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Palo Alto Zero Waste Strategic Plan

The City of Palo Alto has long been a leader in recycling and has developed many innovative and comprehensive recycling programs. On November 15, 2004, the Palo Alto City Council directed City staff to prepare a Zero Waste Plan for the Palo Alto community.¹

What is Zero Waste?

The Zero Waste International Alliance² broadly defines Zero Waste as:

A philosophy and visionary goal that emulates natural cycles, where all outputs are simply an input for another process. It means designing and managing materials and products to conserve and recover all resources and not destroy or bury them, and eliminate discharges to land, water or air that do not contribute productively to natural systems or the economy.

Zero Waste means setting the goal of diverting from landfill at least 90 percent of the waste generated by all sources, both business and residential. Zero Waste is meant to:

- ◆ Reduce excess consumption and minimize unnecessary waste
- ◆ Encourage reuse, recycling and composting to the maximum extent possible
- ◆ Ensure that products are made to be reused, repaired or recycled back into nature or the marketplace

Unlike our current system of managing waste, Zero Waste seeks to eliminate waste wherever possible. Approximately 75% of all Palo Alto waste that is currently landfilled is created by the commercial sector, the remaining 25% by residents. As a result, many enhanced policies and programs may need to target different materials and types of businesses in the commercial sector for Palo Alto to achieve Zero Waste, or close to it.

Planning Process

City staff convened a Palo Alto Zero Waste Task Force³ in January 2005 to assist in the creation of a Zero Waste Plan for Palo Alto. This Task Force met numerous times from January through July, 2005, to review the status of current services, assess the need for additional services to be provided, and to evaluate policies that would help the City move towards Zero Waste. City staff also hired Gary Liss & Associates to assist in the technical analyses, community outreach and preparation of this Plan.⁴

¹ CMR:470:04

² See www.zwia.org

³ A committee of 21 residents and businesses, with open participation of City staff and other stakeholders

⁴ Gary Liss can be reached at 916-652-7850, gary@garyliss.com, www.garyliss.com

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This Draft Zero Waste Strategic Plan builds significantly on the input and discussions at the Palo Alto Zero Waste Task Force (which were open to the public). It also builds on the results of a number of other efforts that have been pursued to obtain input from the community, including:

- ◆ Survey information sent to at least 1,000 businesses throughout Palo Alto.
- ◆ Commercial and Residential surveys posted on the City's website for the public to provide input. All residents received information about the survey in their May utility bills.
- ◆ Survey emailed to reuse, recycling and composting service providers that provide services in Palo Alto, or would like to provide such services.
- ◆ Special meetings with business organizations (including the Stanford Shopping Center, Chamber Government Affairs Committee, Stanford Business Park, and food generating businesses).
- ◆ Community meeting (currently scheduled for 6-1-05).

GLA also conducted a Service Needs Analysis and a Funding Analysis. Associates of GLA reviewed information available on line, did a field review, hand-delivered surveys to service providers in Palo Alto and reviewed data on the top waste generating sectors in Palo Alto. Associates of GLA also evaluated funding opportunities to assist service providers in Palo Alto to help the City achieve a goal of Zero Waste. [Copies of the Service Needs Analysis and Funding Analysis will be distributed on 6-2-05 for review and comment of the Task Force. They will then be summarized below in future drafts of the Zero Waste Strategic Plan.]

Results of Task Force Discussions and Surveys

The Task Force spent several meetings reviewing a wide variety of incentives and policies that could be adopted to restructure the marketplace to encourage waste prevention, reuse, recycling & composting. Some of the proposed incentives and policies would require changes in policies and definitions in:

- ◆ RFPs & Contracts
- ◆ Rates, Ordinances
- ◆ Land Use Permits
- ◆ Facility Permits
- ◆ City General Plan
- ◆ Zoning

The Task Force also considered how the City structures its fees and taxes, which it recognized could have a significant influence on corporate actions. The Task Force explored how the City could "Tax Bads, Not Goods," by taxing things that are not wanted (such as waste), and decrease taxes on things that are wanted (such as jobs, goods and services). Many of the policies and incentives discussed could be implemented at little or no cost to the City, and just require changes in business deals and legal documents associated with the current system.

