic materials has increased.</p>	<p>F-4-a. Develop commercial-sector food-waste recovery programs.</p> <p>F-4-b. Expand promotions of edible food recovery and redistribution programs.</p>
<p>F-4. The recovery of organic materials has increased.</p>		

		<p>F-4-c. Develop a residential yard-waste collection program.</p> <p>F-4-d. Educate and provide financial incentives for landscaping contractors and other generators to recover organic material.</p> <p>F-4-e. Pursue direct land application and/or co-composting of treated sewage sludge for use in soil recovery projects and other agricultural uses.</p> <p>F-4-f. Support development of a statewide organics market.</p>
<p>G. The San Francisco economy employs sustainable uses of paper and other materials.</p>	<p>G-1. Paper purchases have decreased and the portion of those purchases that contain recycled material has increased.</p>	<p>G-1-a. Develop a demonstration project highlighting ways to achieve a paper-efficient office.</p> <p>G-1-b. Educate businesses about the availability, costs, and benefits of using recycled and alternative-fiber paper.</p> <p>G-1-c. Increase the City's minimum-content requirements for recycled paper and institute options for alternative-fiber paper purchasing and use.</p> <p>G-1-d. Require City contractors to use recycled-content paper and other recycled products in work provided to the City.</p> <p>G-1-e. Create incentives for retailers to aggressively market recycled-content products.</p> <p>G-1-f. Continue recycled-products vendor fairs.</p> <p>G-1-g. Consider lobbying for increased postal rates for bulk mail to decrease junk mail; consider lobbying to give residents and businesses the option of blocking receipt of certain types of third-class mail.</p> <p>G-1-h. Consider restrictions on hand-delivered advertising left on residential and commercial doorsteps.</p>
	<p>G-2. An infrastructure that preserves the highest value of recovered paper and other materials has been created.</p>	<p>G-2-a. Promote the value of source separation to generators of waste-paper and other discards.</p> <p>G-2-b. Include non-profit organizations (such as sheltered workshops) in material-processing programs to upgrade recycled materials to their highest and best use.</p>
<p>H. Only resource-efficient building practices are used in San Francisco (including for construction, demolition, and rehabilitation).</p>	<p>H-1. The salvage and reuse of construction and demolition materials has increased.</p>	<p>H-1-a. Revise local building codes to allow an increased use of salvaged materials that are structurally sound in new or remodeled buildings.</p> <p>H-1-b. Develop "green building" specifications, including:</p> <ul style="list-style-type: none"> ● Resource-efficient design, ● Design for renovation and deconstruction, ● Appropriate-material selection, ● Space allocation for recycling, and ● Low-waste landscaping techniques. <p>H-1-c. Create a high-profile awards program which certifies that architects and contractors have achieved specified green building standards.</p> <p>H-1-d. Require submission of a salvage, reuse, and recycling plan to obtain a demolition or renovation permit.</p> <p>H-1-e. Support pilot programs that study the economics of hand-deconstruction</p>

		<p>projects.</p> <p>H-1-f. Develop a building-materials reuse/recycling directory (that is, where to go to buy or sell reusable or recycled building materials).</p> <p>H-1-g. For construction projects with limited space, provide permits for increased sidewalk use for recycling bins for source-separated construction materials.</p>
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