

## **CHAPTER 5:** **WASTE REDUCTION & RECYCLING**

### **A. SOLID WASTE MANAGEMENT IN BERKELEY: AN OVERVIEW**

Efforts to achieve Zero Waste are an essential piece of reducing the emissions that cause global warming. Zero Waste means that all discarded material is recycled, composted or reused, and none is sent to landfills. Recycling and reducing consumption in homes, businesses and public institutions serve to decrease upstream, energy intensive production processes and the associated GHG emissions and to keep waste out of landfills where it releases methane (CH<sub>4</sub>), a powerful greenhouse gas.

In March 2005, the Berkeley City Council adopted the goal of achieving Zero Waste by 2020. The resolution also reaffirms the City's commitment to the Alameda County-wide goal of achieving a 75 percent waste diversion rate by 2010. While the City has worked hard to create and implement several successful waste diversion programs, achieving the 75 percent diversion rate remains difficult due to several challenges, including the shrinking market for recyclables and declining revenues from waste fee collection.

In 2007, landfills reported receiving 102,000 tons (short tons) of refuse originating in Berkeley. The community's waste diversion rate was 59 percent.<sup>40</sup>

Increasing the City's diversion rate to achieve the City's Zero Waste goal and the associated GHG emissions reductions requires sustained collaboration across sectors to:

- **Eliminate solid waste at its source**, i.e., the point of production, through such efforts as promoting deconstruction and reuse of building materials and holding manufacturers responsible for their products and packaging through the entire product lifecycle.
- **Maximize recycling and composting** through expanding residential and commercial collection programs, increasing capacity at recycling and composting facilities, and enhancing public education and outreach.

The principle that guides the City's and its partners' waste diversion programs and policies is to *strive to ensure the "highest and best use" of all discarded materials*. For some materials this may mean the reuse of the material for its original purpose, e.g., reusing building materials to build another structure. For others, such as organic waste, this would mean ensuring that the materials are composted or used as mulch. Discarding materials in the landfill that could otherwise be reused or recycled is inconsistent with the principle of "highest and best use."

As is explained in Chapter 2 (Berkeley's GHG Emissions Estimates) of this report, despite the connection between solid waste management and climate protection, the Berkeley greenhouse gas emissions inventory *does not* currently include the emissions that result from solid waste sent to the landfill or the upstream energy consumption associated with producing new materials. This is a barrier to counting increases or decreases in solid waste-related emissions against the community GHG emissions reduction target. This barrier notwithstanding, Berkeley should not let current constraints in the community-level emissions inventory methodology limit community waste diversion efforts.

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<sup>40</sup> A diversion rate for 2008 has not yet been finalized.

The Climate Action Plan affirms the important connection between climate change and solid waste by including solid waste diversion actions below and an estimate for the scale of GHG reductions that could be achieved by implementing the actions. Further, the City is partnering with ICLEI, the organization that provides cities like Berkeley with an emissions inventory protocol, to update its community-level inventory methodology to include solid waste emissions. Once the update is complete Berkeley will measure and report these emissions in subsequent GHG emissions inventories.

## **B. BERKELEY'S CURRENT SOLID WASTE MANAGEMENT EFFORTS**

The City of Berkeley has long been a leader in the effort to divert solid waste from landfills. Berkeley was the first city in the nation to offer curbside recycling. In 1976 City Council established a 50 percent waste diversion goal, 13 years before the goal was mandated by the State through the California Integrated Waste Management Act (AB 939).

Today Berkeley is one of the few municipalities in California that owns its own waste management facility and manages fleet operations. This enables the City to directly operate and oversee the implementation of a progressive array of source reduction, recycling, and composting programs and policies. It also provides high-quality jobs for local residents.

The City's Solid Waste Management Division, a part of the Department of Public Works, operates many programs directly and contracts through private entities for other services. As for programs it operates directly, the City provides recycling collection for businesses as well as residential and commercial refuse and organic waste collection. The City operates the Transfer Station where the public can dispose of trash and recycle items such as electronics, mattresses, metals, carpet padding, construction materials, and compostable waste. All the materials collected by City trucks are also processed at the Transfer Station. The City employs Urban Ore, Inc., a local reuse company, to salvage reusable items discarded by Transfer Station customers.

