

Recommendation for Waste, Waste Reduction and Recycling

Introduction

Trash is not a sexy topic. It does not conjure up visions of Grand Boulevards or sparkling arrays of photovoltaic panels. It is unlikely you will find the citizens of Mountain View sitting in their favorite coffee shop debating biodegradable garbage bags or extolling the virtues of vermiculture while sipping free trade coffee from porcelain mugs (well...okay, there may be just a few of us doing that). However, as described in the June 2008 report “Stop Trashing the Climate”, wasting directly impacts climate change in three core areas, lifecycle impacts, landfill impacts and waste incineration impacts.¹

The lifecycle impact of waste disposal has the most significant effect on climate change. Every time we destroy or bury a product in our waste system, finite natural resources are extracted to replace the item, precious energy is expended to produce a new item and pollution causing transportation is used to convey the product to the marketplace. In the production of office paper, for example, making one ton of virgin paper from tree harvest through disposal in landfill releases almost 20,000 lbs. of CO₂ into the atmosphere. When the same ton of office paper is produced using recycled paper materials, the CO₂ emission is reduced to 3,600 lbs., a significant reduction. This does not even take into account the carbon dioxide which will continue to be absorbed by the trees which do not need to be cut down, or the fact that paper can be recycled multiple times.²

In its 2005 inventory of U.S. Greenhouse gases, the U.S. Environmental Protection Agency listed landfills as the fifth largest source of all greenhouse gases.³ Landfills release considerable amounts of both carbon dioxide and methane gas into the atmosphere, particularly in the first few years after disposal. Methane gas produced by landfill is 25 times more potent than carbon dioxide when calculated on a 100-year time horizon, but in the first 20 years, it can be up to 72% more potent, which corresponds to much more serious global warming implications. Based on this analysis, landfill accounts for 5.2% of all U.S. greenhouse gas emissions.⁴ Methane capture rates using current systems are largely ineffective. Thus, there is incentive to reduce the debris going to landfill, especially biodegradable materials which could be much more effectively used to enhance our soil productivity rather than contribute to global warming.

The final factor in the relationship of waste disposal to greenhouse gas production is the use of incineration. Since Mountain View does not currently use incinerators as part of our waste management system, they will not be addressed in this report.

¹ “Stop Trashing the Climate”, Brenda Platt, Institute for Local Self-Reliance, David Ciplet, Global Anti-Incinerator Alliance, Kate M. Bailey and Eric Lombardi, Eco-Cycle, June 2008

² The Environmental Defense Fund, “Paper Task Force Recommendations for Purchasing and Using Environmentally Friendly paper” (1995), p. 47. <http://www.edf.org>

³ U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005, Washington D.C., April 15, 2007, Table ES-2. <http://>

⁴ “Stop Trashing the Climate” p.27

What makes waste prevention, re-use, recycling and composting so attractive is that it is relatively low cost method to affect green house gas emissions achievable within a short amount of time. There are strategies which our local businesses, government, families, individuals, children, renters, and homeowners can employ today to set us on the path towards reducing waste and making an impact on climate change.

There is a plethora of pending actions regarding waste currently in the California legislator. Senate Bill 1625 would expand the current Bottle Bill, which now covers only beverage containers, to also include plastic food, cosmetic and cleaning product bottles. Assembly Bill 2058 will expand the current plastic bag recycling laws. Assembly Bill 2505 would help prevent human and environmental exposure to toxins as well as encourage the recycling of consumer packaging by phasing out the use of toxic, non-recyclable PVC plastic packaging.⁵ But there is much which can be done on the local level.

The following recommendations range from simple suggestions, such as providing alternatives to the use of single use shopping bags to broader programs such as the diversion of organic waste from landfill. We would like policies set by our city which encourage re-use and recycling rather than extraction of natural resources to make new products. We want to reach out to the diverse population of our communities; our young people, local businesses, and the multi-cultural residents to teach them why it is important to recycle, and make it easy for them to do so. We want people to think twice before they take that plastic bag or purchase the latest digital television. The overarching goal is to severely limit the amount of un-reclaimed waste generated by our community as a path towards the reduction of greenhouse gas emissions.

Contributors

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⁵ Californians Against Waste, Sacramento CA, www.cawrecycles.org

Prioritized Summary of Recommendations

1. Create a comprehensive Zero Waste Action Plan
2. Increase diversion from landfill by increasing utilization of the SMaRT Station
3. Divert organic waste from landfill by creating composting opportunities
4. Ban Polystyrene take-out food containers
5. Educate the public on recyclable material processing and eco-conscious purchasing practices
6. Discourage single use bags within the city
7. Recycling and Waste Management in Multi-Family Dwellings
8. Provide accessible recycle bins in public places and businesses
9. Partner with local school districts to create waste reduction and recycling programs in the schools, including a Zero Waste Lunch program
10. Develop resources to promote free-cycle and re-use networks

Recommendation #1

Title: Create a comprehensive Zero Waste Action Plan

Working Group: Waste, Waste Reduction and Recycle

Statement of Issue

“A zero waste approach is one of the fastest, cheapest, and most effective strategies we can use to protect the climate and the environment”⁶ Of all of the recommendations put forth by the Waste Reduction and Recycle working group this one is the most essential. The city must shift the way it deals with waste and develop strategies to drastically reduce the amount of debris currently going to landfill.

