

**TO: CITY COUNCIL**

**ATTN: POLICY AND SERVICES COMMITTEE**

**FROM: CITY MANAGER DEPARTMENT: PUBLIC WORKS**

**DATE: MARCH 13, 2007 CMR:123:07**

**SUBJECT: CONCEPTUAL REVIEW OF A ZERO WASTE OPERATIONAL PLAN**

**RECOMMENDATION**

Staff recommends that the Policy and Services Committee recommend to City Council approval of the short term, mid term and long term goals outlined in the Zero Waste Operational Plan (Attachment A). The Zero Waste Operational Plan recommends a regional facility approach to achieve 73 percent waste diversion by 2011 and close to zero waste by 2021. Reliance on regional facilities for composting and construction (C&D) debris processing provides the greatest diversion at the lowest price. The ZWOP also recommends a Recycling Drop-Off Center with a permanent Household Hazardous Waste facility to be developed locally with further study being required at a later date to determine the specific site location. The local Recycling Drop-Off Center will provide a convenient opportunity for residents and business to divert more materials to reuse and recycling and will reduce the toxicity of the disposed waste stream.

**BACKGROUND**

On November 15, 2004, during the discussion of the then-proposed Environmental Services Center project, Council directed staff to develop a zero waste policy and implementation plan. In January 2005, a Zero Waste Task Force composed of residents and businesses was formed to assist in the creation of a zero waste policy and the development of a Zero Waste Strategic Plan (ZWSP) for Palo Alto. The ZWSP was created to act as a framework to guide City officials in the planning and decision making process towards achieving zero waste goals. In October 2005, Council approved (CMR:382:05, Attachment B) the Zero Waste Task Force ZWSP, which identified the key objectives and strategies needed to reach zero waste goals. The ZWSP established a goal of 73 percent diversion by 2011 and to strive for zero waste by eliminating materials sent to landfills by 2021. The ZWSP recommended that the City conduct a waste composition study and develop a Zero Waste Operational Plan (ZWOP) to identify the policies, programs and facilities needed to achieve these goals.

**DISCUSSION**

The primary purpose of the ZWOP is to significantly reduce the amount of waste produced by residents, businesses, and institutions within the City, to reduce the toxicity of the disposed waste stream and to maximize diversion of recyclable and compostable materials generated within the City.

## Project Description

The ZWOP includes:

- A detailed waste composition study to identify the components of the City's disposed waste stream;
- Identification of the policies, programs and facilities needed to reach 73 percent diversion by 2011 and to strive for zero waste by 2021;
- Identification of potential candidate sites for processing facilities options both locally and regionally;
- Estimated costs for implementing the Plan;
- Estimation of diversion potential for the components of the Plan;
- Identification of the staffing needs to implement the policies and programs identified in the plan; and
- Creation of action plan that identifies the tasks necessary to undertake the Plan, including an implementation schedule.

## Palo Alto Waste Composition Study

To achieve zero waste, it is first necessary to understand existing waste streams to identify key opportunities for diversion, recovery, or reuse of specific types of waste categories. The following are the ZWOP's key findings regarding disposal trends and recovery potential for the city overall:

- Approximately 72% of the city's waste is reusable, recyclable or compostable.
- About 3% of the city's waste stream is considered potentially recyclable, meaning markets could be developed regionally to process and market these materials.
- Approximately 25% of the city waste sampled consists of problem materials (Waste is considered problem materials if there are no existing processing options).

The ZWOP's waste composition study identified the following key opportunities:

- Focus on residential and commercial paper. Recyclable paper from residential and commercial waste streams totaled approximately 15% (10,300 tons). Collection, processing, and end markets for recycled paper are well established and could be tapped to increase diversion.
- Expand organics diversion. Food waste and compostable paper from single family, multi-family, and commercial sources totaled more than 26% (18,000 tons).
- Examine opportunities of increased construction and demolition (C&D) debris reduction/recycling. Recyclable materials in the industrial and self-haul waste sectors account for more than 22 % (15,200 tons) per year.

## ZWOP Recommended Policies, Programs and Facilities

Given the key findings of the waste composition study, the ZWOP contains the following major recommendations (section 7.0 of the ZWOP):

### *Policies*

- Continue to expand efforts in waste prevention through legislation, policies, ordinances, outreach, and technical assistance.
- Seek to reduce the amount and toxicity of consumer product waste through measures that place the appropriate level of responsibility on manufacturers for the end-of-life of their products.
- Encourage innovative services to be added by the private sector and nonprofit groups so the City does not have to invest in those activities.
- Work with residents, businesses, community organizations, Bay Area Product Stewardship Council, Bay Area Zero Waste Communities group to further the City's zero waste efforts.
- Establish, support and incorporate environmentally preferable purchasing standards.

