OFFICE OF THE CITY CLERK
2006 FEB 15 PM 4:08

CITY OF OAKLAND
AGENDA REPORT

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

RE: **RESOLUTION ADOPTING A ZERO WASTE GOAL BY 2020 FOR THE CITY OF OAKLAND AND DIRECTING THE PUBLIC WORKS AGENCY, IN CONCERT WITH THE MAYOR'S OFFICE, TO DEVELOP A ZERO WASTE STRATEGIC PLAN TO ACHIEVE THE CITY'S ZERO WASTE GOAL**

SUMMARY

The Mayor's Office requested a resolution be prepared establishing a goal of zero waste disposal by 2020, and directing staff to prepare a Zero Waste Strategic Plan for the City of Oakland. 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 in logical increments to eliminate waste. A graphical depiction of Zero Waste principles is shown in Attachment A.

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. However, Oakland will not be able to meet its 75% waste reduction or sustainability goals solely through traditional downstream recycling programs, which seek to divert from disposal materials that have already been consumed and discarded. Zero Waste strategies are required to achieve both goals. By establishing a Zero Waste Goal, the City of Oakland would join a growing global movement of local governments that have adopted Zero Waste goals and policies. This report recommends that the City take an important step forward in acting on its commitment to sustainability by adopting a Zero Waste Goal, and developing a Zero Waste Strategic Plan to achieve that goal.

FISCAL IMPACT

This resolution establishes a Zero Waste Goal for the City of Oakland, and directs the Public Works Agency (PWA), in concert with the Mayor's Office, to develop a Zero Waste Strategic Plan to achieve that goal. It does not suggest specific programs or projects for funding. Staff will return to City Council with a Strategic Plan and funding options for proposed strategies that

can be used to achieve the Zero Waste Goal. Funding for technical assistance to staff in developing the Zero Waste Strategic Plan is currently available in the FY 2005-07 Adopted Policy Budget Fund (1710) Recycling/Solid Waste Program (30682) Project P275210.SC17 in account 54919 for contracts approved during adoption of the FY 2005-07 Budget.

BACKGROUND

A series of state, county, and City waste reduction, health, environmental protection, and sustainability legislative and policy initiatives 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
- 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) expanded waste reduction goals to 75% by 2010

Beyond solid waste disposal reduction and recycling market development, the following actions by Oakland included:

- Resolution 74678 C.M.S. (1998) adopted sustainability goals
- Resolution 74773 C.M.S. (1999) established a policy and task force to reduce dioxin emissions
- 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. Cities, councils, counties, and states worldwide have adopted a goal of achieving zero waste. The adopted Accords are shown in Attachment B.
- Staff from PWA-Recycling and CEDA-Recycling Market Development Zone are participating in a newly-formed Bay Area Zero Waste Communities working group which includes representatives from the cities of Berkeley and Palo Alto, the City and County of San Francisco, and Santa Cruz County - all of whom have adopted Zero Waste goals and seek to join with other communities to partner, share, and leverage efforts to pursue Zero Waste strategies and actions.

More comprehensive background information is provided in Attachment C.

KEY ISSUES AND IMPACTS

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

Core Zero Waste principles, as applied to discarded materials that may become municipal solid waste, are:

- Improving 'downstream' reuse/recycling of end-of-life products and materials to ensure their highest and best use
- Pursuing 'upstream' re-design strategies to reduce the volume and toxicity of discarded products and materials, and promote low-impact or reduced consumption lifestyles
- Fostering and supporting use of discarded products and materials to stimulate and drive local economic and workforce development

Attachment A provides a more detailed description of Zero Waste principles.

Adopting a Goal for Zero Waste by 2020 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 from 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

Achieving City's 75% Waste Reduction Goal

Zero Waste strategies will be necessary for Oakland to reach its sustainability and 75% waste reduction goals. The City has successfully reached the state-mandated 50% waste reduction goal, primarily through voluntary participation in a Public Works-driven residential recycling collection program, and free market recycling services available to businesses (supported in some instances with technical assistance from City, County, or State government waste reduction programs).

A separate report to the Public Works Committee of February 28, 2006 identifies proposed strategies to accomplish the City's 75% goal focuses on expanding and adding traditional end-of-the-pipeline recycling programs. The report acknowledges that the proposed strategies without

the supplement of Zero Waste are unlikely to result in greater than 65% waste reduction toward the 75% goal.

Ecological Footprint

The global economy's current unsustainable system for materials use is an important problem that is compromising the planet's natural systems that we rely on for basic ecological services such as clean water, clean air, and safe food. The combined and coordinated efforts of individuals, businesses, cities, states, and countries will be required to solve or mitigate this problem. Attachment D describes and illustrates ecological footprint measurement.

Rapid Increase in Municipal Solid Waste (MSW) Volume and Toxicity

The nature of waste has changed fundamentally over the last 100 years, increasingly so since 1960. Attachment E illustrates changes in waste generation volume and composition. Local waste management systems have become the end-of-the-pipeline repository for disposal of an increasingly complex, disposable, and toxic stream of products and packaging. Yet, local governments have little or no direct control over the volume, composition, toxicity, or health impacts of the discarded materials for which they must assume the responsibility of recycling or disposal. The US Environmental Protection Agency Criteria for Municipal Solid Waste Landfills acknowledge that groundwater protection controls required under current regulations will ultimately fail, and toxics will eventually seep into the groundwater under landfills. This eventual and inevitable leakage portends potential future legal and financial liabilities for local governments, garbage franchisees, and/or landfill owners. Similarly, mass-burn incineration and other high temperature thermal processing technologies produce an array of toxic, health-threatening solid, liquid, and gaseous by-products and outputs. As with landfill disposal, they destroy their input materials, and are thus at odds with Zero Waste sustainability principles of highest and best use of materials, resource conservation, and protecting public health.

POLICY DESCRIPTION

Moving toward a Zero Waste Goal will provide an enhanced and concrete pathway toward achieving existing goals of the City of Oakland:

- To develop a Sustainable City
- To Achieve 75% Waste Reduction by 2010

A Zero Waste Strategic Plan for Oakland would include:

- Improving 'downstream' reuse/recycling of end-of-life products and materials to ensure their highest and best use

- Pursuing 'upstream' re-design strategies to reduce the volume and toxicity of discarded products and materials, and promote low-impact or reduced consumption lifestyles
- Fostering and supporting use of discarded products and materials to stimulate and drive local economic and workforce development

Possible elements that may be included in Oakland's Zero Waste Strategic Plan are:

- Partner with other Zero Waste local, regional and international communities and sustainability advocates to advance product and materials management and system re-design strategies, and promote low-impact or reduced consumption lifestyles
- Expansion of Green Building design and construction
- Development of disposal or product use bans
- Expanded use of discarded materials for local economic and workforce development
- Structure creative new financial incentives to reduce waste and maximize recycling
- Adopt Zero Waste practices in City government operations and activities
- Enact an Environmentally Preferable Purchasing policy for City procurement

A more detailed description of potential Strategic Plan elements is provided in Attachment F.