The goal of Zero Waste is to maximize recycling and re-use of products thereby avoiding wasting our natural resources in creating products which will end up in the waste stream. It encourages the design of products which have the potential to be repaired, reused or recycled. When materials can be re-used and recycled wisely it also eliminates the discharge of potentially hazardous substances to our land, air and water. A Zero Waste plan promotes the investment of public money for waste reduction and recycling programs, such as composting of organic discards, which in turn will avoid methane gas emissions created if these products were sent to landfill. The ultimate vision is to design “waste” out of the system, by more thoughtful product design and disposal.

Recommendation

Mountain View should hire a qualified consultant to develop a comprehensive long term Zero Waste Plan for the city. The plan will serve as a map for a methodology to incorporate zero waste policies into long range planning. Policies must include a budget for waste reduction programs, incentives to residents and businesses to judiciously use, reuse and re-cycle materials. This includes incentives for local businesses to produce less toxic, more durable, recyclable products. The plan should encompass a detailed waste characterization study and identify opportunities for areas of development and improvement to reach the diversion goal.

The goal of the Zero Waste plan should be a plan for phased reduction of waste going to landfill. The long term goal of the plan is to attain a minimum of 90% diversion rate by the year 2021. 2021 is the year in which the current contracts terminate for processing of recyclables and disposal of the residual waste. We recommend that a plan similar to the “City of Palo Alto Zero Waste Operational Plan of June 2007”. Creation of the plan is a short term project. Implementation of the solution is on-going, effecting city operations, residents and businesses from the point of adoption into the foreseeable future.

⁶ Platt, Brenda, Ciplet, David, Bailey, Kate M., Lombardi, Eric, “Stop Trashing the Climate”, Institute for Local Self-Reliance, June 2008

Environmental Impact

A Zero Waste plan has far reaching potential to decrease GHG production by diverting waste from landfill, thus reducing the methane and carbon dioxide emitted into the atmosphere when landfill decays. Further reduction is realized when products are recycled or re-used rather than being created by extraction of natural resources, manufactured using energy, and transported vast distances to the marketplace.

Fiscal Impact and Synergies

The estimated cost to hire a consultant to prepare a Zero Waste Plan is about \$40,000.

The estimated cost to implement the plan in the short term would be \$500,000, and long term costs could be high, over \$1,000,000, depending on the strategies adopted. These costs would support increased facilities for broader recycling, increased labor for collection and processing, outreach materials, increased staff and resources, collection infrastructure, increased processing costs, grants or loans to attract reuse and recycling businesses.

There are also potential cost benefits, including less frequent pick up of trash as less trash is generated, revenue from the sale of marketable recyclable materials, increased fees for use of landfill, financial incentives for customers to recycle, fines to those who do not comply if re-use and recycling are made mandatory.

Synergies include a close alliance with the recommendations of other working groups such as Outreach and Education to promote recycle and waste education, as well as the Built Environment in regards to the Construction and Demolition Debris Policy.

Obstacles

There are no significant obstacles to creating the initial plan. Successful implementation of the plan however will require financial commitment from the city, and lifestyle changes by the public, such as a willingness to collect compostable organic waste in their homes, or effort by businesses to separate recyclables from their trash.

Partnerships

Partnerships with other local municipalities, particularly Palo Alto and Sunnyvale, who share the Sunnyvale Materials Recovery and Transfer (SMaRT) Station with Mountain View are critical to the success of an efficient waste plan. It is possible that expanding partnerships to other cities in the region would be advantageous to make full use of local facilities and reduce costs.

Appendix

Citations

1. Using the “City of Palo Alto Zero Waste Operational Plan of June 2007” as a template, a Zero Waste plan for Mountain View should address the following issues:
 - Set achievable diversion goals toward 90% diversion rate by 2021
 - Waste composition analysis to understand potential for increasing diversion⁷
 - A plan for diversion of all organic compostable waste including food scraps
 - Systems to maximize recycle material recovery
 - Options to increase types of materials which can be recycled
 - Establish incentives for compliance or fines for non-compliance
 - Evaluation of effectiveness of single stream versus segregated collection of recyclables
 - Maximized utilization of the SMaRT Station to continue to increase diversion rate, Expanded recycling drop off center locations
 - Set fee structure for dumping to landfill
 - Further incentives to encourage Construction and Demolition debris diversion
 - Outreach programs for multi-family residential customers
 - Facilities required to support increased recycling and composting efforts
 - Cost implications of implementing the plan
2. For information on the minimum waste diversion mandate in California, AB939 “The Integrated Waste Management Act of 1989” from the California Waste Management Board see: <http://www.ciwmb.ca.gov/Statutes/Legislation/CalHist/1985to1989.htm>

Web Sites

“Stop Trashing the Climate”, www.stoptrashingthecclimate.org
The GrassRoots Recycling Network, www.grn.org
Eco-Cycle Inc, www.ecocycle.org
Zero Waste International Alliance, www.zwia.org
Zero Waste California, www.ca.gov
Oakland Public Works, www.zerowasteoakland.com
Institute for Local Self-Reliance, www.ilsr.org/recycling
Northern California Recycling Association www.ncrarecycles.org
California Product Stewardship Council www.caproductstewardship.org

Contact Information

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⁷ Analysis of SMaRT Station residual waste has already been completed by Cascadia Consulting Group and is included in the “Palo Alto Waste Composition Study” Final Report dated May 2006.

