

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

Date: June 4, 2001 (Revised)

To: The Board of Public Works
Honorable Richard J. Riordan, Mayor
City of Los Angeles Councilmembers

From: Judith A. Wilson, Director
Bureau of Sanitation

Subject: STRATEGIC RECOMMENDATIONS FOR MEETING THE YEAR 2020
70% DIVERSION GOAL

EXECUTIVE SUMMARY

BACKGROUND

In 1994 the City of Los Angeles established a goal of reaching a 70% solid waste diversion rate by 2020. Recently, the Mayor and City Council ~~have~~ instructed the Bureau of Sanitation, in cooperation with the Office of Administrative & Research Services, the Department of General Services, and the Environmental Affairs Department, to create a strategy to achieve this goal.

The City and the private sector operating within the City, has developed very strong waste management ~~infrastructure~~ programs and facilities over the last decade. Through the Bureau of Sanitation and private sector, the City has implemented a myriad of innovative source reduction, recycling, composting, and reuse programs. These programs have made waste diversion inroads not only in City government, but also in the residential and commercial/industrial sectors as well. Due to the strength of ~~this~~ waste management ~~infrastructure~~, programs, the City achieved a 49% waste diversion rate in 1999 and is expected to surpass the State mandated 50% waste diversion rate in 2000. Despite the City's tremendous success thus far, reaching the 70% diversion rate will require continued evaluation, planning, and implementation of comprehensive, new, and innovative diversion programs. These programs must be designed to maximize the opportunities for solid waste diversion available throughout a wide range of business, industrial, manufacturing, and governmental agency activities.

The Bureau of Sanitation is presently conducting a comprehensive waste stream analysis to validate that the City has reached the AB 939 50% diversion mandate. The year 2000 analysis will consist of an investigation of citywide disposal and diversion practices including; disposal surveys, on site audits, diversion facility surveys, and waste stream analyses of targeted residential and businesses/commercial operations. The City must continue its efforts by focusing on the waste currently reaching disposal sites and implement programs to reduce overall landfill disposal.

This waste stream analysis is the tool the City will use to analyze, quantify and identify new opportunities to promote and increase source reduction, reuse, recycling, composting, and other solid waste diversion efforts to reach the 70% diversion rate. Recommendations for new programs will be identified based on

the findings from the waste study. These new opportunities will be incorporated into the City's 2000 Source Reduction and Recycling Element (SRRE) which will function as the implementation plan for the City's 70% Strategy. Open stakeholders meetings will be used extensively in the development of new diversion programs to reduce the current amount of waste being landfilled.

This strategy will include using pilot programs to verify the cost-effectiveness of new programs, but will require funding which may be addressed through strategies such as a non-exclusive franchise fee for waste haulers operating within the City.

INTERIM GOALS

In the interim, this report establishes six goals: it reaffirms the five waste management goals established by the City of Los Angeles Solid Waste Management Policy Plan (CiSWMPP) in 1993, and establishes a new goal which reflects potential large diversion through sustainable development. It also evaluates existing diversion programs, recommends immediate tasks, and identifies implementation and documentation responsibilities under each task. Staff from OARS, EAD, and GSD have reviewed this report.

Six Strategic Goals for the City's Diversion and Recycling Program:

- 1) **Maximize Waste Diversion** All recycling, source reduction, and re-use programs operated by the Bureau of Sanitation and the General Services Department will need to be continued and expanded. The Bureau's *Targeted Materials Strategy* must be enhanced and new materials added. ~~The proposed Waste Hauler Permit Ordinance should be acted upon and its attendant recycling programs developed and implemented.~~ New programs to further increase waste diversion from the waste that is currently landfilled will incorporate both private and public sector participation in both the planning and implementation process.
- 2) **Adequate Recycling Facility Development** The Bureau of Sanitation's *Solid Resources Infrastructure Strategy Facilities Plan* addresses the facilities the ~~Bureau~~ City requires to support its current and future solid resources management activities. The Office of the Mayor ~~must assist,~~ through its LA Business Team and Recycling and Market Development Zone (RMDZ) loan program, can assist companies wishing to develop citywide recycling/processing facilities.
- 3) **Adequate Collection, Transfer, and Disposal of Mixed Solid and Household Hazardous Waste** The Bureau of Sanitation will continue its residential curbside waste, household hazardous waste, and small business hazardous waste collection programs. The Bureau of Sanitation, and General Services will continue to promote new and alternative technology. The Bureau will pursue the development of recycling, mixed waste processing and transfer infrastructure to service City residents and businesses, including appropriate contractual mechanisms and potential financial incentives.
- 4) **An Environmentally Sound Waste Management Operation** General Services will continue to operate its vehicle maintenance and inspection program. The Bureau will comply with alternative fuel regulations by taking actions including purchasing alternative fuel trucks to replace fleet vehicles as they are retired, and modifying fuel stations and maintenance facilities to accommodate the new vehicles.

- 5) ***A Cost Effective Waste Management Operation*** New programs will be designed to maximize the diversion potential for the waste currently disposed at the lowest cost. For example, the City will concentrate its efforts on market development through its purchasing power. Specifically the City will ensure department compliance with the *Recycled Content Procurement and Purchasing Price Preference Ordinances* through its *Buy Recycled Challenge 2000* and *Prima 2000* programs.
- 6) ***Sustainable Development (new goal)*** All City departments will lend their support and promote implementation of sustainable development policies and guidelines coordinated and developed by the Bureau of Engineering's expanded Citywide Sustainable Development Program and the City Departments' Sustainable Design Task Force.

Table 1, detailed below, provides estimated additional diversion for ***Goal One: Maximize Waste Diversion Programs***. These diversion estimates are above the estimated diversion for the 2000 AB939 Report. Over the last ten years, the City has demonstrated its commitment to source reduction, recycling, and re-use through the implementation of numerous successful diversion programs. Several key elements have contributed to the success of City programs. These include: a well established recycling infrastructure; strong public/private partnerships; keen public interest and participation; strong political support; and deep City employee commitment.

RECOMMENDATIONS FOR IMMEDIATE IMPLEMENTATION 2001 - 2002

The following recommendations address steps to begin the process of reaching the 70% diversion goal by 2020.