The Task Force considered how the Zero Waste Strategic Plan could change the economic choices made in the community, so that waste prevention, reuse, recycling & composting programs that were marginal in the past would become economic and cost-effective. The Task Force explored how to reward businesses more that design wastes out and eliminate materials

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from being wasted. The Task Force explored the impacts on the producer of the materials (residential and commercial waste generators), the waste haulers and recyclers and the facilities that will receive these materials.

The Task Force also explored how the City pays for garbage and recycling services to contractors. It considered restructuring such payments so that the City pays more for what it wants (waste prevention, reuse, recycling & composting), and much less for wasting. This would recognize wasting as a symptom of inefficiency, and harness the forces of the marketplace to achieve the public policy goal of Zero Waste.

As the City plays a critical role in education and outreach responsibilities in the current Palo Alto system, the Zero Waste Task force also explored policies and incentives for improved education and outreach by both the City and service providers. The Task Force explored how service providers could help more to implement Zero Waste programs cost effectively and efficiently, and to process and market high quality products for their highest and best use. The Task Force explored how this could help reinvest those resources into the local economy whenever possible.

After review and discussion, the City's Zero Waste Task Force selected policies that complement each other, and provide an integrated system that is logically consistent and makes economic sense. The Task Force was most comfortable with a Strategic Plan that initially encouraged and provided incentives for the pursuit of Zero Waste in Palo Alto, rather than mandating policies and requiring participation in programs. The Task Force wants to create a partnership among all the stakeholders involved, and work together positively to achieve the many benefits that Zero Waste offers. The Task Force also wants to revise the City's thinking of this as a waste disposal problem to solve, and view it more as an economic development opportunity to create new jobs and businesses in the area, and to make Palo Alto businesses "Greener," more "Sustainable," and more cost competitive.

Of the 54 responding to the Commercial Survey, half of the respondents indicated support for Single Stream Service to help Palo Alto achieve Zero Waste. This approach allows all recyclables (cardboard, paper, bottles, cans) to be placed in one wheeled cart/bin for collection

In addition, 80 percent of the 54 answering the Commercial Survey indicated that they could voluntarily achieve a 90% waste diversion rate, or could so if they were able to reduce their waste disposal costs by participating. Also, Commercial Survey respondents on average supported a voluntary waste reduction target for 2010 of 68 percent, and a 77 percent target for 2015. Interestingly, 61 percent were not aware of innovations within their business sector that have led toward greater waste reduction. A full 72 percent indicated a general willingness to adopt a Zero Waste goal for their company, or might do so, with more information. Seventy percent of respondents said they would like more information on Zero Waste.

Strong support was also indicated from those responding to the Commercial Survey for the following:

- ◆ **Commercial Garbage And Recycling Rates** - Keep current structure (Garbage rates structured so businesses that prevent waste, reuse, and recycle can reduce their garbage

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bill by reducing their level of service. Provides recycling collection, at no additional cost. Recycling and garbage rate are rolled into one monthly rate.)

- ◆ **Palo Alto RDC** - Operate and maintain a recycling drop-off center (RDC) within the city limits.
- ◆ **Resource Recovery Park** - Establish a Resource Recovery Park within Palo Alto City limits or nearby. A Resource Recovery Park is a one-stop facility to include activities such as a drop-off/purchase of used building materials, recycling drop-off center, permanent small business hazardous waste drop-off program, other reuse activities, and an assistance/education center.
- ◆ **Require Tenant Access** - Require property management companies to provide tenants (e.g., apartment complexes, office buildings) with access to City's Recycling Program.
- ◆ **Commercial Yard Waste Collection** - Implement a landscape/plant debris collection program for commercial customers.
- ◆ **Implement Food Waste Collection** - Expand collection services to include separated food waste for composting.
- ◆ **Require Compostable Packaging And Containers** - Ban disposable food-service containers and require compostable food-service containers only.

