

CITY OF OAKLAND
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CITY OF OAKLAND
AGENDA REPORT

TO: Office of the City Administrator
ATTN: Deborah Edgerly
FROM: Public Works Agency
DATE: November 28, 2006

RE: **Resolution Adopting A Strategic Plan To Achieve The City Council Goal Of
Zero Waste By 2020 For The City Of Oakland**

SUMMARY

On March 6, 2006, the Oakland City Council adopted Resolution #79774 C.M.S., which set a Zero Waste Goal by 2020 for the City (Goal), and directed staff to develop a Zero Waste Strategic Plan (Plan) to provide guidance in the planning and decision-making to achieve the Goal. This staff report presents the Strategic Plan to achieve Oakland's Zero Waste Goal (Attachment 1) and a Resolution adopting the Plan.

Zero Waste is a sustainability philosophy and design principle that goes beyond recycling, taking a whole system approach to the vast flow of resources and waste through society, and moving to eliminate waste. Oakland's Zero Waste Goal is to cut the City's current waste disposal of 400,000 tons per year to 40,000 tons per year – a 90% reduction. This is an ambitious goal for Oakland, and no single strategy will achieve Zero Waste. Zero Waste is as much a journey toward sustainability, as it is a discrete destination. The strategies in the Plan prioritize “upstream” solutions to stop waste before it is created, emphasize improving traditional “end of the pipeline” recycling programs, and identify the critical need for public education and economic solutions.

The City of Oakland has taken steps toward promoting sustainable use of resources and materials, including programs and policy goals to reduce, reuse, and recycle materials that would otherwise be disposed as waste. Adoption of the Plan is consistent with, and an explicit validation of, the Council goal to Develop a Sustainable City. In preparing this Plan staff conducted a series of public meetings with residents, and met with Oakland sustainable business leaders to solicit discussion and comment on the proposed strategies to be included in the Plan. This report recommends that the City Council approve the Zero Waste Strategic Plan, and commit to implementing its strategies by adopting policies and allocating resources to pursue them.

Item #: _____
Public Works Committee
November 28, 2006

FISCAL IMPACT

Pursuing specific strategies to achieve Oakland's Zero Waste Goal will lead to proposed programs and projects requiring funding as part of the budget development cycle for FY 2007-09 and in subsequent biennial budget cycles. Current waste reduction programs are funded within the Recycling Program Fund (Fund 1710), from which fee revenues are derived through garbage rates.

For the FY 2007-09 budget cycle, the following will likely be proposed:

- An economic and municipal finance study (by professional services contract) to identify and evaluate alternatives for restructuring Oakland's municipal solid waste system to provide clear and consistent incentives to reduce waste for both generators and service providers. Estimated cost: \$200,000, one time.
- Additional staffing and resources to focus on economic development, green business, and green market development; and implementation of City policies and operations toward Zero Waste and sustainability. Estimated cost up to \$300,000 annually.

Funding through FY 2007-09 is available in the Recycling Program Fund (Fund 1710), and up to \$150,000 per year in the Non-Residential Recycling Fund (Fund 2175, Project H63640), so the initiative will be funded from fees derived through garbage rates and not affect the City's General Purpose Fund.

BACKGROUND

On March 6, 2006, the Oakland City Council adopted Resolution #79774 C.M.S., which set a Zero Waste Goal by 2020 for the City (Goal), and directed staff to develop a Zero Waste Strategic Plan (Plan) to provide guidance in the planning and decision-making process to achieve the Goal. Public Works Agency staff, in concert with the Mayor's Office, conducted four meetings to solicit discussion and comment from the general public and sustainable business leaders, and have incorporated input and feedback received via this public participation process into development of the Plan. At the first Public Meeting on June 28, 2006, participants were introduced to Zero Waste concepts and Oakland's sustainability goals. At the second Public Meeting on July 19, 2006, participants reviewed possible Zero Waste options and strategies for Oakland, and provided input on which to pursue. At the third Public Meeting on September 20, 2006, participants reviewed and commented on the proposed strategies to be included in the Plan. Additionally, on June 29, 2006, staff convened a meeting of Oakland sustainable business leaders to introduce Oakland's Zero Waste Goal to businesses who are already practicing intensive waste reduction and other sustainable business practices, and to receive their input on how best to engage, inspire, support, and incentivize Oakland business toward widespread alignment with and support of Oakland's Zero Waste Goal.

The March 2006 Council Resolution adopting the Zero Waste Goal stated, "Oakland will assume a leadership role, partnering with other Zero Waste local, regional and international communities and sustainability advocates to actively pursue and advocate for strategies and incentives to advance Zero Waste principles for materials management, system re-design, highest and best use of discarded products and materials, and a closed-loop sustainable production and consumption society." Since March 2006, the Mayor's Office has taken a leadership role in establishing the California Product Stewardship Council, whose stated mission is, "To shift California's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in order to reduce public costs and drive improvements in product design."

A more detailed background of the legislative and policy history and framework for sustainability over the past 15 years is included in the Plan.

KEY ISSUES AND IMPACTS

Why is Zero Waste Important?

As detailed in the March 2006 staff report for the Resolution establishing Oakland's Zero Waste Goal, pursuing Zero Waste is important for Oakland because it is:

- Needed for Oakland to achieve sustainability and 75% waste reduction goals
- Needed to reverse growing local/regional health and financial liabilities of waste disposal
- A key element of local economic and workforce development
- Needed in a worldwide effort to reverse damage to the planet's natural systems

What is Zero Waste?

Zero Waste derives from applying the principle of sustainability to redefine the concept of "waste" in our society. The presumption that waste is a natural by-product of our culture and economic system that is handled by end-of-the-pipeline waste management activities, programs, or technologies, is replaced with the presumption that:

- Products are designed and used so that they can be and are repaired, reused, or recycled
- Any output during the production, transportation, use, and disposition of these products that is destined for land, sea or air is not a threat to planetary, animal, or plant health

Environmental Hierarchy to Guide Oakland's Zero Waste Strategies, Policies, and Actions

As detailed in the Plan, Oakland's pursuit of its Zero Waste Goal will be guided by an environmental hierarchy for 'highest and best use' of materials and pollution prevention in all phases of production, use, and disposition of products and materials. This hierarchy is derived from the core Zero Waste principle of preventing, rather than managing, waste and pollution. It recommits to the priority ordering of the waste reduction hierarchy: first reduce consumption; next, reuse products by maintaining their form and function; and finally, recycle anything that is no longer usable and landfill any residual. The hierarchy formalizes, organizes, and clearly presents how Zero Waste is a fundamentally different approach to waste reduction than the

recycling programs of the past 15 years: Zero Waste tackles the root causes of wasting and broadens responsibility for the solutions to include government, producers, and consumers.

Implementation of Strategies, and Progress Status Updates

Pursuing specific strategies will require policy and advocacy initiatives, and lead to proposed programs and projects requiring funding as part of the budget development cycle for FY 2007-09 and in subsequent biennial budget cycles. It is critically important for Oakland's government, businesses, and citizens to develop and sustain leadership in legislative policy and advocacy toward being a Sustainable City, including participation in state, national, and international dialogues and negotiations.

Staff will provide status updates to the Mayor and City Council through the biennial budget process on progress toward the Zero Waste Goal, including implementation of strategies and waste disposal reduction progress toward the goal of landfilling only 40,000 tons per year by 2020.

ZERO WASTE STRATEGIES FOR OAKLAND

The following five strategies comprise traditional recycling programs as well as system redesign solutions for product waste, and policy and regulatory changes. They provide the framework for Oakland's Strategic Plan to achieve Zero Waste by 2020.

1. Expand and Improve Local and Regional Recycling and Composting

Oakland residents recycle more each year, local private-sector recyclers with access to Pacific Rim markets via the Port of Oakland help businesses reduce waste, and construction and demolition debris recycling continues to increase. Yet large amounts of recyclable and compostable materials are landfilled each day. Maximizing waste reduction from programs that are already capitalized and in place is both efficient and cost-effective. Increasing recycling and composting will require greater engagement with the business community and general public; additional local and regional recovery facilities and services; and new initiatives and innovations.

For more details on Strategy #1, see Strategic Plan (Attachment 1) page 11. Recommended next steps to implement this strategy include:

- Expand residential food scraps recycling promotion to increase participation
- Promote development of regional composting and recycling processing capacity
- Implement and sustain a comprehensive marketing and technical assistance program targeting non-residential waste reduction

2. Develop and Adopt New Rules and Incentives to Reduce Waste Disposal

Oakland's Municipal Code and garbage franchise have provided a good framework for achieving 50% waste diversion. However, meeting the City's 75% waste diversion and Zero Waste goals will require ending the current incentive for landfilling. Other cities in and beyond the Bay Area have developed systems that realign economic incentives to reward all parties for reducing waste, and end the incentive to landfill. Development and adoption of a new waste management system design in preparation for Oakland's next collection and disposal contract is key to the goal of reducing waste. Other new rules and incentives detailed in this Plan are needed to encourage and reward reuse, repair, and reduced consumption.

For more details on Strategy #2, see Strategic Plan (Attachment 1) page 13. Recommended next steps to implement this strategy include:

- Restructure Oakland's municipal code, garbage franchise agreement, and residential recycling service contracts to provide clear and consistent incentives to reduce waste for both generators and service providers so that those who waste pay the most
- Implement a measured, phased approach to banning from disposal readily recyclable materials such as corrugated cardboard

3. Preserve Land for Sustainable Development and Green Industry Infrastructure

Increased recovery of a broader variety of materials will require more businesses and more services, producing more green collar jobs for Oakland residents. Industrial land close to the Port and to transportation and other support services is urgently needed for concrete crushing, recycled asphalt production, and other activities that reuse and recycle building materials. Reuse and deconstruction businesses create more jobs than recycling and disposal, and also need space to grow. Manufacturing new products from local recycled materials could drive further green industry and workforce development, and will require appropriate industrial land. Land for Zero Waste infrastructure should be strategically allocated, just as it is for vital public infrastructure such as wastewater treatment facilities and power generation.