- Adopt the six strategic goals of the plan.
- ~~Acknowledge~~ Direct the use of the City's 2000 AB 939 SRRE Update (completed in 2001) as the cornerstone foundation of and the guide cohesive force for the 70% Strategic Plan.
- Assign the Bureau of Sanitation as the lead department to report annually to the Mayor and City Council on City-controlled and private waste disposal and diversion information, recycled market development progress, and City department and public participation. The Bureau will coordinate documentation of activity with all departments.
- Establish a permanent 70% Diversion Strategic Task Force with representatives from the Bureau of Sanitation, OARS, the Office of the Mayor, the General Services Department and a member from the Board of Public Works to oversee implementation, review and update of the Strategic Plan, and designate a subcommittee of the Strategic Plan Task Force to link the City's current recycling market development activities and business development programs into a cohesive market development program.
- Establish a website for posting of documents, meeting agendas, and meeting minutes pertaining to solid waste issues such as monthly reports, Board of Public Works meeting agendas, and staff reports on program evaluation.

- Establish a stakeholders group with private sector participation as well as other interested parties with regular open meetings to focus on program development, funding, and other specific aspects of waste diversion and disposal.
- ~~Establish~~ Direct the Bureau to develop goal(s) and update implementation schedules for achieving the City's 70% diversion goal for 2020 based on the 2000 findings.
- Use pilot programs as a tool to test the viability and efficiency of potential new programs.
- Determine the capacity of the private sector to supply new or expanded services and facilities needed to meet the City's objectives. Utilize appropriate procurement and contractual mechanisms to ensure competition and private sector performance.
- Direct all City departments to support and assist in the development of citywide sustainable guidelines, practices, and programs, and their adoption and implementation across the City.
- Direct all departments to designate a senior management level staff member as a recycling officer to coordinate with the Bureau of Sanitation and the General Services Department on source reduction, recycling/composting, procurement program implementation and reporting, and sustainable development efforts.
- Direct all City departments to develop a comprehensive diversion plan to include measurable goals for source reduction, recycling/composting, procurement, and sustainable development with the assistance of the Bureau of Sanitation, Bureau of Engineering, and the General Services Department.

MID-RANGE POLICY RECOMMENDATIONS 2002 – 2005

- ~~Expedite the planning, construction, opening, and operation of~~
- ~~Permanent Household Hazardous Waste collection~~ Develop Residential Materials Recycling facilities for the Central City, West Valley, East Valley, West Los Angeles, East Los Angeles, and Harbor areas;
- Use the pilot food waste diversion program at Hyperion Treatment Plant to develop Yard trimmings and food waste processing and/or composting facilities in the City of Los Angeles;
- ~~Hyperion Treatment Plant pilot food waste diversion program; and~~
- Develop processing facilities and increase beneficial end uses for yard trimmings;
- Use small pilot programs to investigate potential new diversion programs based on available funding;
- Using the results of the current pilot programs, develop mixed waste processing and transfer services for City-collected residential and privately collected commercial refuse;

- Promote and encourage, through outreach and financial incentives, the continued development of both private and public infrastructure to support the collection, sorting, processing, and manufacturing of recyclable materials based on the objectives of the Solid Resources Infrastructure Strategy Facilities Plan;
- Continue outreach and technical assistance programs to residents and businesses located within the City to increase awareness of waste diversion and disposal issues.
- Establish the City as a world leader in Sustainable Development Practices and Producer Responsibility Initiatives.

CONCLUSION

For continued success in the 21st century, the City must emphasize consistent, long-term public outreach, flexibility to move with the markets, ability to develop innovative programs, and commitment to a sustainable future.

STRATEGIC RECOMMENDATIONS REPORT FOR MEETING THE YEAR 2020 70% DIVERSION GOAL

BACKGROUND

The Integrated Waste Management Act of 1989 (Assembly Bill 939) requires all municipalities in the State of California to divert a minimum of 50% of generated solid waste from landfill disposal by the end of the year 2000. The City of Los Angeles (City) as of July 2000, using the State's reporting method, documented a 49% diversion rate¹ toward the 50% diversion goal required by December 2000. The City expects to meet or exceed the 50% goal by the end of calendar year 2000. Looking beyond the year 2000 diversion requirement, and in keeping with an environmentally responsible public policy position, the City continues to identify and exploit new opportunities to promote and increase source reduction efforts, recycling activities, the purchase of recycled content products, and re-use programs.

The Bureau of Sanitation (Bureau), in cooperation with the Office of Administrative and Research Services, the Department of General Services, and the Environmental Affairs Department, was requested to prepare a paper with recommendations on how the City can reach 70% diversion by the year 2020. A key City of Los Angeles objective is to achieve the highest possible solid waste diversion rate in the shortest period of time while taking into consideration mitigating economic factors and environmental concerns. An important element in achieving this goal involves the establishment of effective recycling programs in the City's numerous multi-family residential complexes and commercial buildings. In evaluating strategies to meet the 70% goal, the Mayor instructed the Bureau to evaluate the pros and cons of non-exclusive franchising and/or similar regulatory systems. ~~A companion report on regulating haulers has been prepared and released along with this report.~~ The non-exclusive franchise system may be used both as a tool to create incentives for recycling and for generation of revenue for additional waste diversion programs.

In 1993 the Los Angeles City Council and Mayor approved the City Solid Waste Management Policy Plan (CiSWMPP). The CiSWMPP, a 30-year planning document, outlined various goals the City will pursue to reach a 70% waste diversion rate by the year 2020.

The City's Source Reduction and Recycling Element (SRRE) is the implementation plan for the City's CiSWMPP. It has guided the City through the first decade of its initial 30-year waste diversion strategy and will continue to do so. The innovative and far-reaching policies and programs established and implemented through the SRRE have helped the City achieve a diversion rate of 45% for 1995 and a 49% diversion rate for 1999. The City's diversion rate for the year 2000 will meet and most likely exceed that State mandated 50% diversion goal.

The Bureau will conduct a comprehensive waste stream analysis to validate that the City has reached the AB 939 50% diversion mandate. It will also help to determine how much more the City will need to divert in order to reach its calendar year 2020 70% diversion goal. The 2000 analysis will consist of an investigation of citywide disposal and diversion practices. It will include: disposal surveys; diversion facility surveys; and waste stream analyses of targeted residential and commercial/government agency operations. The analysis will identify materials in the waste stream available for diversion. Potential materials include: construction and demolition debris; food waste; and electronic components and equipment.

¹ As of 3/1/01, the 1999 AB939 update has not been approved by the California Integrated Waste Management Board.