In collaboration with neighboring cities and community groups, the City's Solid Waste Management Division engages in innovative, targeted outreach and education efforts. For example, the Division provides a liaison to local restaurants to help them take better advantage of existing recycling and composting programs. The City also works closely with the Ecology Center and StopWaste.org on various public education campaigns. In addition, the City collaborates with the City of Albany to provide a local "Reuse Guide" to area residents. The booklet helps residents find businesses that buy, sell, trade, rent, and repair reusable goods.

The Ecology Center operates the City's residential curbside recycling program, including public outreach and education on the benefits of recycling.

The Community Conservation Center, Inc. (CCC) operates the City's materials recovery facility, sorting materials collected by the Ecology Center and the City, and preparing them for market. CCC also collects and processes scrap metal, batteries and compact fluorescent light bulbs, and a host of other discards.

In addition to activities directly operated or contracted out by the City, several private refuse and recycling companies do business in Berkeley. Four private refuse companies have non-exclusive franchises that allow them to collect dry rubbish from Berkeley businesses. These companies pay a franchise fee to the City and report their activities quarterly. Many other Berkeley businesses also have arrangements with private recycling companies that provide customized service.

In 2004 Berkeley adopted a far-reaching Environmentally Preferable Purchasing Policy (EPP) mandating that the City institute practices reducing waste generated from City government purchases. One example of this policy in action is the City government-wide practice of purchasing only 100 percent post-consumer recycled Process Chlorine Free paper. A related effort is the adoption by the Zero Waste Commission of an Extended Producer Responsibility (EPR) policy, joining in a statewide association of local governments to require the producers of products sold in California to reclaim discarded products, reduce packaging that ends as discards at the local level, and eliminate toxics from products and their waste.

UC Berkeley and the Berkeley Unified School District (BUSD) are also partners with the City to divert waste from the landfill and educate community members. For example, the University and the City work together to collect and divert discards during the time when students are moving out for the summer. City staff and UC representatives also worked together to encourage recycling and composting in sororities and fraternities.

On campus, UC Berkeley's Campus Recycling and Refuse Services (CRRS) manages a series of programs to increase recycling. These services include mixed paper recycling in every office on campus; beverage container recycling in nearly every campus building; food waste collection in the dining halls; and green waste collection by the campus grounds service workers. Student Sustainability Education Coordinators oversee outreach to the student population to encourage greater reuse and recycling in residence halls. The University also requires its contractors to recycle all construction and demolition waste. The campus achieved a 50 percent diversion rate in 2008.

BUSD is also proactively implementing recycling and composting programs in all of its schools. It is saving an estimated \$80,000 per year as a result of reduced waste collection-related costs.

As a result of these and other efforts in our community, the State calculated that Berkeley diverted an estimated 57 percent of its solid waste from the landfill in 2006, and 59 percent in 2007. The overall annual diversion rate includes materials diverted from the landfill through City collection programs and facilities as well as recycling services provide by the private sector. The diversion rate also includes independent actions by residents and businesses to reduce waste, such as stopping junk mail or changing production and packaging practices.

Of the tons of waste diverted as a direct result of City programs and facilities, the curbside recycling and residential green waste collection programs account for 48 percent of the estimated diversion. A combination of waste "self-hauled" to the transfer station by local community members and roll-off containers accounted for about 33 percent of the total diverted waste. Recyclables and organic waste collected from local businesses accounted for an additional 19 percent.<sup>41</sup>

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<sup>41</sup>Numbers are estimated from the City's weigh-master database and invoices from contractors. Numbers include only materials brought to the Berkeley Transfer Station from Berkeley sources.