For more details on Strategy #3, see Strategic Plan (Attachment 1) page 14. Recommended next steps to implement this strategy include:

- Develop policy goals and priority commitments regarding land use, workforce and business development support, and strategic partnerships to retain and expand reuse, recycling, and green manufacturing businesses and facilities both locally and regionally
- Offer tangible economic incentives and technical assistance for green, sustainable, and Zero Waste businesses
- Partner with regional agencies to help site new regional processing facilities that are needed, but cannot be sited within Oakland

4. Advocate for Manufacturer Responsibility for Product Waste, Ban Problem Materials

Every year brings an increase in complex, toxic and non-recyclable products and packaging. This increase is outpacing local government's ability to safely and cost-effectively handle the associated wastes, as well as increasing Oakland's future environmental liability. Unless this cycle is corrected, not even a high-performing recycling region like ours can recycle our way to Zero Waste. Oakland needs to join regional, statewide, national, and international efforts to end the "waste subsidy" for manufacturers that is currently borne by local governments and ratepayers, and to insist that the costs and risks to manage end-of-life products and materials be the responsibility of manufacturers. Such measures can provide incentives for manufacturers to "design the waste out" so that products can be readily reused, repaired, reconditioned, or recycled. Local retailers can assist in collecting and returning selected products to manufacturers. Use or sale of problematic products can also be banned, as Oakland has recently done for expanded polystyrene food packaging and the European Union and China are doing for hazardous materials in electronic products.

For more details on Strategy #4, see Strategic Plan (Attachment 1) page 16. Recommended next steps to implement this strategy include:

- Assume leadership in regional, statewide, national, and international waste reduction and sustainability initiatives to shift product waste management toward producer responsibility in order to reduce public costs and risks, drive improvements in product design, and foster increased reuse and repair
- Develop and actively pursue a Zero Waste and sustainability legislative and regulatory policy agenda at the state, national, and international level

5. Educate, Promote and Advocate a Zero Waste Sustainability Agenda

Efforts have been made in Oakland to educate, inform, and instruct the general public and specific targeted audiences on how and why to reduce, reuse, and recycle. Yet many do not participate, even where convenient recycling systems are in place. Meanwhile, much of the language of Zero Waste and sustainability has been focused on a policy-making audience and not the general public. There is a need for messaging and communications that speak clearly and concisely about Zero Waste and sustainability in a way that makes sense in people's daily lives, in order to move society from awareness into acceptance and action. Educating and engaging diverse audiences will require innovative developments in the message and how it is communicated, along with effective price signals and other financial incentives. It will be necessary to develop partnerships within and beyond Oakland to pursue and advocate for needed policy and behavioral changes, incentives and new rules, and to listen to questions, concerns, and ideas about the new approach.

For more details on Strategy #5, see Strategic Plan (Attachment 1) page 18. Recommended next steps to implement this strategy include:

- Overhaul public education and messaging to effectively communicate 'reduce, reuse, recycle' and sustainability in ways that engage, motivate and inspire
- Develop media partnerships and other strategies to highlight and celebrate achievements, leadership, and successes of individuals and organizations that are contributing positively to a sustainable City and world
- Engage with advocacy groups that are working on legislative and social change to further Zero Waste goals
- Adopt Zero Waste policies and practices in the City's own operations, facilities, capital improvement and maintenance practices

SUSTAINABLE OPPORTUNITIES

Economic: Zero Waste strategies help Oakland businesses reduce waste, thereby increasing operating efficiency and reducing costs. Expanding and actively supporting use of discarded materials drives local economic and workforce development with 'green collar' jobs and value added production. It also supports the export of recyclable materials - one of the dominant mechanisms for returning empty export containers to Pacific Rim countries, which is an important consideration for the expected doubling of import activity at the Port of Oakland by 2020.

Environmental: Zero Waste strategies promote sustainability, conserve natural resources, reduce air and water pollution, and protect habitat.

Social Equity: Zero Waste strategies can provide new living wage jobs for the community, as well as preserve and enhance natural systems that provide basic ecological services such as clean water, clean air, and safe food.

DISABILITY AND SENIOR CITIZEN ACCESS

This project will not have any direct impact on disability and senior citizen access.

RECOMMENDATION AND RATIONALE

Staff recommends that City Council approve the Resolution Adopting a Strategic Plan to Achieve the City Council Goal of Zero Waste by 2020 for the City of Oakland, as an explicit validation of Oakland's commitment to become a Sustainable City. By pursuing Zero Waste strategies Oakland can achieve its sustainability and 75% waste reduction goals, reverse growing local/regional health and financial liabilities from waste disposal, support sustainable local economic and workforce development, and contribute to a worldwide effort to reverse damage to the planet's natural systems.

ACTION REQUESTED OF THE CITY COUNCIL

Staff recommends that the City Council approve the Resolution Adopting a Strategic Plan to Achieve the City Council Goal of Zero Waste by 2020 for the City of Oakland.

Respectfully submitted,



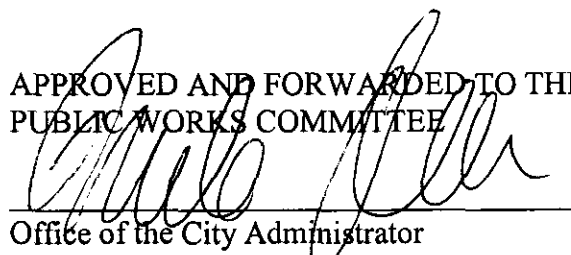
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Office of the City Administrator

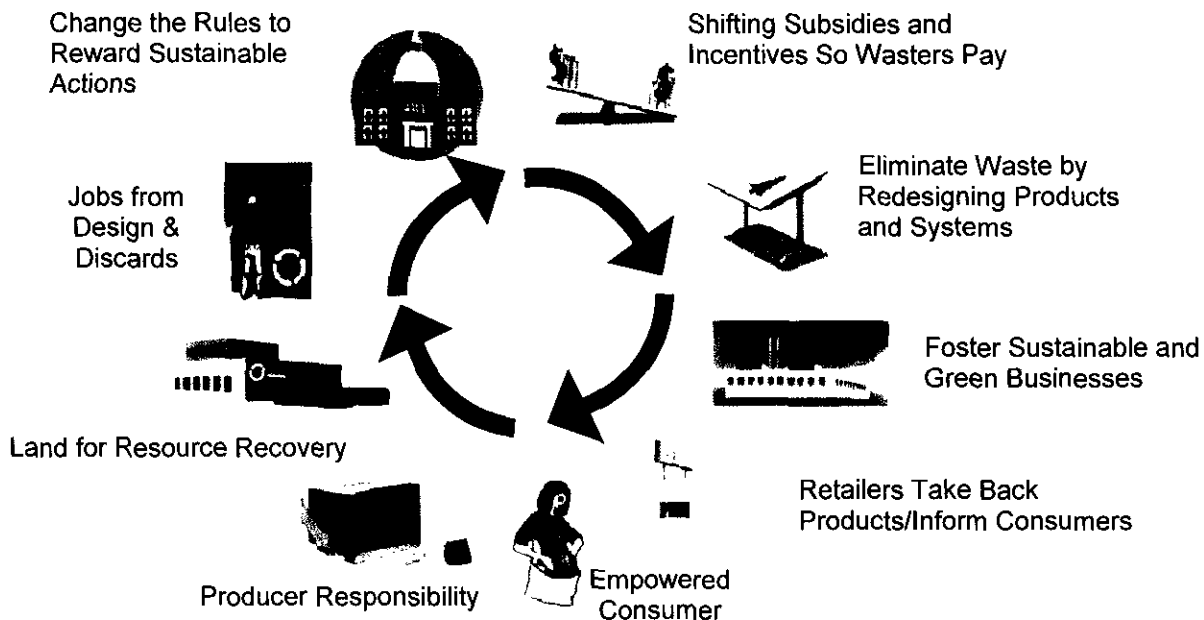
Item #: _____
Public Works Committee
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City of Oakland
Public Works Agency

www.zerowasteoakland.com

Zero Waste Strategic Plan



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**The world will not evolve past its current state of crisis by
using the same thinking that created the situation.
- ALBERT EINSTEIN**

November 28, 2006

Table of Contents

I.	EXECUTIVE SUMMARY	1
II.	BACKGROUND	5
III.	EXISTING CONDITIONS.....	7
IV.	SELECTED STRATEGIES.....	11
	Strategy #1: Expand and Transform Local and Regional Recycling and Composting	11
	Strategy #2: Develop and Adopt New Rules and Incentives to Reduce Waste Disposal.....	13
	Strategy #3: Preserve Land for Sustainable Development and Green Industry Infrastructure.....	14
	Strategy #4: Advocate for Manufacturer Responsibility for Product Waste, Ban Problem Materials	16
	Strategy #5: Educate, Promote and Advocate a Zero Waste Sustainability Agenda	18
V.	CONCLUSION.....	21
	Exhibit A - Environmental Hierarchy to Guide Oakland’s Zero Waste Strategies, Policies and Actions	
	Exhibit B – City of Oakland’s Existing Recycling and Waste Reduction Programs	
	Exhibit C – Oakland Recycling and Reuse Companies	

I. EXECUTIVE SUMMARY

Overview

In keeping with its goal of becoming a Sustainable City, the Oakland City Council adopted a Zero Waste Goal in March 2006. To reach that goal, Council directed staff to develop a Zero Waste Strategic Plan (Plan). Zero Waste is an ambitious goal, and no single strategy will achieve Zero Waste. This Executive Summary presents selected strategies in brief, and they are further detailed in the Selected Strategies section of this Plan. These strategies prioritize “upstream” solutions to stop waste before it is created, and include initiatives to improve and expand traditional, “end of the pipeline” recycling programs and public education.

Why Zero Waste?