Further, the analysis will determine which AB 939 diversion programs have been most effective and need to continue. It will also identify new opportunities to promote and increase solid waste diversion. In addition, the 2000 analysis will address issues of procurement to ensure long-term markets for recyclable materials, additional capacity to provide processing infrastructure for increased diversion activity, and sustainable development to safeguard resources and the environment. Based on this 2000 analysis, the City will revise its SRRE and use it as the basis to meet the 70% goal.

Because the City government manages over 38% of the citywide waste stream, either by use of City collection staff or private sector companies under City contract, the City must continue in its leadership role in developing strong City Department programs. It will require an inter-departmental management approach with the Bureau of Sanitation, General Services Department, the Office of Administration and Research Services, Environmental Affairs Department, and all City departments working together to make diversion a priority in all City operations.

This report takes the five waste management goals established by the 1994 CiSWMPP, reexamines and refines them in light of ten years of changes, and adds a new sixth goal of sustainable development. Written from the vantage point of ten years into the 30-year CiSWMPP, the recommendations will need to be reviewed and updated regularly to stay abreast of trends and technologies in the waste management field, economic, social/cultural developments in the community, and changes within City government. In addition, tasks and responsibilities recommended in this report will need to be reviewed and updated and the agencies assuming responsibility for overseeing the 70% strategy and long-term waste management planning will need to remain flexible and adapt to changing conditions.

STRATEGIC GOAL 1: MAXIMIZE WASTE DIVERSION

Goal: The City will strengthen the integrated waste management policies and programs set into motion by AB 939. Programs will emphasize source reduction and materials recovery and seek to minimize the amount of waste requiring disposal.

A. SOURCE REDUCTION ELEMENT

Source Reduction is any activity undertaken by an individual or organization to eliminate and/or reduce the amount or toxicity of materials before they enter the municipal waste stream. The SRRE identifies source reduction as the critical first step in the waste management hierarchy and the first the City must take in addressing its solid waste issues. Source reduction activities are intended to conserve resources, promote efficiency, and reduce pollution. These activities include xeriscaping, sustainable design, backyard/on-site composting or mulching, business waste prevention (use of reusable products, packaging and paper use reduction, use of e-mail, double-sided copying, materials exchanges, joint purchases), garage sales, thrift shop donations, and reuse.

Implementation Responsibilities - Source Reduction

All City Departments

In its 1995 SRRE Annual Report to the State, the City documented the source reduction programs and activities each City department had implemented since 1990. During its 2000 waste analysis, the City again will review the status and conduct waste audits for each City department's source reduction programs to measure ongoing source reduction and determine potential future source reduction activities.

At the conclusion of this study, the City will make recommendations to specific departments regarding implementing and/or enhancing source reduction programs.

Office of the Mayor

City Department Source Reduction and Recycling Plan Directive: The Mayor as the City's Executive Officer, can assist by directing each City department to develop a waste diversion plan (which includes source reduction activities) with the assistance of Bureau of Sanitation and the General Services Department's City Facilities Recycling Program (CFRP).

General Services Department

The General Services Department will procure and/or amend contracts with vendors, consultants, and other governmental agencies requiring vendors to take back packaging; use reusable packaging materials; and/or reduce packaging.

-Buy Recycled 2000 Challenge: The Buy Recycled 2000 Challenge supports Ordinance #168313 that amended the Los Angeles Administrative Code by establishing a policy to promote the City's purchase of goods, supplies, and equipment containing recycled materials. The City has identified 19 products that are available and made from recycled materials. The City has designated 10 of these 19 items as "Buy Recycled 2000" mandated products, which means that these recycled products are proven items, commercially available, and that departments in need of those items ***should always buy such items made from recycled materials***. These items include: paper, office products, glass, lubricating oils, plastic products, rubber, batteries, compost, anti-freeze, fiberglass insulation, aggregate base, cement and concrete, promotional products, solvents, and paint. In July 2000, City Council reaffirmed the City's commitment to buying and using recycled products, whenever feasible, including remanufactured laser toner cartridges as a "Buy Recycled 2000" mandated product. Under this program the City purchased approximately \$2,036,480 worth of materials in 1998.

General Services will ensure that all City departments are educated and participating in this program.

-Prima 2000 Recycling Program: The General Services Department will ensure that the Prima 2000 accounting system incorporates the categories of recycled-content materials and products specified by City Ordinances #168313 and #170485 and that the system defaults to these materials and products.

Bureau of Sanitation

2000 Waste Analysis and AB 939 Update: The Bureau of Sanitation is conducting the 2000 waste analysis to ascertain compliance with AB 939 and report on its findings. At the conclusion of the analysis, the Bureau will advise each City department regarding the status and direction of its source reduction programs and incorporate its findings into the 2000 SRRE and updates to this Strategic Recommendations Report.

Smart Gardening Program: The Bureau operates this program which promotes xeriscaping, grasscycling, vermiculture, and backyard composting. The City has reached 24,103 residents and students and has sold 12,005 composting bins since the inception of this program in 1992. In 1999, the City calculates that residents diverted 12,975 tons of green waste through onsite source reduction (backyard composting). The Bureau will expand this outreach program through development of a five-year education campaign that will showcase successes and maintain a prominent public message. The goal of this program expansion is to increase onsite residential green waste source reduction by 34,000 tons per year in addition to the 12,975 tons diverted in 1999 for a total of 47,000 tons per year.

Donation and Reuse Programs: The Bureau has implemented several donation and reuse programs to date. These include: production of its *Put it to Good Reuse Directory* a comprehensive listing of thrift stores, non profits, and charities that accept donations; collaboration with Goodwill Industries and the Department of Recreation and Parks to establish a community donation collection site at Manchester Park; and, production of an annual “Second Chance Week” program. In addition, the Bureau conducted a pilot program in 1995 with the Salvation Army in which the Salvation Army would follow a recycling truck along a curbside route and pick up donations of clothing and other items from residents.

In 1999, the Goodwill/Manchester Park donation program alone diverted over a half million pounds of clothing and household appliances from the landfill.

The Bureau will continue to develop partnerships with the thrift store industry and nonprofit organizations to coordinate residential and commercial donation programs.

Source Reduction Outreach Campaign: Because understanding and participation in source reduction activities, recycling, and buying recycled requires a lifestyle change, the Bureau will develop and implement a five-year citywide education campaign to promote these behavior changes. The Bureau will develop a *Reduce, Reuse, and Recycle* theme and message that will be used throughout the campaign for consistency and to ensure maximum exposure in the residential and commercial sectors.