Of the 47 responding to the Residential Survey (94 percent from single-family households), 85 percent use the Palo Alto Recycling Center, and 55 percent use the Palo Alto Landfill.

Interestingly, only 13 percent replied that they visited the SMaRT Station at least one time a year. A full 98 percent of the respondents donate items for reuse. Over half of the respondents indicated support for:

- ◆ **Palo Alto Recycling Center (RC)** - Operate and maintain a RC within city limits beyond 2011. The current RC will close when the Palo Alto Landfill closes in 2011.
- ◆ **Require Tenant Access** (same as above)
- ◆ **Require Compostable Packaging and Containers** - Ban food-service containers that are not compostable (e.g., polystyrene (Styrofoam®) cups and clamshell-type containers).
- ◆ **Establish Zero Waste Refuse Rate** - Establish a reduced refuse rate for residents that generate less waste than the Mini-can (20 gallon) level of service. Rate would still include costs for other programs/services funded by Refuse rates (e.g., Household Hazardous Waste Program, street sweeping).
- ◆ **Adopt Product Life-Cycle Regulations** - Encourage Palo Alto elected officials to advocate for the adoption of legislation, on a State or National level that would require Producer Responsibility, financial and physical, for the take-back of products and packaging they produce at the end of the product's useful life.
- ◆ **Resource Recovery Park (RRP)** - Establish a RRP within Palo Alto City limits or nearby. A RRP is a one-stop permanent facility that includes a variety of goods and services focused on reuse and recycling. Residents strongly supported all the following activities to help them achieve Zero Waste.
 - Residential and small business hazardous waste drop-off
 - Recycling drop-off
 - Drop-off/community exchange/purchase of used appliances, household goods and furniture
- ◆ **Implement Green Building** - Implement a Green Building Program for new construction and major renovations. Green Buildings are designed/built to be mindful

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about using limited resources such as wood and water so that you limit waste, pollution and environmental damage; energy efficiency to reduce air pollution and global warming; incorporation of healthy building materials and construction methods to prevent pollution.

- ◆ **Implement Food Waste Collection** - Expand collection services to include separated food waste (including food-soiled paper like pizza boxes, waxy cardboard, and frozen food boxes) for composting.

In addition, strong support was also indicated from residents for the following (although from less than half of the respondents):

- ◆ **Resource Recovery Park components:**
 - Drop-off/community exchange/purchase of used building materials
 - Yard trimmings drop-off/compost purchase
 - Zero Waste assistance/education center
- ◆ **Landfill Ban on Recyclable Materials** - Ban materials from the Palo Alto Landfill that are recyclable, such as, cardboard, paper, metal, bottles and cans and construction and demolition debris. The Palo Alto Landfill receives waste for disposal from debris boxes, residents/businesses self-hauling garbage.
- ◆ **Ban on Recyclables in Garbage** - Ban materials from garbage pick-up that are recyclable, such as, cardboard, paper, bottles and cans.
- ◆ **Adopt Precautionary Principle** - Require the City to adopt the Precautionary Principle as a strategy in conducting business (e.g. city operations, program and service offerings). The Precautionary Principle requires companies to analyze materials and processes and eliminate the risks of environmental and human health, therefore eliminating the concept of waste—toxic or otherwise.
- ◆ **Existing Garbage and Recycling Rate Structure** - Keep current structure (Garbage rates structured so residents that prevent waste, reuse, and recycle can reduce their garbage bill by reducing their level of service. Provides recycling collection, at no additional cost. Recycling and garbage rate are rolled into one monthly rate.)

Respondents also overwhelmingly supported a goal of Zero Waste, and 98 percent would either adopt a goal for themselves now, or would do so with more information provided. The average goal that residents felt was reasonable was 70% in the next 5 years, and 77% in the next 10 years. Forty-one percent felt a goal of 90% was reasonable for 10 years from now (which would equate to striving for a goal of Zero Waste). More than half wanted more information on Zero Waste.

In general, the response to the survey of residents suggested a more aggressive set of policies be adopted than recommended by either the respondents to the Commercial Survey or the Zero Waste Task Force.