The volume, complexity, and toxicity of waste are increasing each year, despite Oakland’s successful recycling efforts. Growing consumption of material and energy for consumer products is impacting global life support systems. Extraction, processing, production, transportation, use, and disposal of consumer goods are linked to most major environmental problems including habitat destruction, loss of biodiversity, global climate change, and the public health and social disruption associated with these problems. Local municipal waste management systems are not intended for or suited to managing complex and toxic waste. Decisions about wasteful product design and packaging are made by manufacturers and marketers. Local governments and rate payers are relegated to bearing the inappropriate burdens of increasing costs and risks to manage end-of-life products and materials. Zero Waste represents a fundamentally different approach that tackles the root causes of wasting and broadens responsibility for the solutions.

Zero Waste Goes Beyond “Waste Diversion”

Oakland residents and businesses have exceeded the state mandate of 50% waste diversion by reducing landfill waste disposal from 580,000 to 400,000 tons per year over the past 15 years. This 30% reduction in annual disposal tons since 1990 enabled Oakland to achieve 55% waste diversion based on the calculated waste diversion projection for 2005 of the California Integrated Waste Management Board (CIWMB). The CIWMB’s complex waste diversion calculation includes adjustments and credits for population and economic factors. This Plan represents a fundamentally different approach to reducing waste, by setting a far more ambitious goal of sending only 40,000 tons per year to landfill by 2020. Zero Waste does not just manage the “end of the pipeline” disposition of products and materials. Rather, it acknowledges the vast flow of resources and waste through our society and economy, challenges the wasteful and inefficient use of material and energy resources, and creates greater opportunities for local sustainable economic development.

Selected Strategies

No single strategy can achieve Zero Waste. The following strategies encompass traditional, “end of the pipeline” recycling programs as well as “upstream” solutions to product waste, and policy and regulatory changes.

1. Expand and Improve Local and Regional Recycling and Composting

We need to do better at what we are already doing, including City operations. Oakland residents recycle more each year, local private-sector recyclers with access to Pacific Rim

markets via the Port of Oakland help businesses reduce waste, and construction and demolition debris recycling continues to increase. Yet large amounts of recyclable and compostable materials are landfilled each day. Maximizing waste reduction from programs that are already capitalized and in place is both efficient and cost-effective. Increasing recycling and composting will require greater engagement with the business community and general public; additional local and regional recovery facilities and services; and new initiatives and innovations.

2. Develop and Adopt New Rules and Incentives to Reduce Waste Disposal

Oakland's Municipal Code and garbage franchise have provided a good framework for achieving 50% waste diversion. However, meeting the City's 75% waste diversion and Zero Waste goals will require ending the current incentive for landfilling. Other cities in and beyond the Bay Area have developed systems that realign economic incentives to reward all parties for reducing waste, and end the incentive to landfill. Development and adoption of a new waste management system design in preparation for Oakland's next collection and disposal contract is key to the goal of reducing waste. Other new rules and incentives detailed in this Plan are needed to encourage and reward reuse, repair, and reduced consumption.

3. Preserve Land for Sustainable Development and Green Industry Infrastructure

Increased recovery of a broader variety of materials will require more businesses and more services, producing more green collar jobs for Oakland residents. Industrial land close to the Port and to transportation and other support services is urgently needed for concrete crushing, recycled asphalt production, and other activities to reuse and recycle building materials. *Reuse and deconstruction businesses create more jobs than recycling and disposal, and also need space to grow.* Manufacturing new products from local recycled materials could drive further green industry and workforce development, and will require appropriate industrial land. Land for Zero Waste infrastructure should be strategically allocated, just as it is for vital public infrastructure such as wastewater treatment facilities and power generation.

4. Advocate for Manufacturer Responsibility for Product Waste, Ban Problem Materials

Every year brings an increase in complex, toxic and non-recyclable products and packaging. This increase is outpacing local government's ability to safely and cost-effectively handle the associated wastes, as well as increasing Oakland's future environmental liability. Unless this cycle is corrected, not even a high-performing recycling region like ours can recycle our way to Zero Waste. Oakland needs to join regional, statewide, national, and international efforts to end the "waste subsidy" for manufacturers that is currently borne by local governments and ratepayers, and to insist that the costs and risks to manage end-of-life products and materials be the responsibility of manufacturers. *Such measures can provide incentives for manufacturers to "design the waste out" so that products can be readily reused, repaired, reconditioned, or recycled.* Local retailers can assist in collecting and returning selected products to manufacturers. Use or sale of problematic products can also be banned, as Oakland has recently done for expanded polystyrene food packaging, and the European Union and China are doing for hazardous materials in electronic products.

5. Educate, Promote and Advocate a Zero Waste Sustainability Agenda

Efforts have been made in Oakland to educate, inform, and instruct the general public and specific targeted audiences on how and why to reduce, reuse, and recycle. Yet many do not participate, even where convenient recycling systems are in place. Meanwhile, much of the language of Zero Waste and sustainability has been focused on a policy-making audience and not the general public. *There is a need for messaging and communications that speak clearly and concisely about Zero Waste and sustainability in a way that makes sense in people's daily lives, so as to move society from awareness into acceptance and action.* Educating and engaging diverse audiences will require innovative developments in the message and how it is communicated, along with effective price signals and other financial incentives. It will be necessary to develop partnerships within and beyond Oakland to pursue and advocate for needed policy and behavioral changes, incentives and new rules, and to listen to questions, concerns, and ideas about the new approach.

Environmental Hierarchy to Guide Oakland's Zero Waste Strategies, Policies, and Actions

Oakland's pursuit of a Zero Waste Goal will be guided by an environmental hierarchy for 'highest and best use' of materials and pollution prevention in all phases of production, use, and disposition of products and materials (see Exhibit A). Zero Waste has been defined by the Zero Waste International Alliance as an economic and physical system that emulates natural cycles, where all outputs are simply an input for another process. This means designing and managing materials and products to place highest priority on conserving resources and retaining their form and function without burning, burying, or otherwise destroying their form and function. It means eliminating discharges to land, water or air that harm natural systems. It means preventing, rather than managing, waste and pollution, and recommitting to the priority ordering of the waste reduction hierarchy: first reduce consumption; next, reuse what is left; and finally, recycle anything that is no longer usable and landfill any residual.

Measuring Progress Toward Oakland's Zero Waste Goal

Oakland's Zero Waste Goal is to cut the City's current waste disposal of 400,000 tons per year to 40,000 tons per year – a 90% reduction. This will require double the waste disposal reduction that Oakland has achieved over the past 15 years. It goes far beyond what any U.S. city has achieved to date, and would make Oakland the national leader of large cities in waste reduction.

Rather than use the state's diversion calculation described earlier, progress toward the Zero Waste Goal will be measured by the actual amount of annual waste landfilled. Table 1 on the next page shows Oakland's goals in five-year intervals, ending with the 2020 Zero Waste Goal year.

Table 1
Oakland Zero Waste Annual Disposal Goals

Year	Disposal Tons	
1990	580,000	Actual
2005	400,000	Current *
2010	300,000	Intermediate Goal
2015	150,000	Intermediate Goal
2020	40,000	Zero Waste Goal

* This represents a 55% diversion rate, based on the state's diversion calculation projection

The rapid acceleration in reducing waste disposal beyond 2010 is only feasible through major transformations that realign economic incentives to end the incentive toward landfilling (Strategy #2) and ensure that manufacturers assume responsibility for managing end-of-life products and materials (Strategy #4).

Conclusion

Zero Waste challenges the wasteful and inefficient one-way system of 'extract, consume and discard' and creates greater opportunity for sustainable economic development. This Plan to reach Oakland's ambitious goal of Zero Waste includes strategies to guide Oakland toward becoming a Sustainable City. The strategies prioritize "upstream" solutions to prevent waste before it is created, emphasize improving traditional "end of the pipeline" recycling programs, and identify the critical need for public education and economic solutions. By adopting and implementing this Plan, the City will take responsibility for its own destiny and help preserve resources and a healthy environment for future generations to enjoy.

II. BACKGROUND

On March 6, 2006 the Oakland City Council approved Oakland Resolution #79774 C.M.S. which adopted a Zero Waste Goal by 2020 for the City and directed staff to develop a Zero Waste Strategic Plan to provide guidance in the planning and decision-making process to achieve the City's Zero Waste Goal. At the same time the Council approved Oakland Resolution #79775 C.M.S. adopting a Strategic Plan for achieving Oakland's goal of 75% waste reduction by 2010, which identified that Zero Waste strategies would be necessary for Oakland to achieve its 75% goal.

In order to develop Oakland's Zero Waste Strategic Plan, Public Works Agency staff, in concert with the Mayor's Office, conducted four meetings to solicit input and receive feedback from the general public and sustainable business leaders. At the first public meeting on June 28, 2006, participants were introduced to Zero Waste concepts and Oakland's sustainability goals. At the second public meeting on July 19, 2006, participants reviewed possible Zero Waste options and strategies for Oakland, and provided input on which to pursue. At the third public meeting on September 20, 2006, participants reviewed and provided input on the proposed strategies to be included in the Strategic Plan. Additionally, on June 29, 2006, staff convened a meeting of Oakland sustainable business leaders to introduce Oakland's Zero Waste Goal to businesses who are already practicing intensive waste reduction and other sustainable business practices, and to receive their input on how best to engage, inspire, support, and incentivize Oakland business toward widespread alignment with and support of Oakland's Zero Waste Goal. The agenda and meeting summary from each meeting can be viewed at www.zerowasteoakland.com.