Documentation Responsibilities

Bureau of Sanitation and General Services Department

The Bureau of Sanitation, through its 2000 AB 939 survey process will meet with City departments to work with them on source reduction. The General Services Department, through its *City Facilities Recycling Program*, will continue to educate all City departments about the critical nature of implementing, documenting, and reporting to the Bureau of Sanitation all waste diversion activities. Each department must develop and maintain its own waste disposal and diversion documentation with assistance from the Bureau and General Services.

B. RECYCLING

Recycling is the process of collecting, sorting, cleaning, treating, composting, and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw materials for new, reused, or reconstituted products.

For calendar year 1999, the City achieved a 49% waste diversion rate using the State’s reporting method. The City attributes this high diversion rate to a number of factors: the implementation of far-reaching AB 939 City recycling programs (e.g. C&D debris recycling, residential green waste recycling, and commercial sector technical assistance), an excellent private sector recycling infrastructure, public interest, and growing economic prosperity. Despite the City’s 49% diversion rate, many opportunities remain to increase diversion and assist the City in reaching its 70% diversion goal. The 2000 waste analysis will identify many of these opportunities which will be added to future updates of this document once the Bureau has completed that analysis.

The following is a discussion of those recycling programs already in place that must be expanded and promoted over the next two decades.

Implementation Responsibilities

All City Departments

In its 1995 SRRE Annual Report, the City documented the recycling programs each City department had implemented since 1990. During the 2000 waste analysis, the Bureau of Sanitation again will review the status of each City department's recycling programs. At the conclusion of the study, the Bureau will make recommendations to specific departments regarding implementing and/or enhancing recycling programs beyond 2000.

Bureau of Sanitation

Year 2000 Waste Analysis and SRRE Update: The Bureau of Sanitation is conducting the 2000 waste analysis to ascertain compliance with AB 939 and report on its findings. At the conclusion of the analysis, the Bureau will advise each City department regarding the status and direction of its recycling programs and incorporate these findings into the 2000 SRRE and updates to this Strategic Recommendations Report.

Residential Blue Bin Curbside Recycling Program: The Bureau will continue to promote the Residential Blue Bin Curbside Recycling Program and will improve the efficiency of the program by adding, whenever possible, materials to the list of items that can be placed in the residential recycling containers. The Bureau will also work to reduce the level of contamination in this program, currently at 22%, by 5% per year.

Adding items to this program will require working on recycled materials market development and recycled products procurement. For a discussion of market development strategies, please see Strategic Step 5: A Cost Effective Solid Waste Management Plan.

Residential Yard Trimmings Program: The Bureau, beginning in Fiscal Year 2002 – 2003, will enhance its Residential Yard Trimmings Program by replacing existing 60-gallon yard trimmings container with 90-gallon containers as the existing containers reach the end of their useful life. The Bureau believes that by providing a larger container, residents will be encouraged to recycle all of their yard trimmings, some of which currently end up in residential refuse containers due to insufficient capacity of the 60-gallon containers. The Bureau will present a Container Replacement Plan this fiscal year that will recommend the necessary changes to the Standard Allowance and Extra Capacity Policies of the City's Recycling/Automated programs, to allow for the replacement of the 60-gallon containers with 90-gallon containers.

Targeted Materials Strategy: The City has identified certain materials that contribute significantly to the citywide waste stream, by volume and/or weight, and are implicitly recyclable. Due to source separation, collection, marketing, and processing issues, these materials have been nearly impossible to recycle to date. The following is a discussion of these materials and how the Bureau may address their recovery.

Residential Food Waste: Food waste accounts for approximately 18.2% of the City-collected residential waste stream. Because of its high volume and its organic nature, the Bureau has targeted this material for diversion. The Bureau is developing a small pilot program to process material in the black refuse container for composting.

Commercial Food Waste: Commercial food waste, like residential food waste, contributes significantly to the waste stream at 7.2%. A number of large generators, most notably large retail grocery stores, already divert their food waste. In addition, due to the large entertainment industry

a significant amount of food banking takes place regularly. However, enough material remains in the commercial waste stream that the Bureau has targeted this material for diversion as well. The Bureau will conduct a pilot program to divert food waste generated by airlines and caterers through Hyperion Wastewater Treatment Plant's Class A Biosolid Digesters. The Bureau will also target hotels, hospitals and other large commercial operations that generate significant quantities of food waste.

Residential and Commercial Fiber: In 1995, the Bureau conducted its second citywide waste stream analysis. This analysis indicated that citywide fiber (cardboard, mixed paper, and remainder paper) contributed 15.5% to the waste stream (13.3% in the commercial/industrial/Govt sector and 16.4% in the residential sector). Since the 1995 analysis, the Bureau has included mixed paper in the residential blue bin curbside recycling program. The year 2000 analysis will determine how much fiber remains in these two waste streams. If fiber continues to comprise a significant portion of either waste stream, the Bureau will increase specific fiber diversion technical assistance and outreach to these sectors.

Bulky Item Collection: The Bureau collects approximately 14,000 tons per year. The Bureau will enhance the on-call pick up service of bulky items (beds, sofas, stoves, etc.) for City residents by increasing the frequency of collection through a 24 hour collection turnaround, participation in the Clean Neighborhood Initiative, working with Clean Sweep, and working in partnership with reuse/donation centers.

Electronics/Computer (E/C) Recycling Pilot Program: The Silicon Valley Toxics Coalition estimates that more than 12 million computers are scrapped every year and projects that by the year 2005 one computer will be discarded for every new one put on the market. Fewer than 14% of junked computers are recycled. To address this growing problem, the Bureau will conduct a 12-month pilot E/C recycling program offering a minimum of four collection events for Los Angeles residents. At the end of this pilot, the Bureau will analyze types and amounts of equipment collected and levels of participation to determine the viability of the program. The first Electronics/Computer collection event collected 46 tons.

Biosolid Applications: The Bureau has processed the city's biosolids at the Hyperion Treatment Plant for beneficial use since 1990, producing an EPA designated Class B Biosolid ready for land application. The Bureau recently bought a farm to maintain its land application efforts while investigating acceptable diversion alternatives to land application of its biosolids. The Bureau is also exploring a number of alternatives to upgrade its biosolids from a Class B to a Class A product which will increase the marketability of this material.