The Mayor's Office will assist PWA in convening a Zero Waste working group to develop Oakland's Zero Waste Strategic Plan. This Strategic Plan will provide guidance in the planning and decision-making process to achieve the City's Zero Waste Goal. Staff will return to City Council before the end of FY 2006-07 with the Zero Waste Strategic Plan, and once adopted staff will update the Mayor and City Council on progress toward the Zero Waste Goal. Consideration and pursuit of specific strategies may lead to proposed programs or projects requiring funding as part of the budget development cycle for FY 2007-09 and in subsequent biennial budget cycles.

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 Zero Waste Goal and directing staff to develop a Zero Waste Strategic Plan.

ACTION REQUESTED OF THE CITY COUNCIL

Staff recommends that the City Council approve the resolution.

Respectfully submitted,

RAUL GODINEZ II, P.E
Director, Public Works Agency

Reviewed by:
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Assistant Director, Public Works Agency
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Prepared by:
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Senior Recycling Specialist

APPROVED AND FORWARDED TO THE PUBLIC WORKS COMMITTEE

OFFICE OF THE CITY ADMINISTRATOR

Item #:_____
Public Works Committee
February 28, 2006

Attachment A: Zero Waste Principles

The Zero Waste Economy

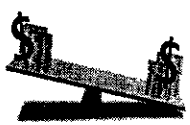
Designing a Full-Cycle System—Upstream AND Downstream

Design for the Environment, Not the Dump

All products must be recoverable through reuse, recycling or composting

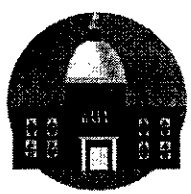
Shifting Subsidies

Stimulating green practices rather than favoring waste and pollution



Changing the Rules

Removing market barriers and inequities to support sustainable industry



Jobs, Jobs, Jobs

Redesign and recovery create more jobs than resource destruction

Clean Production

More resource efficient and recoverable, less toxic to workers, environment and consumers

Retail Stores

Opportunity for consumer education and product take-back

Consumer Buying Power

Creating market demand and a new manufacturing standard

Producer Responsibility

Manufacturers are part of the solution, taking back their own products or supporting recovery infrastructure

Resource Recovery Parks

Community center for total recovery—reuse, recycling and composting—material exchange, and education

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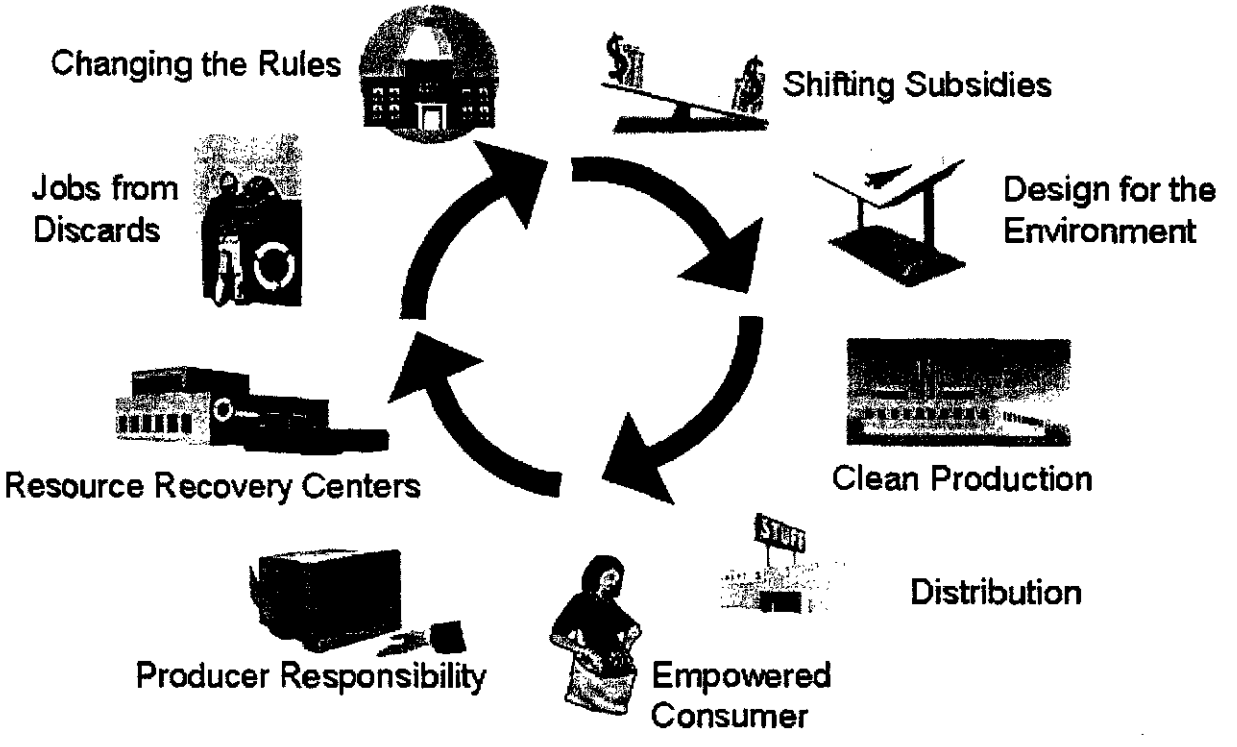
www.ecocycle.org/zerowaste/zwsystem

Figure 1: Zero Waste Economy

An environmentally and economically sustainable system where resources are kept in the production cycle



Rather than looking at our production systems as one way and linear, we can redesign them to be cyclical, as in nature, where there is no such thing as "waste" and materials are kept in the production cycle. Zero Waste is emerging as a paradigm shift, a new, comprehensive socio-technical system that addresses our resource use from product design to disposal.

Changing the Rules of the Game

We need to put policies and practices in place that favor environmentally and economically sustainable practices over wasteful, polluting, and ultimately costly practices. Such policies would include creating financial incentives for businesses and residents to recycle more and create less waste, banning toxic products from landfills or incinerators, prohibiting the sale of unnecessarily toxic or polluting products, essentially putting policies in place that make it easy to recover materials instead of waste them.