A series of state, county, and City legislative and policy initiatives on waste reduction, health, environmental protection, and sustainability over the past 15 years provide the framework for Oakland's adoption and pursuit of a Zero Waste Goal:

- California AB 939 (1989) and Oakland Resolution #66253 C.M.S. (1990) set initial goals for reducing waste disposal to landfills by 2000, and developing markets for recyclable materials
- City of Oakland Resolution #68780 C.M.S. (1992) authorized establishment of a state-designated City Recycling Market Development Zone
- Alameda County Ballot Measure D (The Alameda County Waste Reduction and Recycling Initiative Charter Amendment, 1990) and Oakland Resolution #77500 C.M.S. (2002) elevated waste reduction goals to 75% by 2010
- City of Oakland Ordinance #612253 C.M.S. (2002) amended the Oakland Municipal Code to establish construction and demolition debris waste reduction and recycling requirements

Beyond solid waste disposal reduction and recycling market development, the following actions toward sustainability have been approved by the City of Oakland:

- City of Oakland Resolution #74678 C.M.S. (1998) adopted sustainability goals
- City of Oakland Resolution #74773 C.M.S. (1999) established a policy and task force to reduce dioxin emissions
- City of Oakland Resolution #79135 C.M.S. (2005) established Oakland's membership in the Chicago Climate Exchange, a market for reducing and trading greenhouse gas emissions, which provides a means for the City to achieve the goal of 15% reduction in greenhouse gasses by 2010 that the City Council established in 1998

- City of Oakland FY 2005-07 Mayor and City Council Goals include: Develop A Sustainable City
- In June 2005 Oakland Mayor Jerry Brown signed the United Nations World Environment Day Urban Environmental Accords, pledging that Oakland would implement 21 action steps toward sustainability, including adopting a Zero Waste Goal
- Staff from PWA-Recycling and CEDA-Recycling Market Development Zone are participating in a newly-formed Bay Area Zero Waste Communities working group, which comprises local governments that have adopted Zero Waste goals and seek to join with other communities to partner, share, and leverage pursuit of Zero Waste strategies and actions, and includes representatives from the Cities of San Francisco, Berkeley and Palo Alto, and Santa Cruz County.
- Since March 2006, the Mayor's Office has taken a leadership role in establishing the California Product Stewardship Council, whose stated mission is, "To shift California's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in order to reduce public costs and drive improvements in product design."

III. EXISTING CONDITIONS

Overview

Oakland is situated at the geographical center of the San Francisco Bay Area, and is the commercial, cultural, population, and transportation center of the East Bay. It has a diverse population of 411,000 residents, 26,000 businesses, and 60,000 daytime workers in the downtown alone (per Community and Economic Development Agency data). Oakland is a vibrant hub of economic activity, which includes business and finance; regional medical and educational facilities; and warehousing, distribution, and trade - much of it related to the City's deepwater maritime port, which is the 3rd largest on the U.S. west coast. As a built-out city with little undeveloped land, future development largely will be in the form of reconstruction, reuse, or transformation of existing properties. The allocation and location of land use activities to accommodate future needs presents a key challenge and opportunity.

This section describes existing conditions that are relevant to selecting strategies to guide the planning and decision-making process to achieve the City's Zero Waste Goal, including profiles and data on Oakland's waste disposal; waste reduction programs, activities, infrastructure, and achievements; Municipal Code; and Garbage Franchise.

Solid Waste Disposal

Oakland's current waste disposal is approximately 400,000 tons per year. Table 2 below shows that 67% of Oakland's waste comes from non-residential sources, including 30% that is self-hauled directly to disposal facilities by waste generators over which the City has little control or influence. Generators who haul their own waste to the Davis Street Transfer Station and other in-county disposal facilities include institutions such as Cal Trans, AC Transit, BART, PG&E, EBMUD, Peralta College District, and the Port of Oakland, as well as independent contractors and the City, which itself hauls over 15,000 tons per year. Approximately 30,000 tons per year, much of it from construction and demolition projects, is self-hauled to out-of-county disposal facilities.

Table 2
Oakland's 400,000 Tons/Year Disposal by Sector

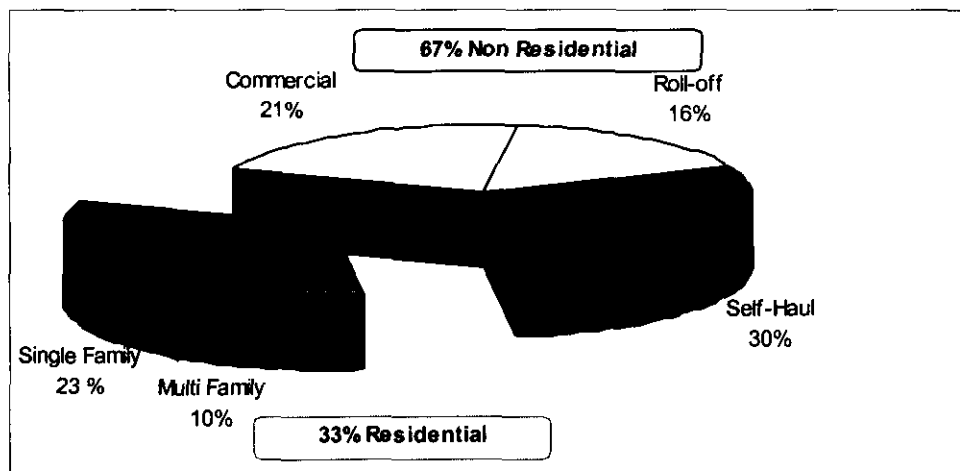
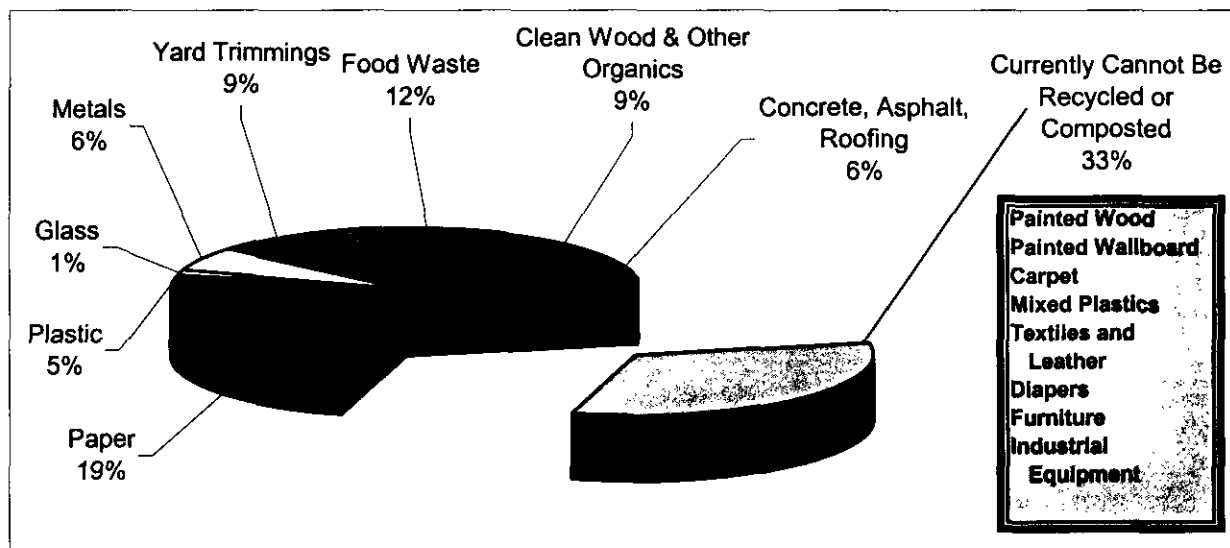


Table 3 below shows that 67% of what is currently disposed is recyclable using existing methods and technologies, and could be diverted if properly separated from other materials and recycled. A diversity of local and regional recovery and diversion opportunities exist for paper, glass, metals, plastics, yard trimmings, food, clean wood, concrete, asphalt, and roofing. They are underutilized because generators are not sufficiently motivated, or are unaware of these opportunities. Lack of motivation is often due to financial or convenience considerations. Little or no recycling, reuse, or repair opportunities currently exist for 33% of the products and materials disposed. The major waste components that currently cannot be recycled or composted in Oakland are listed in Table 3.

Table 3
Oakland's 400,000 Tons/Year Disposal by Material



Oakland's waste disposal system has experienced similar changes as those in the rest of the U.S. as product and packaging waste continues to increase in volume, complexity, and toxicity. Nationally, since 1960:

- Per capita product and packaging waste disposal has doubled
- Product and packaging waste comprise 75% of landfill disposal
- Product and packaging waste has increased at twice the rate of population increase

Waste-Based Energy

A new generation of high-temperature thermal processing technologies that would consume mixed municipal solid waste is being marketed to local jurisdictions as "zero waste" alternatives to landfill disposal, and purport to replace fossil fuels with alternative, "sustainable" fuels made from waste. These waste-based energy technologies are being promoted by the California Energy Commission and the CIWMB under the rubric of "Emerging Technologies".

While these technologies may be suitable for a uniform, controlled feedstock such as agricultural scrap or manure, they are at the bottom of the Environmental Hierarchy (Exhibit A) for

municipal solid waste and are fundamentally contrary to Zero Waste because most of the resource-depleting impacts of products occur by the time they are consumed and disposed. Additionally:

- Wasted resources are not a sustainable feedstock for energy production and only facilitate continued resource depletion, much the way landfills do
- These technologies institutionalize waste, by making waste a “commodity” feedstock for the energy production industry
- These facilities require large energy inputs to capture only fractions of the embodied energy in wasted material - net energy output is unproven and disputed
- These facilities are capital intensive, and typically require local jurisdictions to guarantee delivery of established volumes of waste, or pay for volume deficits, (known as “put or pay” contracts)
- By contrast, waste reduction, traditional recycling and composting are producing known, current, quantifiable net energy savings and reduction in greenhouse gasses through existing infrastructure, at significantly lower cost, and with greater local job creation
- The safe containment of hazardous substances produced by these facilities is unproven; disposal of toxic by-products and emissions to air, land and water are significant public health concerns

While these technologies may appeal to the goals and values of some communities, they distract them from progressing toward true sustainability.