Recommendation # 2

Title: Increased utilization of the SMaRT Station

Working Group: Waste, Waste Reduction, and Recycling

Statement of Issue

Mountain View currently generates about 65,000 tons of municipal solid waste which is brought to the Sunnyvale Materials Recovery and Transfer (SMaRT) Station for processing⁸. The diversion rate, that is material sold to recyclers (as in paper, glass, metal) or diverted for composting (as in green yard waste) was 72% for 2006, the most current year for which data has been calculated⁹. Recently installed equipment at the SMaRT Station is expected to increase the diversion rate by more efficient extraction of recyclable materials from mixed waste, increasing it from the current 18% up to 25%.

The city is also in the final process of implementing a Construction and Demolition debris ordinance which will result in a greater increase diversion rates. Future improvements can be obtained with the development of programs to compost organic waste, increase recycling participation by commercial interests in the city, and multi-family housing units.

Since its opening, the SMaRT Station has had excess capacity and is therefore an underutilized resource in the region. With a permitted capacity of 1500 tons per day, the facility operates at an average of 1100 tons per day, occasionally peaking at 1200. There has been no significant fluctuation in these rates since 2001.¹⁰

Until now it has been more cost effective for cities to send greater amounts of waste to landfill than to spend time and money on greater debris separation and processing. The impact of such financially-driven decisions, however, is that waste that could be diverted is ending up in landfills unnecessarily. Spreading the operating costs beyond the current partner cities when there is excess capacity that could be utilized would make the best use of the facility and the opportunity to divert the maximum amount of waste from landfill.

Recommendations

Increase waste diversion by increasing utilization of the SMaRT Station capacity:

1. In collaboration with the partner cities (Palo Alto and Sunnyvale) and the management of the SMaRT Station, explore an initiative to identify and actively seek additional users of the facility. (Short term)
2. Work with NASA/Moffett Field to become a partner in use of the SMaRT Station. (Short-term)

⁸ "SMaRT Partnerships" Report to the Community by The SMaRT Station Cooperative Venture 2006-2007

⁹ Lori Topley, Solid Waste Manager, City of Mountain View

¹⁰ Information about the SMaRT Station and its operation was obtained during a tour of the facility by the WWRR sub-group on 5/2/08 and in a telephone conversation with Mark Bowers, Manager, on 6/5/08.

Environmental Impact

Increased utilization of the SMaRT Station by other jurisdictions will result in the diversion of waste that is currently being taken to landfills¹¹. This will reduce the amount of GHG generated by landfill decay, new product production, and transportation of goods and waste.

Fiscal Impact

1. Since the operating costs of SMaRT are apportioned among the users/partners, the City of Mountain View could expect a reduction in the fees it pays.
2. Mounting an initiative to study the desirability and feasibility of seeking additional users and the subsequent recruiting and negotiation processes will require staff resources, possibly for an extended period of time. This may necessitate hiring additional staff.

Obstacles

1. The primary obstacles are political. Successfully recruiting additional users of SMaRT requires engagement with other jurisdictions (possibly including the federal government), Councils, city departments, etc.
2. Contracts between municipalities and their haulers are typically long term and may have automatic renewal clauses in them.
3. The state's requirements for waste diversion (50%) are no longer an incentive for jurisdictions to utilize the services of the SMaRT Station. Stricter state mandated diversion rates will influence future city actions.

Partnerships

City of Palo Alto
City of Sunnyvale
Bay Counties Waste Services
Moffet Field/NASA

¹¹ These are the potential benefits of successfully identifying and securing agreements with other jurisdictions to use SMaRT. These recommendations address a collaborative process with the other SMaRT partner cities and will not in themselves result in direct environmental or fiscal benefits and may, in fact, incur costs. It is known that because of the typical length of contracts between jurisdictions, haulers, and depositories, as well as these and other associated political considerations, such an initiative is a complex undertaking.

Appendix

Web Sites

SMaRT Station

<http://sunnyvale.ca.gov/Departments/Public+Works/Solid+Waste+and+Recycling/SMaRT+Station/>

Contact Information

Mark Bowers, SMaRT Station Manager
City of Sunnyvale
408-703-7421

Bay Counties Waste Services (SMaRT Station Operators)
3355 Thomas Road
Santa Clara, CA 95054
Phone: 408-565-9900

Recommendation #3

Title: Diversion of Organic Waste

Working Group: Waste, Waste Reduction and Recycling

Statement of Issue

The diversion or recovery of organic waste from landfills to a Regional Composting facility can accomplish two important goals. This change in waste collection will reduce the amount of methane gas generated by anaerobic decomposition in the landfill and it will reduce the amount of waste going to the landfill.