BERKELEY ESTIMATED WASTE STREAM PROFILE FOR 2008 <sup>42</sup>				
SECTOR	Landfilled Waste		Diverted Waste	Diversion Rate by Sector
	Tons	% of total landfilled waste	Tons	
<i>Self-Haul &amp; Roll-Off Containers</i>	38,534	39%	21,396	36%
<i>Commercial &amp; Multi-Family Buildings</i>	20,126	20%	8,968	31%
<i>Single-Family Residential</i>	14,953	15%	19,716	57%
<i>Private Refuse and Recycling Companies</i> <sup>43</sup>	26,387	26%		
<b>TOTAL</b>	<b>100,000</b>	100%		

## C. WASTE REDUCTION & RECYCLING ACTIONS

The goals, policies, and actions outlined in this section focus on achieving greenhouse gas emissions reductions through eliminating waste at its source and maximizing recycling and composting in homes, businesses and institutions. The recommended actions build on existing waste mitigation efforts, including those outlined in the Berkeley Solid Waste Management Plan Update.

As previously mentioned, solid waste-related GHG emissions are not included in the current community emissions inventory. These emissions will be included in subsequent Berkeley inventories. For the purposes of this report, City staff employed the U.S. EPA's Waste Reduction Model<sup>44</sup> (WARM) to estimate the total GHG emissions that could be avoided by implementing the policies outlined in this chapter. *Assuming Berkeley reduces the amount of solid waste it sends to the landfill by 50 percent, the community would avoid nearly 68,000 MTCO<sub>2e</sub> per year by 2020.*

See Appendix A for a consolidated list of goals, policies and implementing actions related to waste reduction and recycling. The table also includes an implementation timeline and funding sources.

### 1. Goal: Increase residential recycling, composting, and source reduction

The City recently expanded its residential curbside waste diversion efforts by adding food scraps and compostable paper to its existing plant debris collection program and by increasing the frequency of green cart collection to weekly. To help increase participation in the program, the City distributed a small green pail to each single-family home for convenient collection of food scraps in the kitchen and for transporting food waste from the kitchen to the green cart.

<sup>42</sup> Estimate for total tons of waste from Berkeley that were landfilled in 2008 is projected from data reported from landfills in first 3 quarters of 2008. Diversion estimates by sector are from the City's weigh-master database and invoices from contractors.

<sup>43</sup> The City does not currently have an estimate for total waste diverted from the landfill by private refuse and recycling companies.

<sup>44</sup> To access the U.S. EPA's WARM Model visit:

[http://www.epa.gov/climatechange/wycd/waste/calculators/Warm\\_home.html](http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html)

The composting program is paying dividends. Collectively, Berkeley residents are shifting an additional 300 tons per month of food scraps, food related paper and garden trimmings to their green carts as compared to before the program was launched. Nearly 40 percent of households participate each week. The City and its community partners can divert additional organic waste and other recyclables from the landfill in a number of important ways. See specific policies and actions that Berkeley can implement to achieve this goal below.

**a. Policy: Enhance recycling and composting outreach and assistance to single-family homes**

The single-family residential waste stream accounts for about 15 percent (about 15,000 tons) of the waste sent to landfills from Berkeley. The main program designed to divert this waste from the landfill is the City's weekly curbside recycling and green waste collection. The current estimated diversion rate for this sector is 57 percent, the highest rate of any sector. However, a recent waste composition study shows that 50 percent of the remaining waste is compostable food and paper, and that about 13 percent of the remaining waste is recyclable. Obviously, there is significant potential to increase the diversion rate in this sector.

**Implementing Actions:**

- *Initiate a 'split-cart' program to increase convenience and recycling capacity for residents of single-family homes.* Wheeled split-carts would replace the existing blue bins provided to Berkeley residents. Split-carts have a center divider, allowing for the collection of a mix of plastic, glass, and aluminum containers on one side and recyclable paper and cardboard on the other side. In other cities with prior high participation, changing from bags and tubs to a split cart increased the tons recovered by 20 percent. Carts have the added advantage of freeing residents from the need to stock paper bags to set out paper.
- *Increase participation in the residential green cart program by enhancing education and outreach to residents on the topic of composting household organic waste and yard trimmings.* The Solid Waste Management Division's goal is to double current participation in the green cart program.
- *Integrate a "waste audit" into local efforts to conduct residential energy audits, such as the Rising Sun Energy Center's California Youth Energy Services program.* This action is also included in the multi-family building-related actions outlined below.