Waste Reduction Programs and Achievements

In achieving and exceeding the state-mandated goal of 50% waste reduction by 2000, Oakland has reduced its disposal by 180,000 tons per year over the past 15 years. In addition:

- Many Oakland residents have used available franchised recycling and composting services to recycle more and more each year
- Some Oakland businesses have used the vibrant local private-sector recycling economy and other waste prevention actions to significantly reduce waste
- Construction and demolition debris recycling has doubled since the City adopted its Construction and Demolition Debris Waste Reduction and Recycling Requirements (C&D Recycling) Ordinance in 2000, and as of 2005 exceeds 75,000 tons per year.
- Waste reduction programs and initiatives of the regional agency StopWaste.Org have served as an overlay and complement to the City’s programs, including: StopWaste Partnership which assists many of Oakland’s largest commercial and institutional entities; recycling, reuse, and repair information services through its Recycling Guide, online Recycling Wizard, and Recycling Hotline; Bay Friendly Gardening and home composting program; grant and recycling market development projects; and schools recycling project.

More comprehensive information on the City’s existing waste reduction and recycling programs and achievements is provided in Exhibit B.

Increasing Waste Diversion vs. Decreasing Waste Disposal

Oakland continues to exceed state-mandated 50% waste diversion as measured using the state's calculation method. The state's waste diversion calculation uses complex formulas that include population and economic index adjustment factors, and many other credits rather than measuring the actual reduction in waste disposal tons. Using this waste diversion method to measure progress toward sustainability is less relevant in the face of global resource depletion and climate change; health and social effects of accelerating global production and trade; and Oakland's Sustainable City goal.

Municipal Code

The Oakland Municipal Code (OMC) provides the legislative framework that governs Oakland's solid waste and recycling system. OMC Chapter 8.28, Solid Waste Collection and Disposal and Recycling, explicitly defines solid waste, which is subject to Oakland's exclusive Franchise Agreement for Solid Waste and Yard Waste Collection and Disposal Services (Franchise); and non-franchised recyclable and organics materials, which have been separated from mixed solid waste. Any premises generating mixed solid waste must subscribe to services and pay rates defined by the Franchise. No one other than the franchisee may collect, transport, or dispose mixed solid waste except for the generators themselves, who may self-haul mixed waste directly to a permitted disposal site. Non-residential, source-separated recyclable materials may be collected by others, and there are many such private collectors operating in Oakland.

OMC Chapter 15.34, C&D Recycling, requires that building permit applicants for most building and all demolition projects prepare a waste reduction and recycling plan indicating how they will achieve the minimum program requirements. The most recent OMC amendment (Chapter 8.07) related to waste reduction is an Ordinance that takes effect January 1, 2007 prohibiting use of polystyrene foam disposal food service ware by restaurants, take-out food vendors, and City facilities, and requiring that all disposable food service ware is biodegradable.

Garbage Franchise Agreement

Oakland's Franchise Agreement for Solid Waste and Yard Waste Collection and Disposal Services (Franchise) grants an exclusive franchise for collection of residential and non-residential mixed solid waste to a sole franchisee and defines the terms of collection and landfill disposal services to be provided by the franchisee, as well as rates charged to customers, franchise and other fees paid to the City by the franchisee, and other provisions. Services provided under the Franchise include citywide collection of yard trimmings, food scraps, and bulky collection for single-family residences; collection and disposal services for City government operations; street litter container collection; and residential recycling for the southern half of the City.

IV. SELECTED STRATEGIES

No single strategy can achieve Zero Waste. The following strategies encompass traditional, “end of the pipeline” recycling programs as well as “upstream” solutions to product waste, and policy and regulatory changes. For each strategy there is a description, an explanation of why the strategy has been selected, and recommended next steps to implement the strategy.

Strategy #1: Expand and Improve Local and Regional Recycling and Composting

Description of Strategy: Expand and improve existing programs for waste reduction and recycling to maximize public awareness and use of available services and options. Maximize waste reduction from programs and opportunities that are already in place, and develop new ones. Increase recycling and composting through greater engagement with the business community and general public; additional local and regional recovery facilities and services; and new initiatives and innovations.

Why Strategy Selected: Well-established, existing recycling programs and services require continuous focused attention to sustain and increase participation and effectiveness. These programs and services have not fully penetrated all market sectors, and awareness of waste recycling and reduction options by current and prospective participants requires continuous communication and reinforcement. New efforts and initiatives will be required, and existing ones may need to be expanded or transformed to meet the ambitious Zero Waste Goal.

Participation in Oakland’s residential recycling program increased dramatically with the 2005 roll-out of the “New Weekly Pickup.” However, it is estimated that only 15% of residences use the food scraps service that was added to the now-weekly, unlimited yard trimmings service. Most residents do not participate in the food scraps program, despite citywide distribution of food scraps containers in 2005 that was accompanied by a comprehensive marketing and educational campaign, and an on-going regional media campaign by StopWaste.Org.

Recycling awareness and participation are significant issues in the non-residential sector, which generates two-thirds of Oakland’s waste. An extensive free-market recycling infrastructure exists in Oakland thanks to immediate access to the Port, and the Oakland Municipal Code that encourages entrepreneurial free market competition for collection of recyclable materials. The City’s Small Business Recycling Program, a component of Oakland’s residential recycling service contracts, offers cost-effective collection to business that may be too small to attract service providers in the open market.

While these recycling services are available throughout the City and serve businesses of all sizes, it can still be difficult for business and institutional waste generators to learn about or obtain these services, or to see the value in using them. The City’s most significant monitoring and active engagement with private sector recycling comes through oversight of the diversion requirements established under the C&D Recycling Ordinance. One key to maximizing results in the non-residential sector is a comprehensive outreach and marketing campaign on waste reduction and recycling. Such a campaign needs to engage, partner with, and leverage all types

of non-residential recycling service providers, and complement an active and ongoing collaboration with the countywide StopWaste Partnership and Bay Area Green Business Program to provide direct technical support including on-site assistance. It is also important to increase understanding, access to, and embracing of waste reduction opportunities beyond recycling, including: 'reduce, reuse, return, and repair'.

Continuous evaluation of the effectiveness of the services provided to the residential and non-residential sectors by City contract and on the open market will help inform policy and program development related to the other strategies described in this plan.

Recommended Next Steps to Implement Strategy:

- Promote development of adequate regional composting and recycling processing capacity
- Require deconstruction and salvage of structures on the former Oakland Army Base (per the 1997 OAB Conditions and Trends Summary Report)
- Expand Oakland's C&D Recycling Ordinance to include a broader range of projects, provide financial or procedural incentives, and expand informational resources and technical assistance
- Expand Oakland's C&D Recycling Ordinance to include incentives for deconstruction and salvage, in tandem with market development for deconstruction, salvage, and source separated debris recycling
- Implement and sustain a comprehensive marketing and technical assistance program targeting non-residential waste reduction, leveraging and partnering with the existing free-market recyclers
- Build on existing regional residential food scraps recycling promotion efforts to overcome barriers to participation
- Require recycling and waste reduction plans as part of City of Oakland permit and rental agreements for events and facility rentals, and develop and implement such plans for City-sponsored events
- Add selected recyclable materials to residential recycling collection, such as wide-mouth plastic containers, where feasible
- Renew promotion of Oakland's multi-family recycling program, including development of new informational and outreach approaches to non-participants, and incentives to participate
- Engage with recycling service providers to identify opportunities for City assistance, such as printed brochures and technical assistance specific to non-residential food scraps; and implement feasible programs
- Promote and expand programs that recognize and reward the achievements of green and sustainable business, enabling them to benefit from differentiating their products and services in the marketplace.
- Continue to fund and promote the Green Business, Green Restaurant, East Bay Green Coupon Book and other "pro-commerce" Zero Waste related efforts
- Support StopWaste.Org development of a Sustainable Business Rating System
- Explore and evaluate the benefits of instituting permit, license, or non-exclusive franchise system for non-residential recycling service providers that includes reporting and diversion requirements
- Explore and evaluate the benefits of partnering with other cities to develop and expand customer incentives to reduce service levels and reduce wasting

- Explore and evaluate the benefits of expanding multi-family recycling services to include weekly yard trimmings and food waste collection
- Explore and evaluate the benefits of increasing opportunities to drop-off reusables, recyclables and compostables beyond normal week-day hours
- Explore and evaluate the benefits of promoting online services to divert reusable goods from residences and businesses

Strategy #2: Develop and Adopt New Rules and Incentives to Reduce Waste Disposal

Description of Strategy: Redesign Oakland's waste collection and landfill system, realigning economic incentives to reward all parties for reducing waste, and ending the incentive to landfill. Research, review, evaluate, and implement policies and programs to restructure Oakland's municipal code and contracts for garbage collection, transfer, and landfill disposal; as well as residential recycling collection service and materials processing and marketing, so that all parties have a clear and consistent incentive to reduce wasting. Ban disposal to landfill of easily recyclable or problematic materials. Examples of disposal bans include those enacted by Seattle, Washington for corrugated cardboard; 32 states, including California, for tires; and 23 states, and the Counties of San Diego and Sonoma in California, for yard trimmings. Ban the use of disposable, toxic, or non-renewable products such as Oakland's recently approved ban on the use of polystyrene foam take-out food containers. Promote and facilitate increased Green Building practices, including: design for energy efficiency; the use of recycled-content products; and construction techniques that increase operating and maintenance efficiency over the life of the building. Adopt other new rules and incentives to encourage and reward 'reduce, reuse, and recycle' behaviors.

Why Strategy Selected: In most cities, including Oakland, current waste collection and landfill systems are in fundamental conflict with achieving Zero Waste for a number of reasons. The provision of artificially low-cost collection and landfilling of discarded materials enables wasting of products and resources, and in effect subsidizes the cost of end-of-life product management for manufacturers. Likewise, waste-based energy production joins landfilling at the bottom of the Environmental Hierarchy (Exhibit A) for municipal solid waste because it enables wasting of products and resources, rather than their sustainable use and conservation. The costs of the environmental and public health impacts of wasting and resource depletion are not accounted for, and will accrue in the future to local governments and rate payers.