Shifting Taxpayer Subsidies Away From Wasteful and Polluting Industries and Into Supporting Environmentally-Friendly Practices

Federal tax subsidies created more than 100 years ago to spur our change from an agrarian society to an industrialized society still exist, giving a financial incentive to industries to make products from virgin materials. As long as these subsidies remain in place, the devastation of the environment will continue. These are not paltry sums driving today's resource extraction bonanza—according to the report, "Welfare for Waste," direct subsidies to the timber, hard-rock mining, and energy industries reach $2.6 billion per year in taxpayers' funds.

Design for the Environment (DFE)

It's time to stop waste before it happens – at the designer's desk. Instead of designing products without regard for the amount or type of resources used, the product's toxicity, or the product's eventual recovery, under DFE, all products and packaging will be manufactured with the use of non-toxic materials, and designed for either reuse, recycling or composting.

Clean Production

Under the current system, the fastest and cheapest production methods win out above the health and safety of the workers, the community, and the environment. Companies unwilling to meet the environmental and worker protection standards in the developed world have simply relocated to exploit the workers and the environment of developing countries. By providing incentives for clean production methods, we can discourage this "fight to the bottom" mentality and award efforts to protect workers and the environment.

The Role of Distribution/Retail in the Zero Waste System

Within the Zero Waste system, distribution centers work with manufacturers to reuse packaging such as pallets and crates and to reduce unnecessary packaging. Retailers convey consumer habits and preferences upstream to the manufacturers where consumer pressures can lead to better design. Retailers may also support downstream infrastructure such as Resource Recovery Parks through financial contributions or informational displays. Distributors and retailers serve as education centers to inform consumers about the proper disposal methods for items such as motor oil, electronics, and batteries. In all these ways, distributors expand upon their current roles by acting as a go-between for manufacturers and consumers in both directions.

The Empowered Consumer

The empowered consumer is essential in all facets of Zero Waste. First, the consumer uses their buying power to demand non-toxic and easily reused, recycled, or composted products. The consumer dollar is the ultimate voice to industry, particularly in the U.S., and will be the driving force in changing our consumption and disposal patterns. Reduce and reuse also begin with the consumer—they choose materials that are minimally packaged and less toxic, thus rewarding those manufacturers who take responsibility for their products and packaging, and providing the financial incentive for other companies to follow suit.

Extended Producer Responsibility (EPR)

EPR puts the legal, financial, and environmental responsibility for materials entering the waste stream with the manufacturer, not on the consumer or the local government at the end of the product's or packaging's life cycle. The end result is a fundamental shift in responsibility and financing so that manufacturers redesign products to reduce material consumption and facilitate reuse, recycling and recovery.

Investing in Recovery Infrastructure, Not Landfills

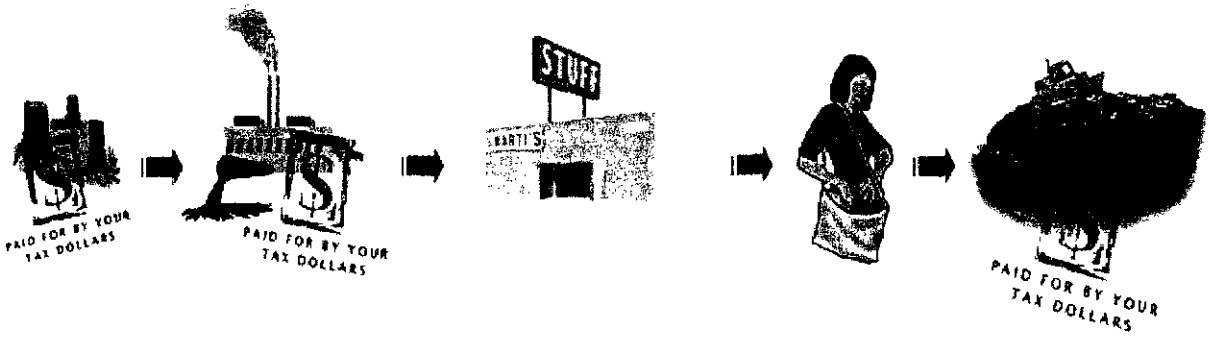
Rather than using the tax base to build new landfills or incinerators and then to clean up the resulting contamination, communities working towards Zero Waste invest in recycling, composting, and reuse facilities called "Resource Recovery Parks." When the true costs of environmental pollution resulting from landfills or incinerators are accounted for, these cleaner Resource Recovery Parks attract the public's enthusiasm, pride and market investments.

Creating Jobs from Discards: The Job Potential of the Zero Waste System

Wasting materials in a landfill or incinerator also wastes jobs that could be created if those resources were preserved. According to the report *Wasting and Recycling in the United States 2000*, "On a per-ton basis, sorting and processing recyclables alone sustains ten times more jobs than landfilling or incineration." In its report *Resources up in Flames*, the Institute of Local Self-Reliance discusses how remanufacturing offers the biggest pay-off in recycling. Recycling-based manufacturers create more jobs at higher wages than sorting operations. In fact, some recycling-based paper mills and plastics product manufacturers employ 60 times more workers on a per metric ton basis than do landfills. Rather than destroying the value of society's discards in incinerators and landfills, this value is protected and leveraged to create new local wealth.

Figure 2: Our Current Linear Wasting System

A costly one-way street



Our current production systems are linear, designed as if there are no limits to our natural resources. Products are born of environmentally-destructive activities such as clearcutting, strip mining and drilling, which result in soil erosion, habitat loss, and severe air, soil, and water contamination. We as taxpayers unwittingly encourage this wasteful and polluting behavior through governmental subsidies at three different stages: (1) When resources are extracted to make the product, financial incentives and tax breaks are given to industries that extract virgin resources. (2) When toxins enter our air and water supplies during the manufacturing process, the taxpayer helps pay to clean up these messes through programs such as the federal Superfund program. (3) At the end of the products' lives, taxpayers pay again for the cleanup of toxins, which leak into the groundwater from landfills and billow into the air from incinerators.