Zero Waste Strategic Plan and Zero Waste Operations Plan

In reviewing plans for the coming year, City staff had planned to complete a detailed waste characterization study comparable to those done in 1990 and 1997. As a result, City staff felt that it would be best if this Zero Waste Plan focus on policies and services needed as a Strategic

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Plan, and that a more detailed Zero Waste Operations Plan be developed next year (Fiscal year 2005-2006), after the waste characterization study identified the types and amounts of materials still being discarded in the City. The Zero Waste Operations Plan would then identify public or private programs needed to reduce, reuse, recycle or compost the materials identified, and respond to the service opportunities identified in this Strategic Plan. The Zero Waste Operations Plan would also identify suggested locations for new public and private facilities that might be required, with a plan for how to pursue the development of those, including:

- ◆ Existing Palo Alto Recycling Center area
- ◆ Los Altos/Palo Alto Sewage Treatment Facility
- ◆ SMaRT Station in Sunnyvale
- ◆ SBWMA facilities in South San Mateo County

Identify City priorities for additional publicly financed facilities to support to be developed, including appropriate reuse, recycling and/or composting activities for Palo Alto Landfill site consistent with existing zoning once the landfill is closed. Recommendations must be environmentally sustainable, practically implementable, economically viable, and socially responsible.

The Operations Plan would evaluate what capacity there is in existing public or private processing facilities, and what amount of space is available for adding facilities needed for implementing the Zero Waste Strategic Plan. The Operations Plan would consider as part of this evaluation the possibility for one or more local or regional Resource Recovery Parks, or pieces of them, to provide locations for expansion of reuse, recycling and composting services. The Operations Plan would also review existing reuse businesses and nonprofit organizations serving Palo Alto and recommend additional support that could be provided to them, to encourage their expansion and/or attraction of others.

The Operations Plan would also explore opportunities for additional regional cooperation. The Operations Plan would identify areas of potential collaboration with neighboring communities in Santa Clara and San Mateo Counties, as well as businesses and non-profits that could expand their operations to provide additional reuse, recycling and/or composting services to serve the City of Palo Alto. This is particularly important with respect to identifying additional processing capabilities or regional markets for materials.

The Operations Plan would also review how much the new “single stream” programs⁵ have increased participation and tonnage of materials collected, and how well the materials collected are marketed under the single stream programs. The Operations Plan would also evaluate whether the amount of residue from the processing of single stream materials is less than 10%. The Operations Plan would also identify market development opportunities to ensure the long-term viability of markets and highest and best use of materials.

The Operations Plan would then identify in broad terms the value of materials that are currently being landfilled, and the potential for additional recovery through expanded reuse, recycling and

⁵ To be launched in July 2005

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composting activities. The Operations Plan would highlight the market value of materials being landfilled, both the unit prices and the total gross value of all materials wasted.

Zero Waste issues and opportunities would also be explored with other City Departments as part of the Zero Waste Operations Plan

Timetable

During the Task Force discussions, it was highlighted that the City's current exclusive garbage contract will end in 2009. A decision of whether to extend that contract or seek competitive proposals will likely be made in Fiscal Year 2006-2007. If the City decides to seek competitive proposals, it will need to design its Request for Proposals (RFP) by 2007, to provide sufficient time for proposals to be prepared, evaluated, and selected, with sufficient time for a smooth startup of a new system (particularly important if there is a new contractor). Therefore, the design of any new system will likely be done in 2006-2007, as a followup to the Zero Waste Operations Plan to be completed in 2005-2006.

The Strategic Plan below assumes that the first stages of implementation of the Strategic Plan will be to educate residents and businesses on the goals and opportunities. The next stage would be to implement new policies and economic incentives that further encourage the participation of residents and businesses in striving for Zero Waste. The City should not consider local bans, mandates and product stewardship policies until evaluation of progress over the next two years after adoption of the City's Zero Waste Policy. However, the City should immediately support state and federal producer responsibility and advanced recycling charges for difficult to recycle or toxic materials. Evaluate implementation of new policies and programs and recommend how to continuously improve them after adoption of the Zero Waste Operations Plan.