Typical municipal garbage franchises have a financial incentive to landfill because the garbage collection and landfill companies that hold the franchises profit more from garbage collection and landfilling than from waste reduction and recycling activities. Having one company that is franchised to do both garbage collection and landfilling typically compounds this problem. By contrast, some cities and their garbage collectors are aligned in their financial interest to preserve finite, contracted, third party landfill capacity because neither has a financial interest in landfill disposal.

Oakland must start now to develop and adopt a new waste management system design in preparation for its next collection and disposal contracts, and to research and structure

progressive measures toward product and disposal bans. For example, by implementing bans on materials that can be discarded or products that can be purchased, Oakland will join other cities that are stimulating markets for alternative products, practices and processes that are consistent with Zero Waste goals. Similarly, by promoting and facilitating increased Green Building practices, the City will build upon steps taken to increase Green Building design and construction methods for its own facilities. Integrating Green Building features into the full range of construction and demolition projects in Oakland will reduce the impact of building activities on the use and wasting of materials and resources, and can result in economic and environmental benefits including energy, water, and materials use efficiency which fulfill major goals of Oakland's Sustainable Development Initiative.

Recommended Next Steps to Implement Strategy:

- Restructure Oakland's municipal code, garbage franchise agreement, and residential recycling service contracts to provide clear and consistent incentives to reduce waste for both generators and service providers so that those who waste pay the most:
 - 2007-2008: Research, review, and evaluate options for alternative structures, such as financially separating solid waste collection from landfilling, and structure clear and consistent incentives to reduce disposal
 - 2009-2010: Negotiate and finalize alternative structures
 - 2010: Approve alternative structures
 - 2012: Implement alternative structures
- Implement a measured, phased approach to banning from disposal readily recyclable materials such as corrugated cardboard. Initial phases could include mandatory recycling plans for the largest generators and over time expand to include all. Eventually, it would be mandatory to follow these recycling plans and eliminate wasting. In general, implement bans only after incentives and voluntary efforts fail to achieve goals.
- Preclude Oakland's franchised waste from being used for high-temperature thermal waste-based energy production
- Develop and share Green Building resources for education and technical assistance
- Add green building standards to the City building code that require design for energy efficiency; the use of recycled-content products; and construction techniques that increase operating and maintenance efficiency over the life of the building

Strategy #3: Preserve Land for Sustainable Development and Green Industry Infrastructure

Description of Strategy: Ensure that sufficient incentives and industrial land are maintained and expanded in order to preserve and grow businesses that reuse, recycle, and manufacture value-added products, utilizing materials discarded locally and regionally. Coordinate and partner with the Port of Oakland, regional governmental bodies including StopWaste.Org and the East Bay Economic Development Alliance (EDAB), and key stakeholders to develop specific policies and initiatives to attract, support, and sustain such businesses.

Why Strategy Selected: Recycling is a significant local industry, whose long-term viability is a key component to Oakland's current and future waste reduction achievements, ongoing export of

key recycled commodities via the Port of Oakland, and overall economic development. Over 35 Oakland businesses currently collect, process, and/or manufacture products made from recyclable materials, employing over 1,000 individuals, attracting raw material from throughout the region and producing value-added products. A listing of these firms is shown in Exhibit C.

Many recycling processors seek to locate in the “Foreign Trade Zone”, which is the area within 1.5 miles of the Port of Oakland Boundary, since this location allows them operating efficiencies, including the ability to load extra heavy containers for export to China and other Pacific Rim countries. This international market constitutes the primary outlet for the majority of recyclable paper, metal, and plastic collected in Oakland and Northern California.

Since 1993, industrial lands in Oakland and Berkeley have constituted one of the state’s 33 Recycling Market Development Zones (RMDZ). The RMDZ program offers low interest loans and other incentives to businesses who intake collected recyclable materials for value-added processing and manufacturing. There are currently about 20 active RMDZ firms in Oakland, with several more in the Berkeley portion of the zone. RMDZ firms who have received loans and grants are shown in Exhibit C.

A vibrant, local private-sector recycling and reuse economy has enabled Oakland and the region to achieve significant levels of materials recovery under an open market system, in advance of and supplemental to government recycling mandates. Currently, however, the City is engaged in land use policy deliberations to evaluate retention vs. conversion of industrial land to other uses. Within this debate, the question of “highest and best use” of the land in different parts of the City often comes up. If measured by sales tax generated or aesthetic appeal, however, such uses may lose out when compared to residential or commercial development. On the other hand, if current and potentially expanded recycling-based businesses represent an opportunity for the City to secure and grow a more sustainable economy, then zoning sufficient space for such firms represents a high and valuable use of industrial land.

Retaining sufficient industrially-zoned land overall, and specific parcels of land dedicated to processing certain high volume, low value materials such as asphalt and concrete, are fundamental to Zero Waste and sustainability-oriented land use and economic development policy. At the same time, recycling collection and processing businesses can present significant impacts, and should be situated and operated to avoid or minimize conflict with residential or other uses. This underscores the need for the City, and the region at large, to plan for and utilize areas where such businesses are most appropriate, and can continue to flourish and grow in the future. Because the Port of Oakland has its own strategic interest in accessing recycling services directly and recycled commodities for export, and since the Port controls the majority of industrially zoned land in Oakland, opportunities to collaborate with the Port to secure the needed capacity for Zero Waste infrastructure should be actively explored.

Recommended Next Steps to Implement Strategy:

- Develop policy goals and priority commitments regarding land use, workforce and business development support and strategic partnerships with the Port of Oakland, EDAB, and Association of Bay Area Governments (ABAG) to retain and expand local and regional reuse, recycling, and green manufacturing businesses and facilities, which constitute critical

infrastructure for a Sustainable City and provide “Green Collar” jobs for Oaklanders, and other social and economic benefits

- Create business capacity to deliver services or products that utilize materials in the waste stream that lack other infrastructure, including emerging opportunities such as recovery and processing systems to implement Extended Producer Responsibility
- Retain sufficient industrially zoned lands to maintain a balance of jobs and housing in Oakland, including existing and future Zero Waste infrastructure
- Actively partner with the Port of Oakland to locate major Zero Waste facilities on Port controlled industrial lands, that are securely zoned for industrial use, afford water and rail access, and provide services the Port itself regularly requires (e.g., aggregate concrete, asphalt, and rock processing and production) and/or trades in large quantities (e.g., recyclable commodity exports)
- Recognize and address the City’s interest in having accessible, cost-effective recycling facilities for concrete and asphalt which are staples of public works road building, ongoing private development and redevelopment activities, and anticipated expanded green building and construction and demolition recycling requirements
- Offer tangible economic incentives and technical assistance for green, sustainable, and Zero Waste businesses including: identifying and promoting loan programs from banks and investors for green investments and green businesses; providing tax and/or redevelopment incentives for relocation and/or expansion of reuse and recycling businesses through the RMDZ and other programs; incubator support; fast track permitting; and City procurement preferences
 - Enhance and expand existing incentive programs, including RMDZ, StopWaste Partnership, and Green Business programs
 - Explore and pursue opportunities to cluster complementary businesses, either in a resource recovery park or otherwise. Focus on top priority materials and services such as construction and demolition materials, organics, deconstruction, salvage, reuse, and repair. Consider public ownership, possibly by or with the Port.
 - Set clear standards and assist existing reuse and recycling service providers to upgrade their appearance and operations, in order to be good neighbors. Work with environmental justice, neighborhood, workforce development, and business development organizations to identify best locations for needed services. Consider levying mitigation fees on high impact facilities to mitigate impacts of operation and to compensate those most impacted by needed facilities.
- Partner with StopWaste.Org, EDAB, ABAG, and other regional agencies to help site new regional processing facilities in the region that are needed, but cannot be sited within Oakland (e.g., organics composting facility, and possibly additional C&D recycling facilities, etc). In order to help site these locally unwelcome – but regionally vital - land uses, consider mitigation measures such as a host fee to communities in which facilities are sited.

Strategy #4: Advocate for Manufacturer Responsibility for Product Waste, Ban Problem Materials

Description of Strategy: Partner with other Zero Waste and sustainability advocates to pursue and advocate for Extended Producer Responsibility and other ‘upstream’ materials management

and system re-design solutions. Ensure that these solutions require manufacturers to assume responsibility for managing end-of-life products and materials, and that they do so in a way that conforms to the Environmental Hierarchy described in the Executive Summary and shown in Exhibit A.

Why Strategy Selected: Wasting is designed into the economy. The City is limited in its capacity and opportunity to bring about change in consumer habits and business practices, or advance system re-design to reduce and reuse at the local level. Adoption of state and national Extended Producer Responsibility (EPR) legislation will extend the responsibility of producers for the environmental impacts of their products and packaging to the entire product life cycle, and require them to assume responsibility for their products and packaging in an environmentally sustainable manner. Structured properly EPR can provide an incentive to “design the waste out” so that products can be readily reused, repaired, reconditioned, or recycled. As a self-funded system, EPR is one of the most powerful opportunities that exist to move society and the economy towards Zero Waste, particularly for products and packaging items that are currently difficult to recycle.

The term ‘system redesign’ as applied to Zero Waste is used to describe transforming the current one-way ‘extract, use and discard’ system toward one that redesigns products and processes for a closed-loop sustainable production and consumption cycle. In such a system, non-toxic, naturally occurring materials and substances are used, products are designed for easy disassembly, reuse and recycling, and outputs break down to be re-assimilated safely into the environment when all useful value is lost. Zero Waste system redesign policies and practices stimulate the development and production of more environmentally sustainable products, and will reduce the management and clean-up costs of waste facilities, landfills and incinerators, which are often borne by local communities. EPR would also reduce negative health effects of wasting such as asthma that are also borne mostly at the local level, and improve the quality of life experienced in local communities.