Urban Environmental Accords

Signed on the occasion of United Nations Environment Programme World Environment Day
June 5th, 2005 in San Francisco, California

Green Cities Declaration

RECOGNIZING for the first time in history, the majority of the planet's population now lives in cities and that continued urbanization will result in one million people moving to cities each week, thus creating a new set of environmental challenges and opportunities; and

BELIEVING that as Mayors of cities around the globe, we have a unique opportunity to provide leadership to develop truly sustainable urban centers based on culturally and economically appropriate local actions; and

RECALLING that in 1945 the leaders of 50 nations gathered in San Francisco to develop and sign the Charter of the United Nations; and

ACKNOWLEDGING the importance of the obligations and spirit of the 1972 Stockholm Conference on the Human Environment, the 1992 Rio Earth Summit (UNCED), the 1996 Istanbul Conference on Human Settlements, the 2000 Millennium Development Goals, and the 2002 Johannesburg World Summit on Sustainable Development, we see the Urban Environmental Accords described below as a synergistic extension of the efforts to advance sustainability, foster vibrant economies, promote social equity, and protect the planet's natural systems.

THEREFORE, BE IT RESOLVED, today on World Environment Day 2005 in San Francisco, we the signatory Mayors have come together to write a new chapter in the history of global cooperation. We commit to promote this collaborative platform and to build an ecologically sustainable, economically dynamic, and socially equitable future for our urban citizens; and

BE IT FURTHER RESOLVED that we call to action our fellow Mayors around the world to sign the Urban Environmental Accords and collaborate with us to implement the Accords; and

BE IT FURTHER RESOLVED that by signing these Urban Environmental Accords, we commit to encourage our City governments to adopt these Accords and commit our best efforts to achieve the Actions stated within. By implementing the Urban Environmental Accords, we aim to realize the right to a clean, healthy, and safe environment for all members of our society.

Implementation & Recognition

THE 21 ACTIONS that comprise the Urban Environmental Accords are organized by urban themes. They are proven first steps toward environmental sustainability. However, to achieve long-term sustainability, cities will have to progressively improve performance in all thematic areas.

Implementing the Urban Environmental Accords will require an open, transparent, and participatory dialogue between government, community groups, businesses, academic institutions, and other key partners. Accords implementation will benefit where decisions are made on the basis of a careful assessment of available alternatives using the best available science.

The call to action set forth in the Accords will most often result in cost savings as a result of diminished resource consumption and improvements in the health and general well-being of city residents. Implementation of the Accords can leverage each city's purchasing power to promote and even require responsible environmental, labor and human rights practices from vendors.

Between now and the World Environment Day 2012, cities shall work to implement as many of the 21 Actions as possible. The ability of cities to enact local environmental laws and policies differs greatly. However, the success of the Accords will ultimately be judged on the basis of actions taken. Therefore, the Accords can be implemented though programs and activities even where cities lack the requisite legislative authority to adopt laws.

The goal is for cities to pick three actions to adopt each year. In order to recognize the progress of cities to implement the Accords, a *City Green Star Program* shall be created.

At the end of the seven years a city that has implemented:

19 – 21 Actions shall be recognized as a ★★★★ City
15 – 18 Actions shall be recognized as a ★★★ City
12 – 17 Actions shall be recognized as a ★★ City
8 – 11 Actions shall be recognized as a ★ City

ENERGY
Renewable Energy · Energy Efficiency · Climate Change

WASTE REDUCTION
Zero Waste · Manufacturer Responsibility · Consumer Responsibility

URBAN DESIGN
Green Building · Urban Planning · Slums

URBAN NATURE
Parks · Habitat Restoration · Wildlife

TRANSPORTATION
Public Transportation · Clean Vehicles · Reducing Congestion

ENVIRONMENTAL HEALTH
Toxics Reduction · Healthy Food Systems · Clean Air

WATER
Water Access & Efficiency · Source Water Conservation · Waste Water Reduction

ENERGY

Action 1 Adopt and implement a policy to increase the use of renewable energy to meet ten per cent of the city's peak electric load within seven years.
Action 2 Adopt and implement a policy to reduce the city's peak electric load by ten per cent within seven years through energy efficiency, shifting the timing of energy demands, and conservation measures.
Action 3 Adopt a citywide greenhouse gas reduction plan that reduces the jurisdiction's emissions by twenty-five per cent by 2030, and which includes a system for accounting and auditing greenhouse gas emissions.

WASTE REDUCTION

Action 4 Establish a policy to achieve zero waste to landfills and incinerators by 2040.
Action 5 Adopt a citywide law that reduces the use of a disposable, toxic, or non-renewable product category by at least fifty percent in seven years.
Action 6 Implement "user-friendly" recycling and composting programs, with the goal of reducing by twenty per cent per capita solid waste disposal to landfill and incineration in seven years.

URBAN DESIGN

Action 7 Adopt a policy that mandates a green building rating system standard that applies to all new municipal buildings.
Action 8 Adopt urban planning principles and practices that advance higher density, mixed use, walkable, bikeable and disabled-accessible neighborhoods which coordinate land use and transportation with open space systems for recreation and ecological restoration.
Action 9 Adopt a policy or implement a program that creates environmentally beneficial jobs in slums and/or low-income neighborhoods.

URBAN NATURE

Action 10 Ensure that there is an accessible public park or recreational open space within half-a-kilometer of every city resident by 2015.
Action 11 Conduct an inventory of existing canopy coverage in the city; and, then establish a goal based on ecological and community considerations to plant and maintain canopy coverage in not less than fifty per cent of all available sidewalk planting sites.
Action 12 Pass legislation that protects critical habitat corridors and other key habitat characteristics (e.g. water features, food-bearing plants, shelter for wildlife, use of native species, etc.) from unsustainable development.

TRANSPORTATION

Action 13 Develop and implement a policy which expands affordable public transportation coverage to within half-a-kilometer of all city residents in ten years.
Action 14 Pass a law or implement a program that eliminates leaded gasoline (where it is still used); phases down sulfur levels in diesel and gasoline fuels, concurrent with using advanced emission controls on all buses, taxis, and public fleets to reduce particulate matter and smog-forming emissions from those fleets by fifty per cent in seven years.
Action 15 Implement a policy to reduce the percentage of commute trips by single occupancy vehicles by ten per cent in seven years.

ENVIRONMENTAL HEALTH

Action 16 Every year, identify one product, chemical, or compound that is used within the city that represents the greatest risk to human health and adopt a law and provide incentives to reduce or eliminate its use by the municipal government.
Action 17 Promote the public health and environmental benefits of supporting locally grown organic foods. Ensure that twenty per cent of all city facilities (including schools) serve locally grown and organic food within seven years.
Action 18 Establish an Air Quality Index (AQI) to measure the level of air pollution and set the goal of reducing by ten per cent in seven years the number of days categorized in the AQI range as "unhealthy" or "hazardous."