Commercial Packaging Materials: In 1990, the City estimated that 30% of its waste stream consisted of packaging and various packaging materials. During the last ten years, the City has consistently supported packaging reduction legislation. The Bureau will continue to promote packaging reduction and will continue to support packaging legislation. The General Services Department will procure and/or amend contracts with vendors, consultants, and other governmental agencies requiring vendors to take packaging; use reusable packaging materials; and/or reduce packaging.

As the plastic portion of the waste stream grows, the Bureau is investigating ways to increase the types of plastics that can be diverted from the waste stream and recycled into new products.

Construction and Demolition Materials: Since 1992, the Bureau has conducted a program aimed at both the private sector and City departments, which provides technical assistance, educational outreach, and information on best management practices for recycling of construction, demolition, and land clearing (CDL) materials. With an estimated 13% of the waste stream, or 436,000 tons of CDL, going to the landfill IN 1995, the Bureau will expand the reach of this program through outreach campaigns, joint promotion of sustainable development initiatives, and targeted workshops with EAD, Bureau of Engineering and other departments. The Bureau's goal is to increase diversion of CDL debris by 11,000 tons per year. The Bureau will also work on construction and demolition debris processing capacity and the promotion of citywide sustainable development practices.(please Strategic Step 2: Adequate Recycling Facility Development) and will study the feasibility of imposing a fee on construction and demolition materials entering landfills.

Commercial/Industrial Sector Strategy: One of the Bureau's earliest SRRE diversion strategies was to identify and assist large commercial and industrial waste generators with waste diversion programs. The Bureau targeted the largest generators within specific commercial and industrial categories, for example the hotel industry, the hospital industry, the food processing industry etc., and developed a series of recycling workshops as well as brochures, pamphlets, and guidelines for these generators. As a result, in part, of the Bureau's outreach a number of targeted generators have implemented waste diversion programs that have significantly contributed to the citywide diversion rate. These programs include: large grocery chains composting unusable produce; movie studios recycling sets; restaurants participating in food banking; and food processors sending residuals to animal feed manufacturers and renders.

The 1995 Waste Analysis indicated that the Commercial/Industrial Sector disposed of 56% of the citywide waste stream. Further, the analysis determined that remainder paper, mixed paper, cardboard, food waste, and wood waste made up the majority of this waste stream. Most of this material can be recycled and, therefore, much of the Commercial/Industrial Sector's waste stream is potentially recyclable.

Waste Hauler Permit Ordinance: The City has witnessed success in recycling programs provided by City collection services (i.e. Residential Curbside Program, City Facilities' Recycling Program etc.). Similar levels of success are also needed with respect to multi-family complexes, small businesses, organizations, institutions, and individuals receiving collection services from private waste haulers. In an effort to address this issue, the Mayor and City Council directed the Bureau to examine regulating private waste haulers operating in Los Angeles as a means to increase recycling in these areas.

During the spring 2000, the Bureau investigated various fee structures as a means to encourage private waste haulers to divert more material from the private sector. ~~The Bureau will recommend in a companion report that the City develop a Waste Permit Ordinance that would require all haulers operating in the City to secure a permit to do so. Permitted haulers would then be required to pay a fee to the City based on gross receipts from material collected within the City. The fees generated then will be used to expand and develop waste diversion programs such as multi-family recycling and expanded technical assistance programs for the commercial and industrial sectors of the city. A portion will also be rebated back to the hauler based on diversion tonnage and activities.~~

Citywide Outreach Campaign: Understanding and participation in source reduction activities, recycling, and buying recycled activities require lifestyle changes. The Bureau will develop and implement a five-year citywide education campaign to promote these behavior changes. The Bureau will develop a theme

and message that will be used throughout the campaign for consistency and to ensure maximum exposure in both the residential and commercial communities.

Multi-Family Recycling: In 1995, multi-family residences disposed of approximately 517,360 tons of solid waste representing 15.4% of the total waste stream. Few multi-family recycling programs are operated by private waste haulers. Historically, multi-family recycling has been difficult for a number of reasons: markets for the recyclable materials typically found in the multi-family waste stream have been weak; multi-family residences are spread throughout the City making recycling routing difficult; and, due to turn over, public ongoing outreach and education is a necessary but costly element of a program. But because multi-family residences contribute significantly to the City's waste stream, they are an untapped source of diversion.

The Bureau has conducted pilot multi-family recycling programs that have met with some degree of success when the Bureau's efforts were coupled with intensive education and outreach. However, funding limitations have prevented the Bureau expanding in multi-family recycling programs beyond those currently receiving City collection services.

As discussed in the companion report, the Bureau is recommending the use of waste permit fees to implement programs such as multi-family recycling programs, to expand the Bureau's public outreach campaign, and to expand and develop technical assistance programs for the commercial and industrial sectors of the city.

General Services Department

City Facilities' Recycling Program(CFRP): The General Services Department provides office paper and mixed beverage container recycling to all City employees housed in the City's 525 facilities. In 1999, the CFRP diverted 7,198 tons of material from City offices, an increase of 4,727 tons over 1995. The General Services Department will ensure that all City departments are educated about and are participating in this program. In addition, the Department will provide recycling expertise for implementation of other needed programs at City facilities, particularly those facilities that have a public face. For example, the General Services Department and the Los Angeles Zoo recently applied for funding through the California Department of Conservation's SB332 to establish a Beverage Container recycling Program. General Services will provide technical expertise and resources to establish this new program.

Environmental Affairs Department (EAD)

The Environmental Affairs Department as the Local Enforcement Agency (LEA) will continue to update and maintain lists of permitted solid waste processing and disposal facilities in the City.

Office of the Mayor

Prioritize Recycling: The Office of the Mayor can assist by augmenting recycling program funding in order to meet the City's 70% diversion goal. In addition, the Office of the Mayor can also expand the scope and reach of the Office's RMDZ Program and the LA Business Team Program as well as securing the cooperation of every City department in the City's diversion goals.

RMDZ Program: The Office of the Mayor can establish as a goal the identification of four RMDZ candidates each year to expand the markets for recyclables.

Documentation Responsibilities

Office of Mayor

Departmental Waste Management Coordinator Directive: The Office of the Mayor has issued Executive Directive No. 2001-33, which directs each City department to report to the Bureau of Sanitation on source reduction and recycling activities each year, and to select an upper level staff member to oversee implementation and documentation of all waste diversion programs.