**b. Policy: Target expanded recycling outreach and services to multi-family residential buildings, including apartment buildings, fraternities and sororities, and cooperative housing**

About 10 percent of Berkeley's landfilled waste is generated in multi-family buildings. The main programs that address this waste stream are the City's curbside recycling and commercial recycling programs. The City collects glass bottles, cans and plastic bottles mixed together, corrugated cardboard, newspaper, and mixed papers (office papers, packaging, junk mail, and catalogs) from apartment buildings of 10 units or more. Buildings with fewer units are served by the Ecology Center. Although the City offers free recycling service to all multi-family buildings, many buildings do not participate, or do not participate optimally. Others fully participate, including separating food waste for collection.

**Implementing Actions:**

- *Provide on-site assistance and containers for building managers to set up recycling and composting systems in existing buildings.*
- *Design model lease language that outlines the responsibility of building managers to provide recycling systems and of tenants to recycle waste.*

- *Organize tenant meetings to provide recycling education and training.*
- *Develop standards to ensure new and remodeled buildings are designed to include appropriate space and facilities for recycling and green waste receptacles/systems.*
- *Enact a local ordinance requiring managers of multi-family buildings to provide tenants with the opportunity to recycle, including the provision of the appropriate receptacles and tenant education.*
- *Integrate a “waste audit” into local efforts to conduct residential energy audits, such as the Rising Sun Energy Center’s California Youth Energy Services program. The waste audit would be designed to educate tenants regarding what materials can and cannot be recycled and when and where to recycle.*

**2. Goal: Increase recycling, composting & waste reduction in the commercial sector**

Local businesses can significantly reduce refuse bills through increased recycling and composting. The City collects glass bottles, various forms of plastic, aluminum cans, paper, and cardboard from commercial customers. Also offered is food waste collection for restaurants and food producers. The combination of these services can help a typical restaurant to reach 85 – 90 percent diversion. The City also provides a “green restaurant liaison” to help restaurants design convenient, space-efficient recycling and composting systems. This program is also available to offices and multi-family buildings. A common barrier to participation in recycling programs is lack of space to store recycling carts within the business.

The City and its community partners can work to increase commercial recycling, composting and waste reduction in a number of ways. See specific policies and actions below.

**a. Policy: Enhance recycling and composting outreach and assistance to local businesses**

**Implementing Actions:**

- *Provide on-site assistance and containers for building managers and owners to set up recycling and composting systems.*
- *Design model lease language that outlines the responsibility of building managers to provide recycling systems and of commercial tenants to recycle waste.*
- *Partner with the Chamber of Commerce, the Sustainable Business Association and other business associations to conduct expanded marketing and outreach to local business owners.*
- *Design and administer recycling and composting training sessions for local building maintenance companies.*
- *Refer large businesses to StopWaste.org’s recycling partnership program, which provides free waste analysis and consulting services for waste reduction.*
- *Enact a local ordinance requiring managers of commercial buildings to provide commercial tenants with the opportunity to recycle, including the provision of shared storage containers and tenant education.*
- *Utilize the interaction between the City government and local businesses at the time a business license is issued to distribute resources and information regarding setting up recycling and composting systems.*

- *Design and implement a more effective space allocation ordinance to ensure that new and remodeled buildings provide adequate space for storage of recycled materials.*
- *Continue to promote participation in the Alameda County Green Business Program. The Green Business program recognizes small businesses that comply with environmental standards and take additional steps to conserve resources and reduce waste. The program provides small businesses with a checklist where “green” measures are selected and a green business certification for businesses that undertake a certain amount of such measures. In 2004, there were 17 green certified businesses in Berkeley. In 2008 there were over 100.*
- *Identify and implement opportunities to assist local businesses to aggregate purchasing power for the purchase of sustainable product alternatives such as compostable take-out fare and reusable bags.*
- *Work with franchised haulers, private recycling companies, and their customers to identify opportunities to recycle and reduce waste in the commercial sector.*

**b. Policy: Make recycling and composting mandatory at public events and provide more public recycling containers**

The City is implementing a policy to require waste reduction, recycling and composting at public events. The Solid Waste Division provides advice and loans recycling containers to sponsors of any event, large or small. As a result, in 2008, 60 – 90 percent of the waste discarded at major city events such as the Solano Stroll, Earth Day, How Berkeley Can You Be, the Kite Festival and the Spice of Life Festival was recycled or composted.