Recommended Next Steps to Implement Strategy:

- Participate in formal and informal regional, statewide, national, and international waste reduction and sustainability working groups, particularly engaging and negotiating with product producers and retailers to provide EPR and provide product take back opportunities, including:
 - Maintain membership in the Product Stewardship Institute (PSI) and active participation in its national stakeholder dialogues and related activities
 - Engage with advocacy groups that are working on legislative and social change to further Zero Waste goals and address critical planning and infrastructure issues
 - Ensure that development of EPR includes establishing efficient refurbishment and repair - retaining the form and function of products and ensuring redesign of products and packaging
 - Participate in developing and expanding regional, statewide, and national media/messaging campaigns to advance awareness and support for Zero Waste and sustainability principles such as system re-design, highest and best use of energy and materials, and a closed-loop sustainable production and consumption society

- Continue leadership in development of a California Product Stewardship Council to shift California's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in order to reduce public costs; drive improvements in product design; and foster reuse, refurbishment, and repair
- Develop and actively pursue a strategic Zero Waste and sustainability legislative and regulatory policy agenda, including initiatives such as:
 - Replace incentives for wasting, such as existing government subsidies for virgin natural resource extraction which put recycling and downstream resource recovery systems at a competitive disadvantage, with policies that favor environmentally and economically sustainable practices over wasteful, polluting, and ultimately costly practices
 - Phase out use of toxic materials in products and processes as the European Union and China have done in adopting Reduction of Hazardous Substances [ROHS] requirements
- Engage and negotiate with key retailers to provide product take back opportunities for pharmaceuticals, universal hazardous wastes (e.g., consumer batteries), consumer electronics (e-waste), and products

Strategy #5: Educate, Promote and Advocate a Zero Waste Sustainability Agenda

Description of Strategy:

Engage, educate, motivate and inspire diverse audiences with simple, positive, clear communication using innovations in the message, and how it is communicated. Create awareness, acceptance and actions toward the systematic changes necessary for a rewarding, healthy, and sustainable future. Develop partnerships within and beyond Oakland, encouraging and supporting alliances among a diverse range of participants. Develop, implement and leverage new and existing relationships with other jurisdictions, agencies, business sectors, and non-government organizations that are engaged in Zero Waste efforts or that are strategically positioned to further Oakland's Zero Waste goals. Develop and actively pursue a strategic legislative and regulatory policy agenda to reduce and eliminate incentives for wasting and phase out use of toxic materials in products and processes. Champion, highlight, and celebrate success, and "lead by example" in the City's policies and actions. Provide more extensive and consistent information about Zero Waste and sustainability actions – what to do, how to do it, and why it is important.

Why Strategy Selected: Even though efforts have been made in Oakland to educate the general public and specific targeted audiences on how and why to reduce, reuse, and recycle, many don't participate - even where convenient recycling systems are in place. Only about 15% of eligible residences use the food scraps service that was added to the weekly yard trimmings service in 2005. New messages and communication styles are needed that are positive and tailored to different circumstances and cultural contexts. Zero Waste messages must encourage pursuing effective and efficient solutions with integrity that is grounded in an understanding of how natural systems function.

Businesses and institutions dispose of 67% of the wastes in Oakland, so a high priority needs to be placed on better two-way communication with them, along with new rules and incentives to

provide encouragement, motivation, and rewards. The good news is that businesses embracing Zero Waste programs save money. The open and free marketplace in Oakland for non-residential recycling provides opportunities to increase participation through more outreach, information resources, recognition, and more active technical assistance to achieve Zero Waste.

Zero Waste itself is an element of a larger strategy to achieve sustainability. The overall goals and values of sustainability, such as healthy communities/healthy people, quality of life, and public safety inform and motivate all the strategies in this Plan. Achieving sustainability calls for addressing interrelated problems with interrelated solutions, and for including all elements of the community. It involves transforming how materials and energy are used to meet human needs and aspirations. Current large-scale environmental challenges such as global warming and energy shortages, are moving sustainability issues to the forefront of public attention, and raising public interest in understanding the earth cycles and natural processes of the living world. The challenge for sustainability messaging and education will be to show how civilization can continue in a positive and satisfying direction while working within natural limits.

Waste reduction has a long and well-known history, and is especially well positioned to convert public concern and awareness about sustainability into effective solutions. Zero Waste messaging and education will generate business and public support for new consumption patterns, product designs, and materials handling processes that offer future Oaklanders a community and economy that meets arising needs, challenges, and aspirations with durable, resilient solutions that are socially and environmentally beneficial. Oakland cannot achieve its Zero Waste goal on its own, and needs to develop and leverage relationships beyond traditional solid waste and recycling organizations by partnering and negotiating with others that have the core competencies, strategic position, or market position to effect Zero Waste goals and aspirations.

Recommended Next Steps to Implement Strategy:

- *Outreach, Education, and Recognition*
 - Develop and sustain public education and promotional campaigns for existing programs
 - Overhaul approach to public education and messaging to effectively communicate 'reduce, reuse, recycle' and sustainability in a way that engages, motivates and inspires:
 - Incorporate "aspirational" or "higher level" values that contribute to quality of life, health, and civic good
 - Use new communications tools and new media, social marketing/branding, and social networking including:
 - Promote existing virtual communications and websites to encourage more reuse of products through electronic marketplaces
 - Develop a Yahoo group for Zero Waste Businesses in Oakland, and expand the City's Zero Waste website, www.zerowasteoakland.com, with publications, media coverage, and information coming from above activities
 - Develop regional collaborations to design and place hard-hitting, high-impact, compelling advertising effectively communicating Zero Waste sustainability in a way that is designed to change people's behaviors
 - Develop media partnerships and other strategies to highlight and celebrate achievements, leadership, and successes; show creativity and progress; and profile businesses,

individuals, and institutions, and organizations that are contributing positively to a sustainable City and world

- Ask sustainable businesses and other community partners in Oakland to carry the Zero Waste message in their own terms to their own communities to help market the concepts of Zero Waste, sustainability, and eco-literacy
- Partner with Berkeley, San Francisco, San Jose and others to promote the San Francisco Bay Area as a national leader in sustainability, and to attract businesses and individuals looking for sustainable living
- Develop messages to inspire and engage all City staff in supporting the City to lead by example in eliminating wasting
- *Technical Assistance*
 - Increase marketing and technical assistance to local businesses to adopt sustainable best business practices to minimize waste and avoid landfill and incineration: more waste audits, how-to guides, and periodic follow-up re: opportunities identified by waste audits
 - Initiate collaborative work groups by industry sector, including local colleges, with StopWaste.Org and others to identify common problems and challenges, and use technical assistance teams to resolve those
- *Advocacy*
 - Seek leadership roles and actively participate in formal and informal regional, statewide, national, and international waste reduction and sustainability groups working to advance Zero Waste policies
 - Engage with advocacy groups that are working on legislative and social change to further Zero Waste goals, including critical planning and infrastructure issues, such as ABAG, EDAB, Californians Against Waste, Berkeley Ecology Center, PSI, Product Policy Institute, Greenaction for Health and Environmental Justice, National Recycling Coalition, California Manufacturers Association, California Retailers Association, California Grocers Association
- *Lead by Example*
 - Adopt Zero Waste policies and practices in the City's own operations, facilities, capital improvement and maintenance practices
 - Educate all City employees on Zero Waste, and incorporate Zero Waste sustainability targets into all City operations and functions
 - Adopt an Environmentally Preferable Purchasing Policy (EPP) for City procurement that includes EPR and an emphasis on reuse, repair, and design for disassembly, and reduced toxicity

IV. CONCLUSION

By pursuing Zero Waste strategies Oakland can advance its goal of being a Sustainable City, reverse growing local/regional health and financial liabilities from waste disposal, support sustainable local economic and workforce development, and contribute to a worldwide effort to reverse damage to the planet's natural systems. Zero Waste challenges the wasteful and inefficient one-way system of 'extract, consume and discard' and creates greater opportunity for sustainable economic development. This Plan to reach Oakland's ambitious goal of Zero Waste includes strategies that prioritize "upstream" solutions to prevent waste before it is created, emphasize improving traditional "end of the pipeline" recycling programs, and identify the critical need for public education and economic solutions. By adopting and implementing this Plan, the City will take responsibility for its own destiny and help preserve resources and a healthy environment for future generations to enjoy.

Exhibit A: Environmental Hierarchy to Guide Oakland's Zero Waste Strategies, Policies and Actions

Zero Waste has been defined by the Zero Waste International Alliance as a philosophy and visionary goal in which manufacturing and supply chains emulate natural cycles, where all outputs are usable inputs for other value-added processes. It means designing products and managing materials and systems for maximum resource conservation, highest, most efficient use, and minimum negative environmental impact. It means eliminating harmful discharges to land, water and air, by preventing rather than managing waste and pollution.

Highest/Best Use

Redesign Manufacturing & Supply Chain

Mandate Extended Producer Responsibility (EPR)
Produce durable, reusable, recyclable, and recycled-content products
Use environmentally sustainable feedstocks & materials
Design for repair, reconditioning, disassembly, deconstruction and recycling
Make brand owners/first importers responsible to take back products & packaging

Reduce/Refuse/Return

Reduce Toxicity

Reduce toxic materials in products
Replace toxic materials in products with less toxic or non-toxic alternatives

Reduce Consumption

Purchase and use less

Apply Environmentally Preferable Purchasing (EPP) standards to purchasing

Reduce Packaging

Purchase products with less packaging
Incentive durable, reusable packaging

Reuse/Preserve Form & Function

Repair and recondition products
Deconstruct and salvage buildings and building products
Support thrift stores and charity collection

Recycle/Compost/Digestion

Recover & return materials to economic mainstream for remanufacture to like-value products
Recover & return materials to economic mainstream for composting to value-added soil amendment products
Ambient temperature (<200 degrees) processing of organic materials for recovery of fuels and energy, with composting of residue

Down Cycle

Recover & return materials to economic mainstream for remanufacture to non- or marginally-recyclable products, such as office paper to tissue paper, or soda bottles to toys or clothing

Bury/Incinerate/Waste-Based Energy

Bioreactor landfilling, when design incorporates sufficient safety & environmental protections

"Beneficial" landfill use, such as alternative daily cover (ADC) or landfill construction

Traditional landfilling

High-temperature, energy-intensive processing to recover fraction of embodied energy, from non-source-separated, mixed resources, including but not limited to: mass burn, co-firing, fluidized bed, gasification, plasma arc, pyrolysis

Lowest/Worst Use

Exhibit B
City of Oakland's Existing Recycling and Waste Reduction Programs

Residential Recycling and Waste Reduction Programs

Residential recycling was initiated in 1993 and bi-weekly yard trimmings collection was added in 1995, and the City's 238-SAVE Recycling Hotline provides informational, service referral, and technical assistance. Recycling costs are included in refuse rates for all residential customers.