### *Programs*

- Divert all PASCO debris boxes rich in C&D debris to local C&D debris processors.
- Create a grant or loan program for attracting and retaining reuse and recycling businesses within the community.
- Track and reduce greenhouse gases from the actions in reducing waste within the community.
- Enhance recycling in public areas (grocery stores, convenience stores, hospitals and schools)
- Enhance business and school technical assistance programs to maximize participation.
- Phase in a mandatory participation ordinance to coincide with the implementation of a new collection services agreement.
- Create new rate incentives that further rewards customers for reducing or eliminating waste.
- Consider encouraging adaptive reuse design and expanding the C&D ordinance to include all projects.
- Have City lead by example by expanding recycling services, increasing education and requiring accountability.
- Implement in the upcoming procurement process for the hauling and processing agreement the following services: expansion of the current curbside yard trimming collection program to include food scraps, compostable paper, untreated wood and other compostables that would include multi-family and the commercial sector; expansion of the types of recycling materials being accepted at the curbside; improvement in the bulky item clean-up program to further reuse and recycle the materials being collected; and implementation of a universal roll-out of recycling services to all customers.

### *Facilities*

- Use the regional facilities approach when processing waste for recyclables at the Materials Recovery Facility, Recyclables, Organics/Yard Trimmings and C&D Debris. The regional facilities approach involves sharing existing processing facilities located within 85 miles of the City with the City contracting for these services as part of its agreement with a new contract hauler.
- Keep a Recycling Drop-Off Center with a permanent Household Hazardous Waste (HHW) facility locally with further analysis needed for a permanent site location.

## Overview

The following table provides an overview of the ZWOP for the short, mid and long term.

### **Zero Waste Operational Plan Overview**

<b>Year/Term</b>	<b>2004</b>	<b>2008 Short Term</b>	<b>2011 Mid Term</b>	<b>2021 Long Term</b>
Diversion Rate	62%	68%	77%	78 to 90%
Major additional programs and facilities	NA	- Additional C&D debris diversion -Additional staff resources	- New collection contract - Universal roll-out - Regional organics processing - Regional C&D debris processing	-Use of emerging technology or other innovative approaches to materials management
Estimated additional costs (Break down of cost are itemized in the Resource Impact Section)	NA	\$615,000 (on-going cost)	\$3,378,500 (on-going cost) \$150,000 (one time cost)	not available
Approximate rate impact	NA	3%	17%	not available
Projected one standard can rate (\$19.80) increase.	0	\$.59	\$3.37	not available

### **ALTERNATIVES TO STAFF RECOMMENDATION**

The ZWOP recommends a regional facility approach for composting and C&D processing along with a local Recycling Drop-Off Center and HHW facility. Two alternatives were looked at that included City-developed facilities, such as the former Los Altos Treatment Plant (LATP) site and the Palo Alto Regional Water Quality Control Plant (PARWQCP) site. These alternatives **would** provide local composting and C&D processing along with a Recycling Drop-Off Center with HHW. Comparisons for these alternatives can be found in section 6.4 and in Exhibit B in the Zero Waste Operational Plan. If the Council were to direct staff to further explore City developed facilities, additional environmental review would be required. Following is a general summary of the two alternatives along with a third alternative that would require no new City-developed facilities, programs or policies.

Alternative 1: City-Developed Facility – LAMP Site

This alternative assumes development of the western-most portions, approximately 7.1 acres of the former LAMP. This site could accommodate the Recycling Drop-Off Center with HHW, Organics/Yard Trimmings Composting, and C&D Debris Processing facilities. This site is also the subject of the City’s initiative to retain auto dealerships in Palo Alto (Anderson Honda).

Alternative 2: City-Developed Facility - PARWQCP Site

This alternative assumes development of approximately 7.5 acres of the southwestern portion of the PARWQCP site. The City would need to take possession, purchase and then demolish three buildings on the northeast side of Embarcadero Way and four buildings on the southwest side of Embarcadero Way, both most directly north of the PARWQCP entrance. This site could accommodate the Recycling Drop-Off Center with HHW, Organics/Yard Trimmings Composting, and C&D Debris Processing facilities.

Alternative 3: No New City-Developed Policies, Programs or Facilities

This alternative assumes that after the City landfill closes in 2011, the existing City facilities would be closed as well. The City would opt not to replace the Recycling Drop-Off Center including handling of certain HHW materials. Public Works Operations would continue its current HHW collection events at the PARWQCP. In addition, all self-haul materials would be diverted to the Sunnyvale Materials Recovery and Transfer (SMaRT) Station or other regional facilities. Under this scenario, the City Municipal Code would require modification.