In 2007, the City will need to decide as part of its development of a new contract (either negotiated or by competitive processes) on what level of policy mandates and required new services would need to be implemented beginning with the next contract in 2009. Once the City's landfill is closed in 2011, the City will also have greater incentive to reduce its long-term liability for sending wastes to a privately owned landfill at Kirby Canyon. As a result, 2011 was suggested below as the interim goal year for moving towards Zero Waste. This also allows for 2 years of implementation of the new garbage and recycling contract in Palo Alto.

Based on the above input, GLA drafted the following strategy.

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Palo Alto Zero Waste Strategic Plan Mission, Objectives and Tasks

MISSION

Reinvest discarded resources in Palo Alto to improve the environment, help Palo Alto businesses compete and reduce City liabilities by diverting 75% of materials from landfills or incinerators by 2011 and by striving for Zero Waste by 2020.⁶

SUPPORTING OBJECTIVES

1. **Design Out Waste** - Encourage Palo Alto businesses to design and manage products and processes to reduce the volume and toxicity of waste and materials, emulate sustainable natural cycles, conserve and recover all resources, and not burn or bury them. Encourage Palo Alto residents to be careful about what they buy, and to reduce or eliminate toxic products for use in households.
2. **Policies and Incentives** - Increase incentives for waste generators and service providers to design out waste and reuse, recycle and compost materials for their highest and best uses.
3. **Service Needs** - Increase public and private reuse, recycling and composting collection and processing services and develop new markets that add value to materials recovered and minimize residues requiring disposal.
4. **Reinvest Resources** - Zero Waste systems should lower the costs of businesses in Palo Alto, help Palo Alto businesses become more sustainable and globally competitive and provide the greatest economic development benefit for the region (e.g., jobs, stable tax base).
5. **Education and Outreach** - Educate and engage the community to support Zero Waste initiatives.
6. **Minimize Liabilities** - Minimize environmental impacts and City liabilities from wasting and ensure that the burdens and benefits of zero waste systems are equitably distributed. Eliminate all discharges to land, water or air that may be a threat to planetary, human, animal or plant health.
7. **City role** - City lead by example to achieve Zero Waste goals for all facilities owned or leased by the City. City facilitate and encourage expansion of services by private and nonprofit organizations. Develop Zero Waste Operations Plan to detail priorities for facilities to be developed for the City as a whole after the City updates its detailed waste characterization study.

KEY TASKS, Years 2005-11

STRATEGY 1: Design Out Waste	Encourage Palo Alto businesses to design and manage products and processes to reduce the volume and toxicity of waste and materials, emulate sustainable natural cycles, conserve and recover all resources, and not burn or bury them. Encourage Palo Alto residents to be careful about what they buy, and to reduce or eliminate toxic products for use in households. A. Ask product designers and marketers to consider Zero Waste to be a critical design criterion. B. Be careful when buying products and services to use environmentally
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⁶ This should be adopted as well in the City's Sustainability Plan and the City's General Plan, when those are next updated.