Recommendations

1. Begin a pilot program for curbside pick-up of organic waste from residential customers. Divert food scraps, compostable paper, untreated wood and other organic compostables. The City can investigate use of the SMaRT Station facility to support the collection of the diverted material. We recommend adding food scraps and other compostables to the single-family yard trimmings collection program.
2. “Provide technical support, and promotion of, non-profit food rescue organizations’ efforts to reclaim unused, edible food for food banks and hunger programs. We also recommend that the City provide information to local restaurants and caterers about the “Good Samaritan” law which allows generators to donate edible food without concern for liability.” (City of Palo Alto, Zero Waste Operational Plan, June 2007, pg 62)
3. Create composting workshops to train a new level of local expertise in composting, tailored to the commercial/industrial sector. Workshops can be targeted to landscapers, restaurant operators, caterers, and others. Include grass-cycling education and on-site composting programs for industrial parks, businesses and institutions.
4. Begin collection of yard trimmings from multi-family dwellings.
5. Partner with organics processors located in the region for sale of composted organic waste as a soil enhancement product.
6. Implement a mandatory organics/yard trimming recycling ordinances and addition of organics materials such as food waste to the commercial waste collection program to increase diversion. Begin with voluntary participation and phase in required participation.

Environmental Impact

According to the United States Environmental Protection Agency (U.S. EPA), landfills, which create landfill gas consisting principally of carbon dioxide and methane, are a large human-created source of methane in the United States, accounting for 25 percent of the country’s methane emissions. Methane has a more powerful greenhouse effect than carbon dioxide. Over a 100-year period, one ton of methane is estimated by the scientific

community to make the same contribution to warming as 23 tons of carbon dioxide. Therefore, by reducing the methane emissions of landfills, through waste prevention and recycling, the City can have a real impact on its overall greenhouse gas emissions. (City of Palo Alto, Zero Waste Operational Plan, June 2007pg 50,)

Methane is generated in landfills and open dumps as organic waste decomposes under anaerobic (without oxygen) conditions. The amount of methane created depends on the quantity and moisture content of the waste and the design and management practices at the site. (<http://www.epa.gov/methane/sources.html>)

Fiscal Impact

- ½ to 1 Full Time Employee for organics technical assistance and workshop coordination
- Additional containers for organic waste, though this could potentially be included in current green yard waste containers for residential customers
- May result in increased pick-up costs, if organic waste is included with green waste, dependent on waste hauler contract
- Long term cost benefit if less waste is taken to landfill, and instead it is composted into soil enhancement material and sold for agricultural use

Obstacles

- The existing contract with Foothill Disposal does not provide for the collection of organic waste. The contract is scheduled to expire in April 2013.
- Education and cooperation of residents and businesses is essential to the success of the program

Partnerships

The Center for Environmental Economic Development (CEED) in Humboldt

The Organics Recycling Board under development by CEED

Foothill Disposal

California Integrated Waste Management Board

California Environmental Protection Agency and the CA Climate Action Team

Google (as they already have a composting program)

Grover Landscaping

Jepson Prairie Organics

Newby Island Compost

Pacheco Pass Landfill

West Contra Costa Sanitary Landfill Compost

Z-Best Compost

Appendix

Some figures from Palo Alto's recent waste composition study document the current conditions:

- Notable findings about the composition of SMaRT Station residuals include:
- Over three-quarters (77%, 30,700 tons) of the SMaRT Station's residuals are reusable, recyclable, or compostable.
- Compostable material categories account for about 36% (14,500 tons) of the SMaRT Station's residuals.
- Recyclable paper accounts for about 17% (7,000 tons) of the residual stream.
- In all of the five business sectors identified in the study (multi-family residential, city departments, schools, restaurants, and hospitals) the highest percentage of recoverable material found in the waste stream was compostable material.

Compostable materials account for about 36% (14,500 tons) of the SMaRT Station's residuals. These material categories included the following:

1. Food (6,061 tons)
2. Compostable Paper (3,590 tons)
3. Pruning and Trimmings (161 tons)
4. Manure (38 tons)²
5. Leaves and Grass (4,186 tons)
6. Compostable Organics (332 tons)
7. Branches and Stumps (88 tons)

(City of Palo Alto, Zero Waste Operational Plan, June 2007, section 4.6.1, Waste Composition study)

Recommendation #4

Title: Polystyrene Takeout-Food Containers

Working Group: Waste, Reduction & Recycling

Statement of Issue

The City of Mountain View allows polystyrene take-out food containers; Mountain View should require that take-out containers be biodegradable and/or recyclable.

No municipality in the State of California accepts polystyrene takeout food containers for recycling; polystyrene disposed of in Mountain View ends up in the landfill after it is transported to the SMaRT Station. Polystyrene is designed for single-use and is the most difficult common plastic to recycle.¹²

Foamed polystyrene is made from a bevy of petroleum-derived chemicals, many of which pose significant health risks to humans. Polystyrene is produced from styrene, a known human neurotoxin and a known animal carcinogen. Styrene has been shown to leech out from expanded polystyrene (EPS) packaging under a variety of circumstances--most notably when in contact with an acidic solution or when food containing vitamin A is used in a microwave.¹³

Recommendations

Ban the use of polystyrene takeout food containers in the city of Mountain View. There is statewide and nationwide precedent for banning polystyrene and requiring food-service take-out containers to be biodegradable and/or recyclable (see Appendix).

Mountain View should follow a similar process as has been done by other cities and counties by proposing the ban; scheduling public input; devising a timeline; determining if there will be assistance to small-businesses; and working with local suppliers to help the transition to become polystyrene-free.