**Implementing Actions:**

- *Continue to require recycling plans and to provide recycling containers and assistance to public event organizers upon request.*
- *Prepare a recycling guide for local event organizers/planners.*
- *Provide more public recycling containers on commercial corridors and in parks and public places and create a system for collecting these recyclables.*

**3. Goal: Increase recycling of construction & demolition (C&D) debris**

According to StopWaste.Org, construction and demolition (C&D) debris represents a significant portion of the total waste stream in Alameda County – over 21 percent. In fact, a typical new home produces approximately 17,000 pounds of C&D waste.<sup>45</sup> This waste generally consists of wood, drywall, metal, concrete, dirt and cardboard, most of which is recyclable. Once it is sent to the landfill, the organic materials break down and emit methane, a potent greenhouse gas.

Recycling C&D waste not only keeps it from ending up in the landfill, but also reduces the upstream energy consumption required to manufacture new construction materials. Further, businesses can often save money by taking their C&D debris to recycling and reuse facilities. Such facilities may have lower fees than landfills and may even buy back selected materials.

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<sup>45</sup> Based on waste studies for three residential developments in Alameda County. Compiled by Matthew J. Southworth, P.E. Assumes a house size of 2,000 square feet.

The City adopted an ordinance that requires a recycling plan as a condition of construction and demolition permits for projects over \$100,000.00 in value, with a recycling report required at the time a large project closes. The Solid Waste Management Division must approve the plan and is currently working to enhance the ordinance to include stricter diversion goals for any project permitted by the City. The Division is also working to provide more convenient recycling of construction materials. *In order to increase the diversion of C&D debris from the landfill, the City requires increased capacity to review and enforce recycling plans and to educate contractors regarding their recycling options.*

In 2008 the City recovered 6,851 tons of construction waste from the Transfer Station. Construction waste diversion began in July 2008.

**a. Policy: Enhance C&D recycling outreach and assistance to improve enforcement of existing ordinance and convenience of compliance for local builders**

**Implementing Actions:**

- *Promote deconstruction and reuse of building materials through written outreach materials such as a brochure on residential remodeling, and through direct consultations with builders.*
- *Pending site design and feasibility analysis, create capacity to process C&D materials at new Berkeley Transfer Station. Until the new Transfer Station is built, the City is sending mixed C&D materials to an outside facility for recycling.*

**4. Goal: Expand local capacity to process recycled materials**

Expanding local capacity to process recycled materials has the potential to reduce the vehicle miles traveled (and GHG emissions) associated with transporting materials elsewhere as well as to create local jobs in the waste management sector.

**a. Policy: Rebuild the Berkeley Transfer Station and material recovery facility in order to increase local capacity to recover recyclable materials**

The facilities at 2<sup>nd</sup> and Gilman Streets in Berkeley have been used for recycling and solid waste management services by the City of Berkeley and various partnering organizations since the early 1980's. The site includes the Transfer Station as well as the City's bin storage, truck parking and washing, household hazardous waste collection areas, salvage areas, and administrative offices of the Solid Waste Division, among other uses. The Ecology Center and materials recovery facility are also located on this site.

As recycling efforts have intensified over the years, the facilities that support waste diversion efforts are being strained by growing vehicle fleets, increased personnel, and the need to process more types of materials. The site at 2<sup>nd</sup> and Gilman has become an increasingly complex mix of activities and use of space. The facility requires major updating.