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	<p>preferable products and not those that may cause harm to the environment or people.</p> <ul style="list-style-type: none"> C. Determine how and where materials are discarded, and establish a monitoring and tracking database system to evaluate performance of diversion and source reduction programs by material type and sector. D. Identify the value of materials that are currently being landfilled, and the potential for additional recovery through expanded reuse, recycling and composting. E. Ask local businesses to adopt Zero Waste goals and to develop Zero Waste plans. F. Train businesses and City staff on how to truly achieve a “paperless office,” using the latest technologies (e.g., extensive use of electronic mail and electronic document storage and retrieval systems) to reduce wastes. G. Work with all government offices (including courts) to be able to accept electronic submittal of all applications and required submittals. H. Provide wireless Internet throughout downtown and other major commercial areas. I. Promote material exchanges, including: CalMax; EBay; Resource Area for Teachers (RAFT); and FreeCycle. J. Work to develop South San Francisco Bay Area computerized matching system for donations of excess inventory materials and products to local nonprofits (as done by LA Shares in Los Angeles).⁷ K. Encourage retailers and their suppliers to takeback products and packaging that are currently difficult to reuse, recycle or compost in Palo Alto (like Ottawa, Canada program). Post all cooperating retailers on City’s Zero Waste website and regularly include articles and/or ads about this program in area newsletters and newspapers.
<p>STRATEGY 2: Policies and Incentives</p>	<p>Increase incentives for waste generators and service providers to design out waste and reuse, recycle and compost materials for their highest and best uses.</p> <ul style="list-style-type: none"> A. Adopt policies and economic incentives to restructure the marketplace to encourage waste prevention, reuse, recycling & composting. B. Change Ordinances, contracts, franchises, permits, zoning, General Plans and garbage rate structures so that it is cheapest to stop discarding materials, and reusing, recycling or composting discarded materials is cheaper than landfilling or incineration. C. For Palo Alto businesses certified as Green Businesses, provide discounted development fees and prioritize applications for permits by the Palo Alto Development Center. D. Revise franchisee contract so they offer recycling services without monthly bin rental fee so there is no additional cost to businesses to recycle more. E. Review performance of construction, renovation and demolition (C&D) Ordinance one year after its implementation, to confirm that 90% of

⁷ <http://www.lashares.org/>

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	<p>inerts and 50% of other C&D debris is actually diverted from landfill. If target goals are not met, require deposits be paid to ensure implementation, to be refunded if waste diversion requirements are met, as a condition of building or demolition permits.⁸</p> <p>F. Encourage all new private construction and major renovation projects in Palo Alto to be LEED-certified Green Buildings or meet comparable Green Building policies already adopted for public facilities.⁹ Require all construction and major renovation of facilities leased by the City, to be LEED-certified Green Buildings, if not covered already by existing City Green Building policy.</p> <p>G. Adopt adaptive reuse as a priority in City building standards for both residential and commercial construction.</p> <p>H. Structure payments to City’s franchisee to be paid inversely to the amount landfilled.</p> <p>I. Set substantially lower rates for clean source-separated materials from residents going to Palo Alto compost area. Establish greater discount for clean source-separated materials from businesses going to Palo Alto compost area</p> <p>J. Ban food-service containers that are not compostable (e.g., polystyrene (Styrofoam®) cups and clamshell-type containers). Require restaurants and grocery stores to provide only compostable food-service containers for all take-out customers of prepared foods. (From Residential Survey).</p> <p>K. Ban other materials from garbage pickup and the Palo Alto Landfill that are recyclable, such as, cardboard, paper, metal, bottles and cans and construction and demolition debris. (From Residential Survey)</p> <p>L. Keep current garbage rate structure so both residents and businesses that prevent waste, reuse, and recycle can reduce their garbage bill by reducing their level of service. Provides recycling collection, at no additional cost. Recycling and garbage rate are rolled into one monthly rate. (From Commercial and Residential Surveys).</p> <p>M. Establish a reduced refuse rate for residents that generate less waste than the Mini-can (20 gallon) level of service. Rate would still include costs for other programs/services funded by Refuse rates (e.g., Household Hazardous Waste Program, street sweeping). (From Residential Survey).</p>
<p>STRATEGY 3: Service Needs</p>	<p>Develop public or private services to address specific needs of major sectors in Palo Alto: medical services; retailers; restaurants; offices; manufacturers; schools; government facilities; and single-family and multi-family residential dwellings, including, but not limited to [NOTE:</p>

⁸ Chapter 5.24 of the Palo Alto Municipal Code requires that all covered projects shall divert at least ninety percent of inert solids and at least fifty percent of the remaining project-related construction and demolition waste to an approved facility or by salvage.