Environmental Impact

A CIWMB (California Integrated Waste Management Board) Report finds that “in the categories of energy consumption, greenhouse gas effect, and total environmental effect, polystyrene’s environmental impacts were second highest, behind aluminum.”¹⁴

Polystyrene containers are one of the most common forms of marine debris. Local governments pay for storm drain clean-up costs due to polystyrene litter. Polystyrene also breaks up into small pieces and can be ingested by marine or bird life, killing them

¹² http://www.cawrecycles.org/issues/eps_environmental_effects

¹³ http://www.cawrecycles.org/issues/eps_health

¹⁴ <http://en.wikipedia.org/wiki/Polystyrene>

through starvation. The product does not biodegrade. It crumbles into fragments that have no expiration date.¹⁵ The impact on Mountain View would be to replace polystyrene food containers with less-impactful take-out containers, and to promote the use of biodegradable containers.

Fiscal Impact

Minimal cost to the city. Cost would be borne by local business to change container type.

Obstacles

Resistance by businesses to convert to non- polystyrene to other containers which may increase food service costs.

Partnerships

Potential to partner with a local eco-friendly vendor for city-wide lower-cost acceptable containers. As this industry grows, a partnership with a closed-loop vendor should be part of the plan i.e. a supplier who also picks up and composts the biodegradable containers or works with Mountain View to establish eco-friendly container composting.

¹⁵ http://www.cawrecycles.org/issues/polystyrene_main

Appendix

Contact Information

<http://www.cawrecycles.org>

<http://www.verdant.net/nofoam.htm>

http://www.cawrecycles.org/issues/polystyrene_main

http://www.cawrecycles.org/issues/eps_recycling

<http://media.www.thehilltoponline.com/media/storage/paper590/news/2003/03/07/NationWorld/s-tyrofoam.Versus.Paper.Debate-388550.shtml>

<http://www.grist.org/advice/ask/2003/02/06/umbra-styrofoam/>

http://www.americanchemistry.com/s_plastics/doc.asp?CID=1422&DID=5645

<http://www2.sfenvironment.org/foodservice/>

EPA Site on Styrene

OSHA Web Resource on Styrene Exposure

CDC Agency for Toxic Substances and Disease Registry Styrene Fact Sheet Plastics and Human Health

Other California community's regulations on Polystyrene:

- Berkeley - Type: EPS Ban. Requirement that 50%, by volume, of takeout food packaging be recyclable or compostable. Enacted 1988.
- Calabasas -Type: EPS Ban. Requirement that all takeout food packaging be recyclable/compostable. Effective July 2007.
- Capitola - After a challenge from the Restaurant Association, Capitola's food packaging ordinance was reinforced June 2007. Type: EPS Ban. Requirement that all takeout-food packaging be compostable. Enacted December 2006.
- Emeryville - Emeryville's ordinance requires restaurants to switch to more environmentally-friendly packaging. Type: EPS Ban. Requires that all takeout-food packaging be compostable/recyclable. Enacted March 2006.
- Fairfax - Type: EPS Ban. Restaurants & retail food vendors banned from using EPS food packaging.
- Malibu - EPS Ban. Enacted September 2005.
- Millbrae - Type: Polystyrene Ban (ALL polystyrene.) Requirement that all plastic takeout food packaging be recyclable or compostable. Effective January 2008.
- Oakland - Type: EPS Ban. Requires all takeout-food packaging be compostable. Effective June 2006.
- Orange County municipalities of Aliso Viejo, Huntington Beach, Laguna Hills, Laguna Beach, Laguna Woods, San Clemente, San Juan Capistrano and the Santa Margarita Water District - banned EPS food packaging in certain municipal facilities. Enacted 1991.
- San Francisco - Type: EPS Ban. Requirement that all takeout-food packaging be recyclable/compostable. Effective June, 2007.
- Santa Monica – Type: Polystyrene Ban (ALL.) Takeout-food packaging be compatible with the City's recycling infrastructure; all takeout-food packaging be recyclable. Effective Dec. 2006.
- Sonoma County - Anyone in a county facility cannot possess, sell or buy EPS.
- Ventura County has a ban on the use of foamed polystyrene in county franchises.

Recommendation #5

Title: Educate the public on recyclable material processing and eco-conscious purchasing

Working Group: Waste, Waste Reduction, and Recycling

Statement of Issue

For the residents of Mountain View to maximize recycling activities and to make environmentally conscientious purchasing decisions related to waste management issues, it is essential that resource information is comprehensive, easily accessible, and up to date. There are a broad array of recycle topics which would benefit from public education to be effective.

Recommendation

1. The City should take any and all necessary steps to educate the public on processing recyclable materials and making environmentally conscious purchasing choices. To accomplish this goal the city should consider the following actions:
 - Provide a comprehensive resource on the city web page for recycle locations for various items, similar to Palo Alto's Recyclopedia¹⁶
 - Increase the number of locations in the city where recyclable materials not picked up by waste haulers can be taken for recycling by residents and businesses.
 - Set up recycling education booths at public events and festivals
 - Develop a list of green volunteers to promote recycle causes
2. Educate the public on the following recycle issues:
 - Reduce the amount of paper in the recycling stream by educating residents about how to remove their name on junk mail lists and delivery lists.
 - Use of paperless billing services such as those provided by their service providers, banks, PayPal (www.paypal.com), or PayItGree (www.electronicpayments.org/green/)
 - The Digital TV transition scheduled for Feb. 2009, and what type of equipment will or will not become obsolete.
 - Reduce the amount of motor oil entering the recycling stream, by educating the public that oil changes are now recommended at 5000-mile intervals under normal operating conditions¹⁷.
 - Reduce the amount of water needed for car washing by encouraging residents to wash vehicles less often and to consider cleaning them with damp rags as an alternative, especially during short intervals. Encourage use of commercial car wash services, as they reuse water and capture the sludge that comes off the cars in traps for proper waste disposal.