Bureau of Sanitation and General Services Department

The Bureau of Sanitation, through its 2000 AB 939 survey process, will meet with City departments to work with them on source reduction. The General Services Department through its *City Facilities Recycling Program*, will continue to educate all City departments about the critical nature of implementing, documenting, and reporting to the Bureau of Sanitation all waste diversion activities. Each department must develop and maintain its own documentation with assistance from the Bureau and General Services.

C. TRANSFORMATION

Transformation is the third waste management strategy on the waste management hierarchy, following source reduction and recycling/composting. Transformation is the incineration of solid waste thereby reducing the volume of the material that must be landfilled. Contemporary transformation facilities usually generate electricity as a by-product of incineration: water is super heated during incineration creating steam that drives electricity-producing turbines.

Initially, AB 939 considered transformation as disposal. After 1995, however, the State reconsidered transformation and now allows it as diversion toward the 2000 50% diversion mandate.

The City has had a controversial history regarding transformation. Community and environmental groups fought the siting of a transformation facility within City limits. As a result, the City opted to emphasize source reduction and recycling in its solid waste management planning and will achieve the 50% diversion mandate by 2000 without counting transformation toward diversion.

STRATEGIC GOAL 2: ADEQUATE RECYCLING FACILITY DEVELOPMENT

Goal: *The City will ensure an adequate number of facilities that enhance waste reduction, recycling, and composting throughout the city in ways that are economically, socially, and politically acceptable and meet the needs of the 70% diversion goal.*

In order to meet its 70% diversion goal, the City will need to expand existing facilities and site new facilities to handle materials separation and processing. These facilities may include Materials Recovery Facilities (facilities that accept and process municipal solid waste separating recyclable materials from non-recyclable materials), composting centers, construction and demolition processing facilities, transfer stations, and recycling plants. They may be City-owned facilities or they may be facilities the City has assisted private waste haulers (individually or collectively) and recyclers to establish through appropriate contractual mechanisms and the Mayor's financing and business assistance programs.

Implementation Responsibilities

Environmental Affairs Department

Regulatory Compliance: EAD is the local regulatory enforcement agency. EAD oversees and updates all City department regulatory and legislative compliance plans regarding solid waste processing facilities operating in the City.

Planning Department

Zoning and Ordinance Issues: The Planning Department will review ordinances and zoning and permit procedures for the purpose of removing barriers to the siting, development, construction, and operation of new recycling/processing and recycled product manufacturing facilities. Source reduction, recycling, and buying recycled are promoted through the City's Landscape Ordinance, citywide Sustainable Design Policy, Space Allocation Ordinance, and EIR mitigation conditions. These ordinances, policies, and mitigation measures will be monitored and enforced on a regular basis.

Bureau of Sanitation

The Bureau of Sanitation has completed a *Solid Resources Strategic Infrastructure Facilities Plan*. This plan addresses Bureau of Sanitation solid resources needs into the future. The City does not own infrastructure facilities such as transfer stations and material recovery facilities, which support the Bureau's core business of providing waste management services to 720,000 households. The City is thus subject to changes in pricing and ownership of the large private waste companies that do own the infrastructure facilities which the City currently uses. Acquiring City-controlled facilities will provide more control over future price increases and more options for managing the materials the City collects at the curbside. The plan calls for the following solid resources infrastructure improvements. Until these improvements are made and the City can internally process these materials, the Bureau will continue to obtain private sector services to process residential curbside recyclables, yard trimmings, and refuse bin materials:

- Development of a transfer station and recycling center in the Central Los Angeles area.
- Development of a transfer facility on City-owned property located at 6000 West Jefferson Blvd.
- Relocation of the East Valley Collection Yard and development of a new East Valley collection yard as approved by the Mayor and City Council on August 5, 1998 (CF 96-0705S2).
- Development of six permanent Household Hazardous Waste (HHW) drop-off facilities for City residents and CESQG program participants to provide year-round services and encourage safe disposal of these materials.
- Develop a stakeholders group for feedback and program innovation.
- Continue to pursue the development of yard trimmings processing, mulching, and shipping facilities and marketing of the finished product within the City.
- Perform closure construction at all six inactive landfill sites owned by the City within the next four years.
- Acquire the minimal long-term disposal capacity that the City will need beyond the 2001 through extension of current disposal contracts(s).
- Establish a capital improvement expenditure program to upgrade all collection yard facilities to meet current environmental and health and safety standards, and to provide an adequate working environment for City employees.

- Develop a financing plan for the recommended Solid Resources infrastructure.
- Develop a comprehensive and five-year Public Education and Community Outreach Campaign designed to educate and inform the public about the City’s solid resources programs and strategies.
- Continue to research and develop the use of material recovery facilities to preprocess all waste prior to delivery at a landfill.

Office of the Mayor

Business Assistance: The Office of the Mayor can assist, through its LA Business Team and RMDZ loan program, companies wishing to develop citywide recycling/processing facilities. The Office of the Mayor and the Bureau of Sanitation will identify, recruit, and assist these companies. The Office of the Mayor will assist the Bureau in developing a sound financing plan for these facilities.

STRATEGIC GOAL 3: ADEQUATE COLLECTION, TRANSFER, AND DISPOSAL OF MIXED SOLID AND HOUSEHOLD HAZARDOUS WASTE

Goal: Mixed solid waste is that waste that cannot be reduced, recycled, or composted. The City will ensure that all mixed solid waste will be collected, transferred, and disposed of in a manner that minimizes adverse environmental impacts.

Implementation Responsibilities

Bureau of Sanitation

Residential Curbside Waste Collection: The Bureau will continue to provide and research, pilot and develop a mixed solid waste preprocessing option for the residents served by City forces.

Household Hazardous Waste Collection: The Bureau will continue to provide household hazardous waste collection service for City residents. As referenced above in Strategic Step 2, the Bureau is working on establishing five permanent household hazardous waste collection facilities that, once established, will significantly reduce the number of mobile collection events and increase the tonnage which is collected.

Small Business Hazardous Waste Collection: The Bureau will continue its Conditionally Exempt Small Quantity Generator program for the City’s small businesses. As referenced above in Strategic Step 2, the Bureau is working establishing five permanent household hazardous waste collection facilities which will accept and process small business hazardous waste as well.