⁹ The Leadership in Energy and Environmental Design (LEED) Green Building Rating System® is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. For more info, see <http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>

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this list to be revisited after Service Needs Analysis completed]:

- A. Develop residential discarded food¹⁰ collection and composting. Expand collection services to include separated food waste (including food-soiled paper like pizza boxes, waxy cardboard, and frozen food boxes) for composting. (From Residential Survey).
- B. Expand institutional and commercial recycling; particularly for paper recycling and other services needed for top 4 waste generating sectors (Medical/Health Services; Restaurants; Other Retail Trade; and Business Services)
- C. Develop institutional and commercial discarded food collection and composting
- D. Expand support for deconstruction and adaptive reuse
- E. Expand recovery, reuse and recycling of used building materials
- F. Expand support for collection and drop-off of other reusable products
- G. Setup desktop “mini-bin” programs to recycle >80% of discarded materials in offices.
- H. Set environmentally preferable purchasing and recycled content as “defaults” for departments to use in departmental purchases of supplies and equipment not centrally procured. Use fees from solid waste system to help fund staff in Purchasing and Contract Administration Division to monitor and implement environmentally preferable purchasing program.¹¹
- I. Require franchisee to reuse, recycle and/or compost at least 50% of the materials collected in City Clean-up Day. Consider alternative ways of collecting so usable materials are not compacted on route.¹²
- J. Solicit other companies to provide collection and transport services for Recyclable Materials and/or solid waste from Commercial/Industrial Premises as non-exclusive franchises. This would allow additional haulers to compete within the City and the City could require detailed reporting and performance requirements, including recycling policies as a condition of franchisees to do business in Palo Alto. Require haulers to achieve a waste diversion goal for their overall operations (e.g., 50% initially and 10% more each year).
- K. Provide recycling services to multi-family residential dwellings (MFDs) at least equal to those of single-family curbside recycling services. Compile data on MFDs to establish clear baseline to measure progress.
- L. Provide areas in Palo Alto for drop-off of reusable furniture,

¹⁰ Whenever referenced, also includes food contaminated paper (e.g., pizza boxes and frozen food containers) and assumes CIWMB hierarchy for food scrap management is followed, to (1) prevent food waste, (2) feed people, (3) convert to animal feed and/or rendering, and (4) compost (see <http://www.ciwmb.ca.gov/FoodWaste/>).

¹¹ With leadership from the City’s Sustainable Purchasing Committee, the City is already expanding the purchase of environmentally preferable products. Currently in use are chlorine-free, 100% recycled content papers, low-mercury fluorescent lights, and recycled carpet tiles in high traffic areas, and uses 20% bio-diesel fuel in all heavy equipment. Source: <http://www.cityofpaloalto.org/fire/sustainability/pdf/citygreenbuscert.pdf>

¹² See “Community Cleanups” case study prepared by Gary Liss & Associates for the CIWMB with alternative ways that different communities are accomplishing that at: <http://www.ciwmb.ca.gov/LGLibrary/Innovations/CleanUps/>

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	<p>appliances, toys, pallets, mattresses, and used building materials, in conjunction with local nonprofits and/or reuse businesses.</p> <p>M. Require source separation of all materials that can be reused, recycled or composted. Charge penalties for all designated materials found in loads.</p> <p>N. Expand collection services to include separated food waste for composting. Require compostable food-service containers only. (From Commercial and Residential Surveys)</p> <p>O. Require property management companies to provide tenants (e.g., apartment complexes, office buildings) with access to City’s Recycling Program. (From Commercial and Residential Surveys).</p> <p>P. Implement a landscape/plant debris collection program for commercial customers. (From Commercial Survey).</p> <p>Q. Operate and maintain a Recycling Center (RC) within city limits beyond 2011. The current RC will close when the Palo Alto Landfill closes in 2011. (From Residential Survey).</p>
<p>STRATEGY 4: Reinvest Resources</p>	<p>Zero Waste systems should lower the costs of businesses in Palo Alto, help Palo Alto businesses become more sustainable and globally competitive and provide the greatest economic development benefit for the region (e.g., jobs, stable tax base).</p> <p>A. Consider Zero Waste, waste prevention, reuse, recycling and composting to be economic development priorities to make Palo Alto businesses more sustainable and globally competitive.</p> <p>B. Leverage community reinvestment and economic development strategies to help expand needed services.</p> <p>C. Support existing reuse, recycling and composting businesses and nonprofit organizations and help them expand to the degree the operators of them want to do so, to minimize public investments required. Facilitate and/or provide equipment, containers, land, building space and financing support to make waste prevention, reuse, recycling and composting more economic.</p> <p>D. Develop locally owned and independent infrastructure, on an open, competitive basis.¹³</p> <p>E. Develop local or regional resource recovery park(s) within Palo Alto City limits or nearby to provide locations for expansion of reuse, recycling and composting businesses. A Resource Recovery Park is a one-stop facility to include activities such as a drop-off/purchase of used building materials, recycling drop-off center, permanent small business hazardous waste drop-off program, other reuse activities, and an assistance/education center. (From Commercial and Residential Survey)</p>
<p>STRATEGY 5: Education and Outreach</p>	<p>Educate and engage the community to support Zero Waste initiatives.</p> <p>A. Coordinate outreach programs for sustainability and pollution prevention with Zero Waste, waste prevention and recycling programs.</p>