WATER

Action 19 Develop policies to increase adequate access to safe drinking water, aiming at access for all by 2015. For cities with potable water consumption greater than 100 liters per capita per day, adopt and implement policies to reduce consumption by ten per cent by 2015.
Action 20 Protect the ecological integrity of the city's primary drinking water sources (i.e., aquifers, rivers, lakes, wetlands and associated ecosystems).
Action 21 Adopt municipal wastewater management guidelines and reduce the volume of untreated wastewater discharges by ten per cent in seven years through the expanded use of recycled water and the implementation of a sustainable urban watershed planning process that includes participants of all affected communities and is based on sound economic, social, and environmental principles.

Attachment C: Zero Waste Goal Background

The California Integrated Waste Management Act of 1989 (AB 939) required that all California jurisdictions achieve a landfill diversion rate of 50% by the year 2000, and that jurisdictions reduce, reuse, recycle, and compost all discarded materials to the maximum extent feasible before any landfilling or other destructive disposal method is used. In 1990 the City Council approved Resolution# 66253 C.M.S, adopting Solid Waste Reduction Goals including:

- Managing discarded materials as important recoverable resources that contribute to the local economy when reused and recycled
- Applying the hierarchy of integrated waste management in the following order of priority: reduce what is consumed and discarded; reuse as much as possible before discarding; recycle and compost to the maximum extent what is discarded; properly landfill the rest
- Stabilizing and expanding markets for recyclable materials and products by buying recycled materials and products, expanding existing and attracting new user industries to manufacture products from recycled materials, and supporting state and federal recycled materials market legislation and programs

In 1990 Alameda County's voters passed ballot Measure D (The Alameda County Waste Reduction and Recycling Initiative Charter Amendment), setting a requirement for the County to reduce landfilling by 75% by 2010. In 2002 the City Council adopted Resolution #77500 C.M.S. establishing the goal of 75% reduction of waste going to landfills by 2010 for the City of Oakland in alliance with the countywide 75% waste reduction requirement.

In 1992 the City Council adopted Resolution #68780 C.M.S. authorizing establishment of a state-designated City Recycling Market Development Zone (RMDZ), which the City continues to staff with a full-time RMDZ Coordinator in the Community and Economic Development Agency. The purpose of the City's establishing a state-designated Recycling Market Development Zone is to attract, retain, and expand recycling-based businesses in Oakland. Recycling is a key local industry, with materials converging from all over Northern California feeding 3 of the top 10 exports from the Port of Oakland, including the top 2 (scrap paper and scrap metal). Over 50 Oakland businesses collect, process, and/or manufacture products made from recyclable materials, employing nearly 1,000 individuals many of whom are Oakland residents. In addition to those processing and consolidating materials for export, other businesses produce value-added products including major industrial manufacturers such as Owens Brockway Glass.

In 1999 the City Council adopted Resolution 74773 C.M.S. establishing a policy and task force to reduce dioxin emission effects on public health and the environment.

In 1998 the City Council adopted the Sustainable Development Initiative (Resolution 74678 C.M.S), which embraces the concept of meeting people's current economic, social, cultural, and environmental needs in ways that enhance the ability of future generations to meet their needs. Oakland's FY 2005-07 Mayor and City Council Goals include: Develop A Sustainable City through maximizing socially and environmentally sustainable economic growth, including conserving natural resources. In alliance with Oakland's Sustainable Development Initiative and

Sustainable City goal, in June 2005 Oakland Mayor Jerry Brown joined mayors of 50 of the world's largest and most visionary cities as an original signer of the United Nations World Environment Day Urban Environmental Accords, pledging that Oakland would implement 21 action steps toward sustainable cities in the areas of energy, waste reduction, urban design, transportation, environmental health, and water including: Establish a policy to achieve zero waste to landfills and incinerators.

Cities, councils, counties, and states worldwide have adopted a goal of achieving zero waste, including the counties of San Francisco, Santa Cruz, San Luis Obispo and Del Norte in California; the cities of Palo Alto and Berkeley in California, Seattle in Washington, Toronto in Canada, and Canberra in Australia; and the state of New South Wales in Australia; and 45% of New Zealand's local government councils. By establishing a Zero Waste Goal, the City of Oakland would join a growing global movement of local governments that have adopted Zero Waste goals and polices.

Attachment D: Ecological Footprint

It is widely accepted that the world's economies are using natural resources at a rate that is not sustainable. Sustainability was put on the public policy agenda in 1987 when the World Commission on Environment and Development formulated "sustainable development" as a public policy goal, defining it as development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs.

The United Nations began measuring the "ecological footprint" of humanity's natural resource consumption in 1961, which dramatically illustrated the progression of a now widely accepted belief that the world's natural resources are being consumed at a rate that is not sustainable. The global economy's current unsustainable system for materials use can be generally described as 'extract, use, and discard'. It is estimated that for every ton of waste at the end of a product's useful life, there are about 70 tons of waste produced 'upstream' in the process of raw materials extraction/processing, manufacturing, packaging, and shipping.

This strains the planet's natural systems that we rely on for basic ecological services such as clean water, clean air, and safe food affecting developed and developing countries, and populations both rich and poor. For example, according to Rachel's Environment and Health Weekly, even human mother's milk could not be sold in grocery stores because virtually no woman's milk could pass minimum standards for freedom from toxic chemicals established by the U.S. Food and Drug Administration.

United Nations Ecological Footprint measurements estimate how many earths are needed to meet the resource demand of humanity. In Figure 1 below, Ecological Footprint is calculated as the product of population (horizontal axis) times per capita consumption (vertical axis).