Single Family Dwellings

- In February 2005, Oakland initiated the following changes to single family recycling:
 - 64-gallon cart for all recyclables replaced dual 18-gallon recycling tubs
 - Weekly recycling collection extended to Southern half of City
 - Weekly yard trimmings collection replaced bi-weekly collection Citywide
 - Unlimited yard trimmings collection added
 - Food scraps and food-soiled paper added to yard trimmings collection
- The combined changes resulted in over 35% increase in recycling and over 40% increase in yard trimmings/food scraps

Bulky Pickup and Recycling

- Program changed in 2004 from neighborhood clean up to individual household appointments, and added recycling of more items
- Changes resulted in a program diversion rate increase from under 10% to over 40%

Multi-Family Dwellings

- Multi-family dwellings receive carts, or in some cases metal bins, for weekly recycling
- Yard trimmings, food scraps and bulky pick-up are not offered to multi-family dwellings

Regional Waste Reduction Programs

- Stopwaste.org serves all Alameda County with recycling, reuse, and repair information services through its Recycling Guide, online Recycling Wizard, and Recycling Hotline
- Stopwaste.org also provides a Bay Friendly Gardening program, which includes a long-established home composting component offering training classes and sale of low-cost, subsidized home composting bins

Non-Residential Recycling and Waste Reduction Programs

Non-Residential (including commercial, industrial, and non-franchised self haul) solid waste comprised 67% of Oakland's waste stream in 2000.¹

¹ 2000 - Alameda County Waste characterization Study & California Integrated Waste Management Board Disposal Data

Exhibit B: Existing Recycling and Waste Reduction Programs (continued)

Construction and Demolition Debris Waste Reduction and Recycling

- Over 2,000 new construction, commercial and apartment house demolition, and commercial and apartment house remodeling projects have been subject to Oakland's Construction and Demolition Debris Waste Reduction and Recycling (C&D Recycling) Ordinance since it was adopted in 2000
- Building permit applicants are required to divert from landfill at minimum 65% of materials from the project, including 100% of all asphalt and concrete
- Annual C&D recycling tonnage has doubled since adoption of the C&D Recycling Ordinance, and as of 2005 exceeds 75,000 tons annually

Construction & Demolition Market Development

- Program helps recycling-based businesses secure grants and loans, obtaining sites and permits, secure reliable supplies of recycled raw materials, and develop business plans
- Approximately 30 active RMDZ clients are in Oakland

Medium and Small Business Recycling – Services, Outreach and Technical Assistance

- Small and medium-sized businesses may receive up to two 96-gallon recycling carts for low cost, weekly Small Business Recycling service
- The Public Works Agency actively promotes and recruits businesses to this service, as well as targeting businesses for technical assistance for other recycling and waste reduction opportunities

StopWaste Partnership (SWP) Collaboration

- The Public Works Agency collaborates with SWP, a program of the Alameda County Waste Management Authority and Recycling Board (StopWaste.Org), to target Oakland's Top 100 waste generators with free waste reduction and recycling technical assistance
- Clients include nearly all of Oakland's largest commercial and institutional entities including Oakland International Airport, airlines, hospitals, public agencies, hotels, corporations, the Oakland Coliseum, and most recently, Eastmont Town Center

Alameda County Green Business Program Promotion

- The Alameda County Green Business Program promotes environmentally responsible business practices, through a certification program
- 55 Oakland businesses currently certified

Commercial Organics Diversion

- 11,000 tons per year of commercial food scraps are diverted from landfill disposal by open market recycling service providers
- The Public Works Agency is actively promoting food scraps recycling to targeted businesses

Exhibit C
Oakland Recycling and Reuse Companies

AB&I Foundry	195	Recycles iron and casting sand; 100+ yrs. Old
Aman Environmental	15	Recycles concrete and asphalt
Badger Forest Products *	8	Converts damaged paper into usable sheets, rolls
Concrete Works	12	Custom concrete countertops, fireplace surrounds, etc.
C&K Salvage *	4	2nd generation company salvages, mills large timbers
White Owl Woodworks	4	Mills reclaimed wood
St. Vincent de Paul of Al.Co. *	100+	Reused household goods, clothes; food rescue
The Reuse People *	10	Bldg. deconstruction and used construction material sales
East Bay Depot for Creative Reuse *	20	Reclaimed items become art supplies, furniture, etc.
eCullet *	9	Startup: Optical sorting of contaminated curbside glass
Joinery Structures	30	Custom builder using salvaged urban trees
John Lewis Glass *	15	Glass casting/drilling to make commercial & fine art pieces
Mannequin Madness	3	Recovery and reuse/resale of store mannequins
Pacific Paper Tube *	36	100% recycled paper tubes & other product
Recycling Works	14	Document destruction firm relocated here in 2000; 14 jobs
Containers Unlimited	18	Barrel, bag, container washing and reuse
East Bay Rock, Inc.	10	Concrete/asphalt/brick recycler; sells "Envirocrete"
Owens Brockway	500+	Glass bottle/jar mfr. here since 1937; union labor
Schnitzer Steel *	100+	Publicly traded metals recycler/mfr. employs 100+ here
Sutta Company *	50+	W. Oakland paper recycler, 2nd plant in Ventura, CA
Smurfit Stone Container	20	Large, international scale processor of recycled paper
National Recycling	16	Major paper recycler; 2 plants: West & East Oakland
Standard Iron and Metal	35	Metals recycling operation; relocated from 66th Ave. area
Aaron Metals	25+	Metals recycler bounded by residents; can't expand
Custom Alloy Scrap Sales	40	Large non-ferrous metals recycler; owns lots of land
Alliance Metals	15	Beverage container recycler
Super Link Plastic Inc	30	Major regional plastics reclaimer and export broker
Gallagher and Burk	35	Regional reprocessor/manufacturer of asphalt for roads, etc.
Lakeside Metals	15	Long time metals recycler, now surrounded by residential/lofts
East Bay Conservation Corps	15	Youth training program; collects recyclables from small biz's
Goodwill Industries	25	Regional processing for reused household items, clothing
Habitat for Humanity ReStore	4	Salvaged and reused bldg. material sales support H4H projects
California Waste Solutions	50+	2 recycling processing plants in West Oakland; City contractor for residential recycling collection (northern half of City)
Universal Waste Management	5	Collection of electronic and other regulated wastes

* Oakland Recycling Market Development Zone (RMDZ) grant or loan recipient

OFFICE OF THE CITY CLERK
OAKLAND**OAKLAND CITY COUNCIL**
City Attorney

2006 NOV 16 PM 4:24

RESOLUTION No. _____ C.M.S.**RESOLUTION ADOPTING A STRATEGIC PLAN TO ACHIEVE THE CITY COUNCIL GOAL OF ZERO WASTE BY 2020 FOR THE CITY OF OAKLAND**

WHEREAS, the City of Oakland has taken steps toward promoting sustainable use of resources and materials, including programs and policy goals to reduce, reuse, and recycle materials that would otherwise be disposed as waste; and

WHEREAS, on March 6, 2006 the Oakland City Council approved Oakland Resolution #79774 C.M.S. which adopted a Zero Waste Goal by 2020 and directed Public Works Agency staff to prepare a Zero Waste Strategic Plan for the City of Oakland; and

WHEREAS, Public Works Agency staff, in concert with the Mayor's Office, conducted four public meetings to solicit input and receive feedback from the general public and sustainable business leaders, and has prepared a Zero Waste Strategic Plan for the City of Oakland based on participant feedback received via this public process as well as its own research and guidance provided by the Resolution which adopted Oakland's Zero Waste Goal by 2020; and

WHEREAS, this Zero Waste Strategic Plan for the City of Oakland includes the following strategies encompassing traditional, "end of the pipeline" recycling programs as well as "upstream" solutions to product waste, and policy and regulatory changes:

1. Expand and Improve Local and Regional Recycling and Composting
2. Develop and Adopt New Rules and Incentives to Reduce Waste Disposal
3. Preserve Land for Sustainable Development and Green Industry Infrastructure
4. Advocate for Manufacturer Responsibility for Product Waste, Ban Problem Materials
5. Educate, Promote and Advocate a Zero Waste Sustainability Agenda; and

WHEREAS, the potential to implement these strategies over the next 14 years requires a commitment of will and resources; now, therefore be it

RESOLVED, that the City Council hereby adopts a Strategic Plan to Achieve the City Council Goal of Zero Waste by 2020 to 40,000 tons annual landfill disposal; and be it

FURTHER RESOLVED, that Oakland will assume a leadership role, partnering with other Zero Waste local, regional and international communities and sustainability advocates to actively pursue and advocate for strategies and incentives to advance Zero Waste principles for materials management, system re-design, highest and best use of discarded products and materials, and a closed-loop sustainable production and consumption society; and be it

FURTHER RESOLVED, that the City Council will consider and appropriate resources to implement these strategies in the course of planning and adopting its biennial policy budget, and approve and consider policies that will implement these strategies.

IN COUNCIL, OAKLAND, CALIFORNIA, _____, 20____

PASSED BY THE FOLLOWING VOTE:

AYES - BROOKS, BRUNNER, CHANG, KERNIGHAN, NADEL, QUAN, REID, and PRESIDENT DE LA FUENTE

NOES -

ABSENT -

ABSTENTION -

ATTEST: _____

LaTonda Simmons
City Clerk and Clerk of the Council
of the City of Oakland, California