¹³ <http://www.crra.com/irc/guide.html>

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	<ul style="list-style-type: none"> B. Ask businesses to adopt Zero Waste goals and plan for implementing Zero Waste. C. Recognize businesses that are models of one or more Zero Waste Business Principles.¹⁴ D. Expand City’s waste audit and technical assistance services for businesses, coordinating with Pollution Prevention Program of Environmental Compliance Division with Integrated Environmental Audits (like with Green Business Certification programs), to provide detailed analyses like the Alameda County StopWaste Partnership Program.¹⁵ E. More actively promote Bay Area Green Business Program and recruit Palo Alto businesses to participate. List Palo Alto Green Businesses on City’s website with contact information and URL links to websites of those business to encourage the public to patronize them. F. Implement comprehensive community-based social marketing programs to more actively engage residents and businesses to commit to preventing waste, reusing, recycling and composting. G. Work on region wide development of messages and promotions for events such as Earth Day (April 22), World Environment Day (June 1-5), Second Chance Week (September) and America Recycles Day (November 15). H. Continue to support existing programs to educate the public about less toxic pesticides and custodial products, in coordination with the Integrated Pest Management Program. Support strategies that provide shelf-tags, fact sheets and training for staff at local hardware stores.¹⁶ I. Obtain input and include recommendations from City staff and Zero Waste Task Force on other opportunities for local, countywide and regional education and outreach programs that would support Zero Waste messages.
<p>STRATEGY 6: Minimize Liabilities</p>	<p>Minimize environmental impacts and City liabilities from wasting and ensure that the burdens and benefits of zero waste systems are equitably distributed. Eliminate all discharges to land, water or air that may be a threat to planetary, human, animal or plant health.</p> <ul style="list-style-type: none"> A. Extend use of Kirby Canyon Landfill as long as possible (so don’t have to arrange for more capacity elsewhere). B. Minimize long-term landfill liabilities by ensuring that full capital and operating, closure and post-closure costs are factored into current rates and financial assurances.
<p>STRATEGY 7: City role</p>	<p>City lead by example to achieve Zero Waste goals for all facilities owned or leased by the City. City facilitate and encourage expansion of services by private and nonprofit organizations. Develop Zero Waste Operations Plan to detail priorities for facilities to be developed for the City as a whole after the City updates its detailed waste characterization study.</p>

¹⁴ For copy of the Principles, go to: <http://www.grn.org/zerowaste/business/>

¹⁵ See <http://www.stopwaste.org/home/index.asp?page=9>

¹⁶ Currently done by “Our Water, Our World;” see www.ourwaterourworld.org

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	<ul style="list-style-type: none">A. Fund community Zero Waste initiatives with fees levied on the transport, transfer and disposal of wastes and by leveraging the investments of the private sector.B. Structure fees and taxes in ways that provide additional incentives for designing out waste, reuse, recycling and composting.C. Encourage Palo Alto elected officials to advocate for the adoption of legislation on a State or National level that would require Producer Responsibility, financial and physical, for the take-back of products and packaging they produce at the end of the product's useful life. (From Residential Survey).
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Appendices (to be added)

A. Service Needs Analysis

B. Funding Analysis