¹⁶ <http://www.cityofpaloalto.org/depts/pwd/recycle/recyclopedia.asp>

¹⁷ <http://www.3000milemyth.org>

- Provide increased information about correct recycling procedures for the following:
 - How clean containers and paper actually need to be for processing in the recycling stream
 - Electronic waste disposal – drop off locations
 - CFL and fluorescent tube - drop off locations, including participating retail outlets
 - Batteries – pick up at curbside
 - Household hazardous waste – drop off locations
 - Proper disposal of over-the-counter and prescribed medications.
 - Plastic type differences related to their processing in the recycling stream

Environmental Impact

Increased recycling practices and eco-conscious purchasing will divert material from landfill, and therefore avoid the GHG emissions generated by landfill, the energy used to produce new products, and the transportation of products. There are also benefits to the environment when toxic materials are properly disposed of rather than contributing pollutants to our air, land and water.

Fiscal Impact and Synergies

Fiscal impact includes production of educational materials (can be incorporated into existing publications), staff time to augment city web pages, creation and staffing of additional waste drop off locations.

Synergies with the Communications, Public Education & Outreach, and Green Business working group efforts should be noted.

Obstacles

Obstacles to the implementations are likely limited to City staff limitations and partner agency resources.

Partnerships

- SMaRT Station (for assistance with educating Mountain View residents about responsible consumer electronics recycling)
(<http://www.sunnyvale.ca.gov/Departments/Public+Works/Solid+Waste+and+Recycling/SMaRT+Station/>)
- Santa Clara County Integrated Waste Management (<http://www.reducewaste.org>)

Appendix

Web Sites

- City of Mountain View Resource Newsletter
(http://www.ci.mtnview.ca.us/services/city_publications/the_resource_newsletter.asp)
- City of Mountain View Garbage & Recycling Programs (<http://www.mvrecycle.org>)
- RecycleStuff.org, provided by the Center for the Development of Recycling (CDR), Santa Clara County (<http://www.recyclestuff.org>)
- Materials and Waste Types, California Integrated Waste Management Board
(<http://www.ciwmb.ca.gov/Index/default.asp?VW=3>)
- 21 Things You Didn't Know You Could Recycle, Coop America Quarterly, Fall 2007(<http://www.coopamerica.org/pubs/caq/articles/21Things.cfm>)

Contact Information

- Lori Topley, Solid Waste Program Manager, City of Mountain View, 650-903-6488, lori.topley@mountainview.gov
- Rob D'Arcy, program manager with the Santa Clara County Department of Environmental Health, Household Hazardous Waste Program

Recommendation #6

Title: Single use bags

Working Group: Waste, Waste Reduction and Recycling

Statement of Issue:

Single use plastic bags were introduced in the United States in 1975, and became commonly used by grocery stores in 1977. They are popular because they are strong, lightweight and inexpensive to produce. California uses about 2 billion plastic bags per year (California Integrated Waste Management Board). Of these, less than 5% are currently recycled.

Plastic bags are made from petroleum based products. They cause litter, harm to marine animals, release toxins and do not degrade in landfill. Paper bags are made from precious forests, create pollution during their manufacturing process and are heavy to transport. One reusable bag replaces hundreds of single use bags.

Recommendation:

1. Educate the public to carry re-usable shopping bags through outreach programs.
2. Educate retail employees to ask if a bag is needed or “did you bring your bag today?”
3. Do not distribute plastic bags at city run operations, such as the Public Library.
4. Develop a program to distribute reusable shopping bags to city residents at little or no cost, including partnerships with bag manufacturers for “logo” opportunities
5. Ban use of plastic bags at the Farmers Market
6. Enforce compliance with current plastic bag recycling programs (Ca AB 2449)
7. Endorse new legislation for stronger plastic bag legislation (Ca AB 2058)

Environmental Impact:

Environmental impact is potentially high. Reduced use of single use bags would reduce risk to marine life and animals and reduce dependence on petroleum based products. It would also be beneficial for the diversion from landfill of millions of bags that not biodegrade. Even the production of paper bags uses natural resources and energy, and creates pollution. Recent statistics show that Americans throw out over **100 billion plastic bags** a year, accounting for almost 2% of all landfill waste. In addition, making and transporting those bags requires more than **12 million barrels of oil**. Each year, more than **14 million trees** are cut down to make **paper bags** for US consumption alone.

This recommendation has synergies with the Communications, Public Education & Outreach, and Green Business working group, as they developing processes to promote green business within the city.

Fiscal Impact

Low cost: If we bring our bag to the store (BYOB= Bring Your Own Bag). Stores save money of providing bags and gain better reputation to be more sustainable by promoting reusable ones. As an alternative stores could provide compostable bags. Stores could also provides incentives to the customers when the bring their bags, such as currently done locally by Safeway and Trader Joe's.

If the City provides bags they can offset all or nearly all expenses associated with producing the bags if they allow local companies and organizations to include their logos and other information as artwork on the bags (think of this as a NASCAR logo effect). Chico Bags has confirmed that they can work with the City to accomplish this (minimum order 500 bags).