Figure 1:
Ecological Footprint by Region

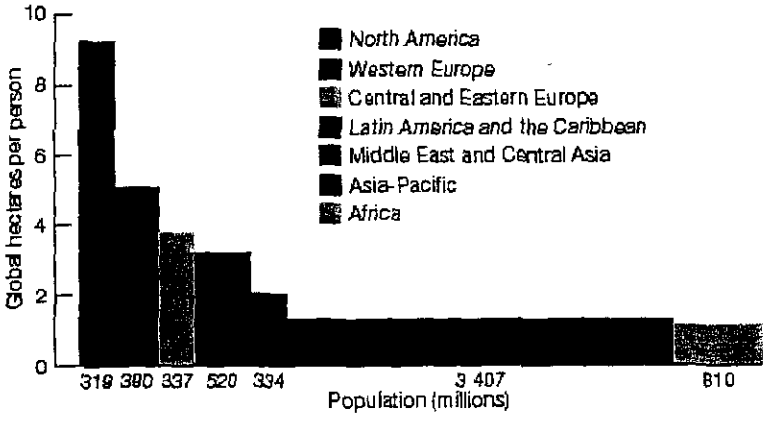
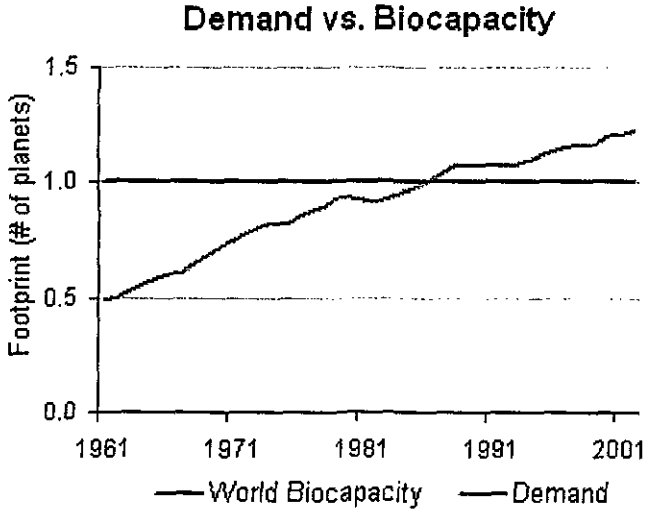


Figure 2 below shows changes over time in the world's demand compared with the earth's resources (world biocapacity). Expressed in terms of "number of planets," the biocapacity of the Earth is always one (represented by the horizontal line). However, the actual resource supply (biocapacity) of our one planet changes over time depending on factors such as ecosystem management, agricultural practices, ecosystem degradation, world population demands, and weather. Figure 2 shows how humanity has moved from using about half the planet's biocapacity in 1961 to over 1.2 times the biocapacity of the earth in 2002.

The global ecological deficit of 0.2 earths is equal to the globe's "ecological overshoot" indicating that an additional 1/5 planet is needed to sustain consumption patterns. If the whole world consumed at the level of the Bay Area then an additional 4 1/2 planets would be needed to sustain that consumption level. Overshoot is possible in the short-term because humanity can liquidate its ecological capital rather than living off annual yields. However, as resource demand continues to grow, it becomes increasingly difficult to reduce humanity's Ecological Footprint in order to restore ecological capital that has been previously liquidated.

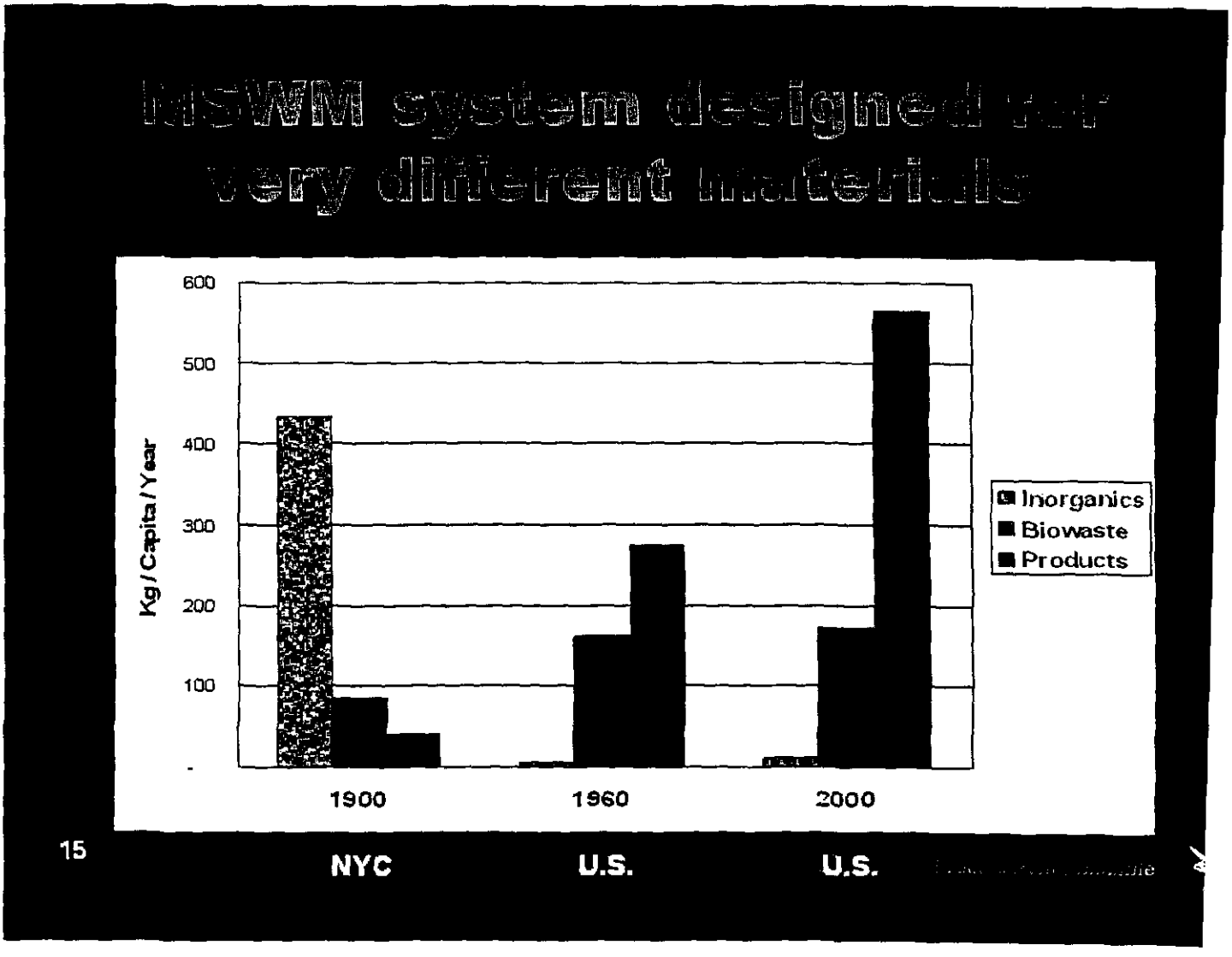
Figure 2:



Ecological Footprint information/data source:
Global Footprint Network
3270 Lakeshore Ave.
Oakland, CA 94610 USA
Tel. +1-510-839-8879
Fax +1-510-251-2410
http://www.footprintnetwork.org/

Attachment E: Changes In Municipal Solid Waste Volume and Composition

Figure 1: Changes in Per Capita Waste Disposal Volume and Composition



Notable trends in per capita municipal solid waste disposal:

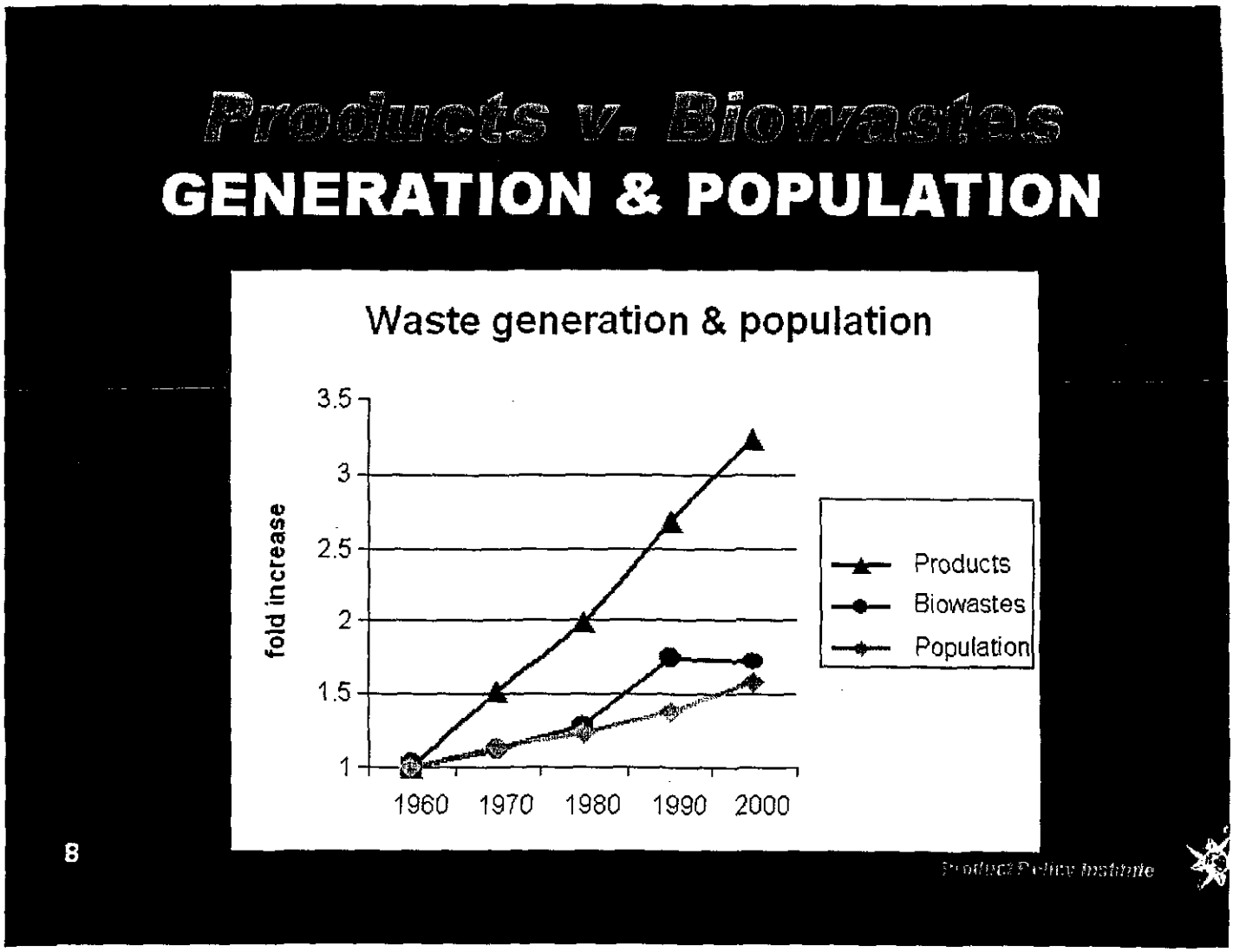
- Since 1960 per capita disposal of biowastes (food and yard trimmings) has increased less than 10%.
    - Most of the increase in biowaste generation has been offset by increases in diversion of yard trimmings from landfills to higher and better uses such as composting
- Since 1960 per capita disposal of product wastes (including packaging) has doubled
    - Product waste is now 75% of all municipal solid waste (MSW)
    - The putrescible (wet) garbage that MSW systems were set up to handle now comprise only 25% of what is disposed
    - Over time MSW systems have become the convenient dumping ground for an increasingly complex, disposable, and toxic stream of products and packaging

Product Waste Toxics Threaten Public Health

Landfills are the number one source of human-made methane, the second most important greenhouse gas, as well as the source of "leachate," a toxic liquid that most experts agree will

eventually seep into the groundwater under every landfill ever built. The last landfill to operate in Boulder County, CO was closed in 1992 and declared a Superfund site due to groundwater contamination of nearby drinking water. Since closing, the City of Boulder and the landfill owner have spent over $14 million in groundwater and site clean-up activities. In 2005, groundwater contamination stalled expansion plans for Sonoma County's Central Landfill and required immediate commencement of costly shipping of waste out of the County. The eventual and inevitable leakage of landfills portend potential future legal and financial liabilities for local governments, garbage franchisees, and/or landfill owners for remediation activities, alternate drinking water sources, and increased costs for waste disposal in more remote areas and/or employing expensive capital-intensive strategies with their own environmental and health risks. Similarly, mass-burn incineration and other high temperature thermal processing technologies produce an array of toxic solid, liquid, and gaseous by-products and outputs, many of which threaten public health even at very low levels (e.g., mercury and other heavy metals).

Figure 2: Per Capita Waste Disposal



Notable Trends in waste disposal since 1960:

- US population has increased 160%
- Biowastes (food + yard trimmings) have increased 175%, slightly ahead of population
- Product waste has increased 320% - double the rate of population increase

Attachment F: Potential Elements of an Oakland Zero Waste Strategic Plan

The Public Works Agency, in concert with the Mayor's Office, will develop a Zero Waste Strategic Plan (Strategic Plan) to achieve the City's Zero Waste Goal.