The City is committed to rebuilding its waste processing facilities in order to better meet a variety of needs and to reach the Zero Waste goal, including increased levels and types of material recovery, better traffic flow to reduce idling and waiting time, and more space for equipment maintenance. ***The City's goal is to design and build a state-of-the-art zero waste facility that utilizes resources efficiently and increases local capacity to divert waste from landfills.***

### **Implementing Actions:**

- *Conduct a feasibility study that results in recommendations regarding the design of a rebuilt Transfer Station and material recovery facility as well as recommendations regarding what types of waste-processing equipment to incorporate. The new facility should meet nationally recognized green standards.*
  - *As part of the Transfer Station rebuild, examine the costs and benefits of installing a “single-stream” sorting system, or a sorting system that can accept both single and dual-stream recyclables. Currently, residents must sort recyclables before the Solid Waste Management Division collects them. A single-stream system would enable residents to put all recyclables in one bin. Advantages of single stream recycling include reduced sorting by residents, reduced space required in buildings for multiple recycling receptacles (which is especially important in apartment buildings), and the use of one collection truck rather than two. However, a two-stream system makes it easier to sort recyclables into clean marketable materials, giving the City flexibility to sell these materials for their “highest and best use.”*
- b. Policy: Expand the types of materials that can be recycled locally and identify local markets for recycled products**

### **Implementing Actions:**

- *Evaluate the feasibility of acquiring an anaerobic digester for commercial food waste, or sending commercial food scraps to a digester elsewhere. An anaerobic digester breaks down biodegradable waste (in the absence of oxygen) and captures the resulting methane and carbon dioxide. The captured gases can be used as a renewable source of energy for vehicles or be converted into electricity, among other uses, and the material residue can be used for compost.*
- *Expand the types of materials that are collected for recycling, such as rigid plastic packaging (e.g., yogurt containers), as soon as an environmentally sound market for the materials are found. This will increase diversion and reduce confusion among the public about what items are recyclable.*
- *Investigate additional options to sell recycled materials for domestic use, rather than for export.*

## **5. Goal: Expand efforts to eliminate waste at its source**

### **a. Policy: Encourage the use of reusable bags at local retail locations**

### **Implementing Actions:**

- *Institute a ban on single-use plastic bags and establish a fee on paper shopping bags at Berkeley retail locations.*
- *Explore bulk purchase of reusable bags with the City’s Office of Economic Development, coordinating with the Buy Local Berkeley program. The City should work with community partners such as the Ecology Center to identify grant funds to purchase or subsidize reusable bags for citizens.*

### **b. Policy: Increase producer responsibility for product waste and packaging**

Current practice places the cost of dealing with product waste and packaging discards on local communities. “Extended Producer Responsibility” (EPR) is a strategy that holds manufacturers accountable for their products and packaging through their entire lifecycle. In this way, product producers are responsible for designing products to be durable or easily recyclable, taking back spent

products from consumers and either reusing or recycling them, and/or contributing to recycling infrastructure. Given that Berkeley will not reach its Zero Waste goal without addressing the generation of waste by manufacturers and packagers, action to extend producer responsibility is of utmost importance.

The City government's Environmentally Preferable Purchasing policy addresses this issue for government operations, but the policy needs further traction among businesses in the community, in the region, and beyond. To further EPR and EPP efforts, the City will partner with other community entities and with other levels of government to take the actions below.

**Implementing Actions:**

- *Evaluate options and opportunities for extending producer responsibility for product waste at the local level.* These opportunities include expansion of retail businesses engaging in take-back programs and grant-funded education programs.
- *Support policies at the state level that provide incentives for efficient product design, reduced product and packaging waste, and elimination of toxics in the discard stream through mandatory compliance programs.*
- *In collaboration with the Chamber of Commerce and other business associations, enhance outreach and education to local businesses about the waste embodied in products and packaging and support local manufacturers' efforts to reduce packaging.*

**c. Policy: Continue to promote reuse and repair businesses and organizations**

**Implementing Actions:**

- *Promote the utilization of reuse and repair businesses in outreach to businesses and residents.* Reuse and repair organizations in Berkeley include the Berkeley Tool Lending Library, the Alameda County Computer Resource Center, Urban Ore, and over 200 other reuse and repair and rental businesses cited in the Reuse Guide. Information about these entities should be integrated into the different types of outreach outlined below under Goal #8 (enhanced marketing and outreach).