**Estimated Costs and Diversion Rate Comparisons**

<b>Approach/Year</b>	<b>Estimated Net Annual Cost *</b>	Projected one standard can rate (\$19.80) increase.	<b>2004 Estimated Diversion</b>	<b>2011 Estimated Diversion</b>	<b>2021 Estimated Diversion</b>
Regional Facility Approach (ZWOP recommendation)	\$3,993,500	\$3.96	61.9%	76.6%	77.6%
<b>Alternate 1:</b> City Developed Facility-LAMP Site	\$5,242,000	\$5.03	61.9%	77.3%	78.3%
<b>Alternate 2:</b> City Developed Facility-PARWQCP Site	\$5,342,000	\$5.12	61.9%	65.3%	66.3%
<b>Alternate 3:</b> No New City Developed Policies, Programs, or Facilities	\$0	\$0	61.9%	65.3%	66.3%

\* Cost includes amortized capital cost, annual operating cost, estimated material sales, net material sales and existing processing cost.

**RESOURCE IMPACT**

Additional Refuse Fund expenses and revenues will be required to support the ZWOP recommendations. For the short term (fiscal year 2007-08) period \$615,000 for on going expenses would be needed to fund:

- \$450,000 for additional staff or contract resources (3 FTE),
- \$100,000 for expanding the outreach campaign,
- \$15,000 for diverting the remaining PASCO debris boxes rich in C&D to a local C&D processor, and
- \$50,000 for grants or loan program for attracting and retaining reuse and recycling businesses.

For the mid term (after fiscal year 2008 but on or before fiscal year 2011) period, \$3,378,500 of on-going expenses and \$150,000 of one time-time expense would need to fund:

- \$15,000 for organic containers;
- \$2,500 for technical assistance to multi-family units;
- \$3,361,000 for implementing new programs in the upcoming procurement process for collection and processing services (assumes a regional facility approach for composting and C&D Debris processing with a local Recycling Drop-Off Center with HHW facility – see Exhibit B in the ZWOP for additional details.); and
- \$150,000 of one-time expenses would need to be funded for the purchase of organic containers.

For fiscal year 2007-08, staff is proposing a 13 percent rate increase for the Refuse Fund to maintain the Council-adopted minimum Rate Stabilization Reserve. It is projected that if the ZWOP is fully implemented as recommended, that a 20 percent rate increase for the Refuse fund would be required starting in fiscal year 2007-08 (a 3% rate increase, and after fiscal year 2008 but on or before fiscal year 2011, a 17% rate increase).

### **POLICY IMPLICATIONS**

On November 15, 2004, during the discussion of the then-proposed Environmental Services Center project (CMR: 470:04), Council directed staff to return to Council with a proposed policy for zero waste, including an implementation plan. The Zero Waste Operational plan is consistent with this Council direction.

The City's Sustainability Policy and Comprehensive Plan contains many programs and policy statements that are consistent with the long-term solid waste planning goals and objectives of the ZWOP. The city's Comprehensive Plan contains the following policies:

#### **Comprehensive Plan Policies**

##### **Natural Environment-Solid and Hazardous Waste**

- N-34: Reduce the amount of solid waste disposed in the city's landfill by reducing the amount of waste generated and promoting the cost-effective reuse of materials that would otherwise be placed in a landfill.
- N-35: Reduce solid waste generation through salvage and reuse of building materials, including architecturally and significant materials.
- N-36: Encourage the use of reusable, returnable, recyclable, and repairable goods through incentives, educational displays and activities, and city purchasing policies and practices.
- N-37: Ensure the environmentally sound disposal of solid waste.
- N-38: Support state and federal legislation encouraging the use of recyclable goods.

- N-52: Improve city composting practices and continue promoting the household composting program.
- N-54: Continue to develop long-term solid waste management programs that include safe and environmentally sound disposal methods such as the SMaRT Station.

The following local, state, and federal mandates are consistent with the Zero Waste Operational Plan recommendations:

Palo Alto Municipal Code (5.20.270)

The city will maintain, within the city’s territorial limits, a recycling center that accepts from residents and non-residents the delivery of recyclable materials.

**ENVIRONMENTAL REVIEW**

This project is a feasibility study and exempt under 14 California Code of Regulations 15262.

**ATTACHMENTS**

- Attachment A: Zero Waste Operational Plan-December 2006
- Attachment B: CMR: 382:05 Adoption of Zero Waste Resolution, Approval of the Zero Waste Strategic Plan and Direction to prepare a Zero Waste Operational Plan

Copies of the attachments to this CMR:123:07 may be viewed at the Public Works Department counter located at 250 Hamilton Avenue, 6<sup>th</sup> Floor, Palo Alto or by contacting Russ Reiserer at 650-496-6951.

PREPARED BY:

\_\_\_\_\_  
RUSSELL REISERER  
Solid Waste Manager

DEPARTMENT HEAD:

\_\_\_\_\_  
GLENN S. ROBERTS  
Director of Public Works

CITY MANAGER APPROVAL:

\_\_\_\_\_  
EMILY HARRISON  
Assistant City Manager