The Strategic Plan will help guide future decisions regarding City disposal and recycling services, City procurement policies and operations, and cooperative efforts with other local jurisdictions in Alameda County and throughout the world. Zero Waste strategies that may be included are:

- Assuming a leadership role, partnering with other Zero Waste communities (local, regional and international) and sustainability advocates to actively pursue and advocate for strategies to promote low-impact or reduced consumption lifestyles and higher order, 'upstream' materials management and system re-design strategies. Strategies include:
  - Extended Producer Responsibility, whereby industries that design and market consumer products assume ownership of products at the end of their useful life and responsibility for recycling the products in an environmentally sound manner. For example, a law recently enacted in the state requires retailers of cellular phones to take back and recycle old phones at no charge to the customer.
  - Eliminating or reducing existing government incentives for virgin natural resource extraction (which put recycling and downstream resource recovery systems at a competitive disadvantage)
- Promoting and facilitating increased Green Building practices, including:
  - Design for energy efficiency and use of recycled-content products; construction techniques that improve recovery of building materials for recycling during construction, at the end of the building's useful life, and during renovations
  - Add Green Building standards to the City building code
- Implementing action steps that Oakland has committed to pursue through Mayor Brown's being an original signer of the United Nations World Environment Day Urban Environmental Accords in June 2005, including adopting citywide laws to reduce or ban the use of disposable, toxic, or non-renewable product category (e.g., ban take-out food containers that cannot be composted)
- Banning disposal of easily recyclable or problematic materials, such as Seattle, WA has done for corrugated cardboard, California has done for tires, and several states have done for yard trimmings
- Developing and implementing initiatives to expand and actively support use of discarded materials to drive local economic and workforce development with 'green collar' jobs and value added production
- Developing additional financial incentives to maximize recycling and reduce waste for the ratepayers (i.e., businesses, residents), recycling collectors, and the solid waste franchisee
- Adopting and implementing an organizational value of putting Zero Waste principles into practice in all City government operations and activities
- Adopting and implementing an Environmentally Preferable Purchasing policy for City procurement

Approved as to Form and Legality

Oakland City Attorney's Office

OFFICE OF THE CITY CLERK

2006 FEB 15 PM 4:09

OAKLAND CITY COUNCIL

Resolution No. _____ C.M.S.

Introduced by Mayor Jerry Brown

RESOLUTION ADOPTING A ZERO WASTE GOAL BY 2020 FOR THE CITY OF OAKLAND AND DIRECTING THE PUBLIC WORKS AGENCY, IN CONCERT WITH THE MAYOR'S OFFICE, TO DEVELOP A ZERO WASTE STRATEGIC PLAN TO ACHIEVE THE CITY'S ZERO WASTE GOAL

WHEREAS, the California Integrated Waste Management Act of 1989 (AB 939) required that all California jurisdictions achieve a landfill diversion rate of 50% by the year 2000, and reduce, reuse, recycle, and compost all discarded materials to the maximum extent feasible before any landfilling or other destructive disposal method is used; and

WHEREAS, in 1990 Alameda County's voters passed ballot Measure D (The Alameda County Waste Reduction and Recycling Initiative Charter Amendment), setting a requirement for the County to reduce land filling by 75% by 2010; and

WHEREAS, in 1990 the City Council adopted Resolution #66253 C.M.S establishing solid waste reduction goals, including returning discarded materials to the local economy through reuse and recycling; applying the waste management hierarchy in priority order (reduce, reuse, recycle and compost) to the maximum extent; and promoting recycling market development; and

WHEREAS, in 2002 the City Council adopted Resolution #77500 C.M.S. establishing the goal of 75% reduction of waste disposal landfills by 2010 for the City of Oakland in alliance with the countywide 75% waste reduction requirement; and

WHEREAS, in 2001 the California Integrated Waste Management Board set a goal of Zero Waste in its strategic plan for the state; and cities, councils, counties, and states worldwide have adopted a goal of achieving zero waste, including the counties of San Francisco, Santa Cruz, San Luis Obispo and Del Norte in California; the cities of Palo Alto and Berkeley in California, Seattle in Washington, Toronto in Canada, and Canberra in Australia; and the state of New South Wales in Australia; and 45% of New Zealand's local government councils; and

WHEREAS, strategies to reach zero waste can help to promote the over-arching goal of each generation leaving less and less of an ecological footprint on the earth thus allowing more and more of nature to restore; and

WHEREAS, Zero Waste principles promote the highest and best use of materials to eliminate waste and pollution, emphasizing a closed-loop system of production and consumption, moving in logical increments toward the goal of zero waste through the core principles of:

- Improving 'downstream' reuse/recycling of end-of-life products and materials to ensure their highest and best use;
- Pursuing 'upstream' re-design strategies to reduce the volume and toxicity of discarded products and materials, and promote low-impact or reduced consumption lifestyles;
- Fostering and supporting use of discarded products and materials to stimulate and drive local economic and workforce development; and

WHEREAS, in 1992 the City Council adopted Resolution #68780 C.M.S. authorizing establishment of a City staff supported Recycling Market Development Zone; and recycling continues to be a significant local industry, whose long-term viability is a key component to Oakland's current and future waste reduction achievements, economic development, and workforce development of 'green collar' jobs; and

WHEREAS, in 1998 the City Council adopted the Sustainable Development Initiative (Resolution #74678 C.M.S) embracing the concept of meeting people's current economic, social, cultural, and environmental needs in ways that enhance the ability of future generations to meet their needs; and

WHEREAS, Oakland's FY 2005-07 Mayor and City Council Goals include: Develop A Sustainable City through maximizing socially and environmentally sustainable economic growth, including conserving natural resources; and

WHEREAS, in alliance with the Oakland's Sustainable Development Initiative and Sustainable City goal, in June 2005 Oakland Mayor Jerry Brown joined mayors of 50 of the world's largest and most visionary cities as an original signer of the United Nations World Environment Day Urban Environmental Accords, pledging that Oakland would implement 21 action steps toward sustainable cities in the areas of energy, waste reduction, urban design, transportation, environmental health, and water including: Establish a policy to achieve zero waste; and

WHEREAS, adopting a goal of zero waste disposal and pursuing Zero Waste principles is consistent with, and an explicit validation of Oakland's Sustainable Development Initiative and Sustainable City Goal; now, therefore, be it

RESOLVED, that the Mayor and City Council hereby adopt a Zero Waste Goal by 2020 for the City of Oakland and direct the Public Works Agency, in concert with the Mayor's Office, to develop a Zero Waste Strategic Plan to achieve the City's Zero Waste Goal; and be it

FURTHER RESOLVED, that Public Works Agency, in conjunction with the Mayor's Office, will convene a Zero Waste working group to develop a Zero Waste Strategic Plan that will provide guidance in the planning and decision-making process to achieve the City's Zero Waste Goal; and be it

FURTHER RESOLVED, 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.

IN COUNCIL, OAKLAND, CALIFORNIA, _____, 2006

PASSED BY THE FOLLOWING VOTE:

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

NOES –

ABSENT –

ABSTENTION –

ATTEST:

_____
LATONDA SIMMONS
City Clerk and Clerk of the Council of
the City of Oakland, California