**d. Policy: Reduce yard and garden waste produced by residents and businesses**

**Implementing Actions:**

- *Promote participation in StopWaste.Org's Bay Friendly Landscaping program.* Bay-Friendly Landscaping is a whole systems approach to the design, construction, and maintenance of the landscape in order to reduce waste and recycling materials, as well as reduce storm water runoff and create wildlife habitat, among other benefits.
- *Explore the feasibility of initiating a local "excess harvest program" in which residents are encouraged to donate excess produce from gardens and fruit trees to local food banks and homeless assistance programs.*

**6. Goal: *Revise the City solid waste disposal rate structure in order to maintain and enhance incentives, outreach programs and other activities designed to increase waste diversion***

New programs and services to achieve Zero Waste require sustained, substantial funding. The City's Refuse Fund, which pays for Solid Waste Division services, is affected by a number of factors including the market price for recycled materials (declining in 2009) and increasing landfill fees. The City is currently updating its solid waste disposal rates. As it restructures its finances, the City will endeavor to maintain and expand incentives and programs to increase recycling and composting while also maintaining necessary operating revenue in an environment of increased waste diversion.

**Implementing Actions:**

- *Update solid waste disposal billing rates to cover costs of providing basic refuse, recycling and composting service to the community. Analyze new rate structure options with the goal of maintaining and enhancing incentives to recycle.*
- *Review the service impacts and operational and financial aspects of offering every-other-week residential refuse service. As the amount of waste is reduced at given locations, there may be less need for weekly pick-up. The cost reductions available through reduced pick-ups could reinforce actions taken by residents and businesses to generate less waste.*

**7. Goal: *Increase recycling, composting, and waste reduction in public institutions***

Action to reduce waste and increase waste diversion in municipal buildings and in schools demonstrates important leadership for the community.

**a. Policy: *Maximize waste reduction and recycling and composting at all City buildings, including leased buildings, and at all City events***

**Implementing Actions:**

- *Ensure that every City department is equipped with the appropriate recycling containers and undergoes basic training on how and where to recycle.*
- *Initiate a recognition program to encourage City departments to recycle 100 percent of recyclable materials.*
- *Ensure that all City departments coordinate event planning with the City's Solid Waste Management Division. The Solid Waste Division will provide the appropriate recycling containers as well as compostable utensils, cups, plates, etc.*
- *Limit the use of single-use plastic beverage bottles in City buildings and at City events.*
- *Track City government paper use and limit its consumption by making duplex the default setting for printers and by encouraging the electronic distribution of documents whenever possible.*

**b. Policy: *Sustain and enhance waste diversion efforts at the Berkeley Unified School District***

**Implementing Actions:**

- *Support BUSD efforts to identify a funding source for ongoing staffing in support of waste diversion systems in schools.*

8. ***Goal: Enhance and expand marketing, outreach, and education regarding waste reduction and recycling***

Personal choice underlies many of changes that will have to occur in order for the community to achieve its Zero Waste and GHG-reduction goals. As such, enhancing and expanding current education and outreach efforts is fundamental to this plan.

The actions outlined below represent a strategic start rather than a comprehensive list of the things our community can do to affect behavior change. New and innovative ideas for creating social change happen all the time. The City and its partners will continue to seek and harness such ideas. See the chapter on Community Outreach & Empowerment for more.

a. **Policy: Work with regional and local community partners to provide sustained outreach and education to Berkeley citizens regarding waste reduction and diversion**

**Implementing Actions:**

- *Incorporate information about waste reduction services into expanded marketing and outreach print and web-based materials, including City and partner agency newsletters, the City website, and door-to-door marketing.*
- *Include waste diversion resources and information in a “welcome basket” for new Berkeley homeowners and renters.*
- *Enhance the City Solid Waste Division website to serve as a one-stop web portal for waste diversion resources.*