Waste Hauler Education: ~~In light of the proposed Waste Hauler Permit Ordinance, the Bureau will use part of the waste hauler fees to support waste haulers with technical assistance. The Bureau will offer private waste haulers templates for outreach materials and develop workshops, and other partnerships to increase residential and commercial recycling activity. In addition,~~ The Bureau will educate haulers about its Household Hazardous Waste, CESQG, green waste, source reduction, and recycling programs in order to increase their participation and effectiveness in these programs.

Bureau of Sanitation and General Services Department New and Alternative Technology Promotion: The Bureau and General Services will develop a Task Force of pertinent City departments and private sector stakeholders to explore, promote, and encourage the development of new and alternative technologies for the disposal and diversion of solid waste. The Environmental Affairs Department will participate in the task force with other stakeholders.

STRATEGIC GOAL 4: AN ENVIRONMENTALLY SOUND WASTE MANAGEMENT OPERATION

Goal: *The City will develop an environmentally sound solid waste management operation that protects public health and safety, safeguards natural resources, promotes sustainability, and uses the best available technology.*

In all waste management efforts, the City will take all necessary steps and measures to mitigate all apparent and potential negative environmental impacts that are associated with solid waste management in the City.

Implementation Responsibilities

General Services Department

Vehicle Maintenance Program: General Services will continue to operate a strict vehicle maintenance and inspection program for its refuse truck fleet and will assist the Bureau in the implementation of the alternative fuel refuse truck program.

Bureau of Sanitation

Alternative Fuel Refuse Truck Program: The SCAQMD's recently adopted Rule 1193 requires that all owners of refuse collection fleets of fifteen or more vehicles, including the City of Los Angeles, purchase alternative fuel vehicles when adding to or replacing their existing fleets starting in the July 2001. In addition, the Los Angeles City Council approved a motion that requires all rubbish/trash collection trucks operating within the City of Los Angeles, both public and private, to install particulate traps and use low sulfur fuel within in one year.

Further, City Council has referred to the Environmental Quality and Waste Management Committee, a motion that would require that as private trash collection operators replace existing fleet vehicles with clean fuel vehicles which meet SCAQMD standards, these new vehicles be assigned to routes within the City.

The Bureau is working closely with the City's Alternative Fuel Task Force to address the environmental impact and costs of achieving this new mandate.

STRATEGIC GOAL 5: A COST EFFECTIVE WASTE MANAGEMENT OPERATION

Goal: *The City shall operate a cost effective integrated waste management operation that emphasizes source reduction, recycling, and market development and is adequately financed to meet operational and maintenance needs.*

Source Reduction

Source reduction programs demonstrate that they result in the lowest unit cost per ton since the primary cost associated with these programs is public education and technical assistance. Therefore, the City should develop and sustain source reduction and technical assistance programs throughout the next 20 years and revisit them every five years to maintain the lowest total system cost.

Recycling

Recycling and composting of municipal solid waste is a lower cost alternative to solid waste collection, transfer, and disposal. The Bureau of Sanitation's residential blue bin curbside recycling program demonstrates this: during the period May 7, 2000 to June 7, 2000 the Bureau's West Valley collection yard reported that refuse collection cost \$56.80 per ton while recycling cost \$39.90 per ton. With increasingly stringent regulations of landfills, solid waste, and hazardous materials and increased transfer station and disposal costs, the cost of recycling will continue to be cost effective.

Market Development

The City will continue to develop a cost effective waste management system by establishing strong, viable, and self-sustaining markets for recyclable materials and materials and products manufactured with recycled content that support the City's waste diversion operation. The Bureau of Sanitation's Operation Clean Sweep is an example of how departments can promote recycled market development. Operation Clean Sweep spent \$100,000 on recycled content paint for its graffiti removal program, paint collected through the Bureau's HHW program. In addition, Operation Clean Sweep has specified that its contractors also use recycled paint for graffiti removal. In 1999, Operation Clean Sweep's 17 contractors spent an average of \$85,000 per month on recycled paint.

As City materials collection efforts increase, however, the City will define a strategic recycled market development program to sustain diversion goals. Market development must now take center stage. The City does not have one entity responsible for market development. This responsibility is dispersed among several agencies: the Office of the Mayor, Bureau of Sanitation, Bureau of Engineering, Department of Public Works, General Services Department, and other departments. These efforts must be linked with the City's current market development activities and business development programs into a focused cohesive market development program. This market development plan must embrace the concept and practice of sustainable development, as this new field will open a brand new market for recycled-content materials and products as well as for used materials and products.

Implementation Responsibilities

All City Departments

Recycled Content Procurement Ordinance: Ordinance #168313 amends the Los Angeles Administrative Code to establish a policy to promote the City's purchase of goods, supplies, and equipment containing recycled materials. All City departments must participate in the *Buy Recycled 2000 Challenge* which supports this ordinance.

Purchasing Price Preference Ordinance: City Council adopted Ordinance #170485 which allows a 10 percent price premium for recycled products, or a total additional annual expenditure of \$2.5 million.

Contract Program: All City departments must structure contracts to require vendors, consultants, other City departments, and government agencies to purchase and use recycled content materials and products while under contract.

General Services

Recycled Content Procurement Ordinance: Ordinance #168313 amends the Los Angeles Administrative Code to establish a policy to promote the City's purchase of goods, supplies, and equipment containing

recycled materials. The Department of General Services will continue to administer and implement the City recycled Products Purchasing Division specified by City Ordinance #168313.

Buy Recycled 2000 Challenge: The Buy Recycled 2000 Challenge supports Ordinance #168313 that amends the Los Angeles Administrative Code to establish a policy to promote the City's purchase of goods, supplies, and equipment containing recycled materials. The City has identified 19 products that are available and made from recycled materials. The City has designated 10 of these 19 items as "Buy Recycled 2000" mandated products, which means that these recycled products are proven items, commercially available, and that departments in need of those items ***should always buy such items made from recycled materials***. These items include: paper, office products, glass, lubricating oils, plastic products, rubber, batteries, compost, anti-freeze, fiberglass insulation, aggregate base, cement and concrete, promotional products, solvents, and paint. In July 2000, City Council passed a motion that reaffirmed the city's commitment to buy and use recycled products, whenever feasible. In addition, the motion included remanufactured laser toner cartridges as a "Buy Recycled 2000" mandated product. Two recent City Council motions continue to promote markets: one encourages the use of recycled and reusable products practices by city vendors and the second requires the recycling of materials in all Building & Safety demolition contracts.

Purchasing Price Preference Ordinance: City Council adopted Ordinance #170485 which allows a 10 percent price premium for recycled products, or a total additional annual expenditure of \$2.5 million. The Department's Specification and Technical Support Section (STS) is charged with the implementation and administration of this ordinance. STS reviews and develops City standards and specifications and, whenever practical, includes a "closed-loop" or "quasi closed-loop" arrangement in the specifications. The STS Section submits these specifications to the Procurement Section for purchasing staff's bid development and procurement process.

Prima 2000 Recycling: The General Services Department will ensure that the Prima 2000 accounting system incorporates the categories of recycled-content materials and products specified by City Ordinances #168313 and #170485 and that the system default to these materials and products.

Contract Development: The General Services Department and the Bureau of Contract Administration will develop contract language for City department contracts specifying that vendors, consultants, other City departments, and government agencies purchase and use recycled content materials and products, take back materials (packaging), and apply sustainable development practices while under contract to a City department.

City Department Education and Oversight: The General Services Department has the responsibility of ensuring that City departments are educated about and participating in the *Buy Recycled 2000 Challenge*, *Prima 2000 Recycling*, *CitiMax*, "Take Back - Producer Responsibility" policies, and the *Contract Program* referenced above.

Materials Exchange Programs: The General Services Department will assume responsibility for expanding City Department awareness of and participation in its CitiMax Program as well as Los Angeles County's CoMax Program and the State's CalMax Program.

City Department Recycled Procurement Reporting: The General Services Department will consistently use its departmental source reduction, recycling, and buy recycled documentation form to report department participation in the *Buy Recycled 2000 Challenge* and the *Prima 2000 Program*. General Services will oversee participation in the reporting procedure. Assessment of these reports will help General Services determine which departments require additional training and education.

Bureau of Sanitation and Department of Public Works

Public Outreach Campaign: The Bureau and Department of Public Works will develop a public outreach campaign to promote the above referenced materials exchange programs, increased use of recycled content materials and products, legislation supporting the above, development of producer responsibility initiatives.

Bureau of Sanitation/Bureau of Engineering/Office of the Mayor

New Technology/Business Development: The Bureau and the Mayor’s Office will continue to strengthen their collaboration on exploring, encouraging, and developing new technology and business in the areas of re-use, recycled products market development, and re-manufactured products for city funded buildings, projects, and private sector developments.

Bureau of Sanitation

Review of Contracts: The Bureau, in an effort to contain costs, will review on an annual basis, composting, transfer station, refuse, and material recovery facility contracts and proceed with the implementation of the Solid Resources Infrastructure Strategic Plan.

Office of the Mayor

Recycled Procurement Commitment: The Office of the Mayor will continue its support of City Ordinances 168313 and 170485 and the *Buy Recycled 2000 Challenge* and the *Prima 2000 Program*.

Recycled Market Development: The Office of the Mayor will continue its commitment to developing the recycled market industry in the City.

Financial Assistance: The Office of the Mayor’s LA Business Team can assist by the development of the recycled market industry in the following ways:

1. Extend its use of financial incentives such as subsidies, grants, and tax breaks to entrepreneurs and businesses seeking to establish recycling related enterprises.
2. Provide economic assistance to viable businesses that use post-consumer recyclables.

STRATEGIC GOAL 6: SUSTAINABLE DEVELOPMENT

Goal: *Promote sustainable development as the vision of the 21st century that will help Los Angeles to better manage its resources in such a way as to reduce waste, improve our environment, enhance our quality of life, create jobs, and save money.*

On April 12, 1995, the Los Angeles City Council adopted a motion instructing the Environmental Affairs Department to establish an interdepartmental task force comprised of representatives from the Bureau of Engineering Architectural Division, the General Services Construction Forces Unit, the Department of Public Works Bureau of Sanitation Solid Resources Citywide Recycling Division, the Community Redevelopment Agency, and other departments as appropriate. Through this motion, the City firmly established its commitment for sustainability. In May 2000 the Council instructed the Bureau of Engineering to oversee the development of the Sustainable Design Guidelines and Program for municipal buildings and designated BOE as the lead in the Sustainable Design Taskforce.

The current mission of this Task Force is to facilitate implementation of environmentally responsible building projects within the City of Los Angeles. To accomplish its mission, the Task Force is:

1. Developing and implementing criteria, standards, methods, and written guidelines for sustainable building and site performance that can be monitored and quantified;
2. Developing a program for implementing sustainable practices in the design, construction, and operations of City-owned buildings and sites;
3. Developing a program whereby the City can encourage sustainable building features in buildings the City leases, finds or finances, or otherwise influences in new construction or renovation; and,
4. Developing a market-based program that would promote sustainable development and building practices in the private sector.

Since 1995, the taskforce has made various recommendations to the City Council for the incorporation of energy-efficient, recycled content building products in all of the City's new construction and remodeling projects, and continues to study and make recommendations on an ongoing basis for additional environmentally-sensitive design features that should be incorporated into the City's new construction and remodeling projects.

Starting January 2001 a joint partnership of the Bureau of Sanitation and Bureau of Engineering will begin work on a citywide market based sustainable practices program for the private sector. For this effort, it is recommended that the taskforce be expanded to include a cross section of private sector participants.

Implementation Responsibilities

Office of the Mayor

The Office of the Mayor will lead and promote all citywide sustainable development policies and legislation to reach the 70% citywide diversion goal.

All City Departments

All City departments will lend their support and promote implementation of Citywide sustainable development policies and guidelines developed and coordinated by the Department of Public Work's Bureaus of Engineering and Sanitation and the City Departments' Sustainable Design Task Force.

Bureau of Sanitation/Bureau of Engineering

In addition, the Bureau of Sanitation will work closely with the Bureau of Engineering to enhance and expand the Sustainable Design Program into a citywide sustainable development program. The City's development policies and guidelines have the potential of creating a strong local market for recycled materials and products. The City has an annual capital improvement budget, including all bond projects, of hundreds of million of dollars. The Bureau of Engineering will continue to develop sustainable development guidelines and convert these guidelines into regulations so that the capital improvement budget can be used to procure recycled and environmentally - responsible materials and products. The Bureau of Sanitation will support efforts to promote citywide sustainable development practices that include construction and demolition recycling, best stormwater practices, and resource conservation to city departments, other public institutions, and the building industry.

6/7/01

R:\70% Strategy\70%stratlet.doc