Obstacles

- Change habits of the store employees, including packing more into each bag.
- Potential increased costs for consumers if retail outlets switch to compostable bags, or charge for re-usable bags
- Opposition from plastic bag producers and large retail chains, argued that policy would increase costs to consumers.
- Change habits of the public who need to get accustomed to bringing reusable bags with them.

Partnerships

Partner with business to supply reusable bags

<http://store.chicobag.com/html/co-branding.html>

Contact Information

Barrett Green, customer representative/fundraiser specialist,
530-342-4426 x233, 888-496-6166 x233, fax 530-267-5434,
barrett@chicobag.com

Partner with Mountain View Public Library and Friends of the Library to educate patrons in bringing their own bag to the Library, or supply canvas as an initiative with the Library Logo.

Partner with Mountain View Voice to avoid plastic bags when delivering the newspapers or prepare a mechanism to take them back and reuse them (see Appendix at end of this section).

Chamber of Commerce Mountain View (<http://www.chambermv.org>)

Mountain View Farmers Market, 1-800-806-3276
(<http://www.cafarmersmkts.com/mtnview.html>)

Appendix

Citations

California Legislation

(from Californians Against Waste www.cawrecycles.org)

AB 2449, enacted in 2006, requires all California grocery stores and large retail store (over 10,000 sq.ft.) take back and recycle plastic grocery bags. The bill also requires retailers to print a message provide consumers with a bag reuse opportunity. Retailers and manufactures are required to implement a public education program, and all bags must be labeled 'Please Return to a Participating Store for Recycling.'

The program includes:

- Labeling bags to return to the store for recycling.
- Placing recycling bins in visible and accessible locations for customers.
- **The provision of reusable bags for customers to potentially purchase and use in lieu of disposable ones.**

AB 2058 would require large grocery stores and pharmacies that distribute free plastic bags to ensure that at least 70% of those bags are kept out of the landfill by July 2011. If this goal is not met, retailers will be required to charge a 25-cent per bag 'advance disposal fee', the proceeds of which would be used to institute the toughest in the nation litter clean-up law for carryout bags. California uses about 19 billion plastic and 3.8 billion paper bags annually. The cost to retailers of providing these 'free' bags to consumers is about \$680 million annually.

The cost of managing and cleaning up the more than 95 percent of one-time use plastic bags that become litter or sent do landfill is generally borne by local governments and ultimately the taxpayers. An analysis of these costs by the San Francisco Department of the Environment found that the cost burden in that city was approximately 17 cents per bag. Extrapolating those costs out for the entire state, and the total costs to local government and tax payers for managing plastic bag litter and waste is in excess of \$3.2 billion annually.

All told, the 'free' one-time use bag is actually costing in excess of \$300 per household annually in higher costs and taxes. Even the moderately successful goal of 70 percent reduction and employing a 15 cent per bag fee for consumer that forget their bag, California would experience a nearly 50 percent reduction in bag related costs—or \$1.7 billion annually.

Testimony from a vendor at the Farmer's Market:

"Well I wasn't sure what to expect this year regarding plastic bags (we do have to buy those ourselves) but I'm pleasantly surprised at how many people bring their own bags. We do over 30 Bay area markets a week during our 6-7 week season and I usually go through several thousand bags a year. This year we have seen at least a 60-70% drop in usage and the last order of bags I purchased were bio-degradable plastic. You'll be happy to hear that most people in general have their own baskets or cloth bags that they bring along to the markets.

It seems that the trend is catching on!"

Web Sites (not referenced in footnotes)

Californians against waste:

http://www.cawrecycles.org/issues/current_legislation/ab2449_06

http://www.cawrecycles.org/living_green/bags/tips

Taxes on plastic bags proposed by Assembly:

[http://news.sympatico.msn.ca/Plastic+Bags+Tax+Proposed+in+CA+Assembly/Globally Minded/ContentPosting.aspx?isfa=1&newsitemid=d7d311e4-dd51-4f6c-81c8-55472a033e4b&feedname=RETHOS&show=False&number=0&showbyline=True&subitle=&detect=&abc=abc&date=True](http://news.sympatico.msn.ca/Plastic+Bags+Tax+Proposed+in+CA+Assembly/Globally+Minded/ContentPosting.aspx?isfa=1&newsitemid=d7d311e4-dd51-4f6c-81c8-55472a033e4b&feedname=RETHOS&show=False&number=0&showbyline=True&subitle=&detect=&abc=abc&date=True)

<http://store.chicobag.com/html/co-branding.html>

Pacific Protection Initiative:

http://www.healthebay.org/currentissues/ppi/theneed_bags.asp

Contact Information

Mark Murray

Executive Director

[Californians Against Waste](#)

Chico bags: <http://store.chicobag.com/>

Barrett Green, customer representative/fundraiser specialist,
530-342-4426 x233, 888-496-6166 x233, fax 530-267-5434,
barrett@chicobag.com

Bags on the run: <http://www.bagsontherun.com/>

Compostable bags:

http://www.ecoproducts.com/Home/home_biobags/home_index_biobags.htm

Title: Recycling & Waste Management in Multi-Family Dwellings

Working Group: Waste, Reduction & Recycling

Statement of Issue:

Establishing recycling programs for residents of multi-family dwellings (MFDs) is a challenge.¹⁸ MFD residents generate a large amount of a community's residential waste and want to recycle, but don't know how to participate. One survey conducted by a local low-income housing group cited recycling as one of the top three things people wanted in their community.¹⁹ Issues that have to be overcome include:

- Curbside programs for individual households are not suited to MFDs.
- Many MFD buildings were not designed with recycling in mind, they typically have little space in individual units or in common areas for the collection and storage of recyclables.
- Residents are ill informed about the need to recycle and how to do so.
- Language and cultural barriers and misunderstanding.
- MFD management may be hesitant to participate

Recommendations:

1. Communicate the value of increased recycling to MFD residents by:
 - Developing campaigns using Posters/Leaflets/direct mail, phone calls and on-site visits that are in the relevant language/ethnic/cultural context.
 - Making presentations to residents & relevant community groups. Describe environmental and cost benefits of recycling to both building residents and property owners.
2. Make recycling easy for MFD residents:
 - Develop a specialized container to collect and transport their recyclables i.e. 'Recycling Buddy' (sponsored by local businesses & provided on an economic sliding scale) to centralized recycle locations.
 - Label all containers clearly in all the main languages in Mountain View.
 - Develop a program of visits by recycling advocates to audit each location and develop a plan of action for improvements if necessary.
3. Create a supportive recycling network at each MFD
 - Create a volunteer Corps. 'Recycling Rangers' (e.g. Scouts, high school kids or recycling advocates) for bringing recyclables to collection points, circulating program information, informing people on recycling benefits etc.
 - Identify a complex 'point person' for the program.
 - Set up a virtual & real network to help these people stay connected, learn from each other and remain motivated etc.
 - Develop incentive competitions for complexes that meet recycle goals.

¹⁸ <http://www.ciwmb.ca.gov/lglibrary/innovations/Multifamily/Summary.htm>

¹⁹ http://www.rethinkwaste.org/mfd_recyccoords.php?id=mfdrecycpros

4. Involve MFD owners and property management

- Provide professional support from recycling planners to assist property owner in designating appropriate space for centralized recycling containers, include incentives of simplified permit process or fee reduction if necessary
- Work with property managers to encourage recycling of landscape waste (requires waste hauler support as well)
- Implement programs with incentives to meet complex recycle goals.
- Follow up with mandatory enforcement by fines when goals are not met.

Environmental Impact:

Increasing MFD recycling can help divert significant quantities of materials from the solid waste stream. Curbside diversion rates for MFDs averages 14.6 percent compared to 16.0 percent for single family households. Also, each multi-family household set out an average of 0.14 tons of recyclable materials per year compared to 0.23 tons per single family household per year. If the MFDs rates are brought up to at least that of single family homes, it will help increase the environmental quality of life; reduce the amount of GHG emitted by landfills as well as the need areas required for landfill expansion.²⁰

Synergies exist with the Communication and Outreach working group.

Fiscal impact:

- Medium (\$30,000 - \$100,000) in the short term as the programs are being developed.
- Low (\$10,000 - \$30,000) after the start up phase.
- On-going extra cost for hauling and processing recycled materials could be offset by the benefit of increased marketable clean recycled goods.

Obstacles:

- Space constraints in individual units and communal areas
- Uninformed tenants and language and cultural challenges
- Existing practices, requires change in habits and extra effort
- Landlord/management company resistance and lack of motivation
- Legislative resistance to compelling participation by mandating fines for non-compliance
- Increased cost for collection and processing of waste

Partnerships:

Coca-Cola/NRC Recycling Bin Grant Program (www.bingrant.org).

Green Citizen (www.greencitizen.com).

Californians Against Waste (www.cawrecycles.org)

Relevant Community organizations for promotion of programs e.g. Churches,

²⁰ <http://www.epa.gov/epaoswer/non-hw/recycle/multi.txt>

Recommandation #8

Title: Provide accessible and visible recycling bins in public places and businesses.

Working Group: Waste, Waste Reduction and Recycling

Statement of Issue:

There is a lack of recycling bins around the city, both in public places and in local businesses. If recycle bins were more easily available, more people would utilize them. This would increase the amount of trash diverted from landfill as well as raise public awareness for recycling. As sensitivity to environmental issues increases in our community, many people will want to “do the right thing” and recycle, especially if it does not take any extra effort on their part.

Recommendations:

1. For every public location where there is a trash can, there should at least be a container recycle bin (glass/plastic/metal) and ideally one for mixed paper as well.
2. These bins should be clearly designated for recycled materials to alleviate contamination with garbage. Differentiation could be achieved by size and shape of openings for containers, consistent color of bins for different types of materials, and/or clear marking in several languages. We must make it just as easy for someone to dispose of recyclable material in the appropriate way as it is for someone to throw an item in the trash.
3. In food establishments which generate organic waste and utilize compostable cups and utensils, there should be an accessible compost recycle collection area to avoid sending compostable material to landfill.
4. Recycle containers should be placed in city parks, along major streets, downtown, at transit centers, in the Civic Center area, near restaurants with take-out service, at stores and markets, at the Farmer’s Market, and at all major events and festivals.

Environmental Impact:

- Increased recycling diminishes waste going to landfill and the resulting GHG.
- Using recycled material to generate new products conserves our natural resources and minimize the pollution and ecosystem damage caused by the extraction of virgin resources, manufacturing and transportation.
- Using recycled materials to produce new products decreases energy use and GHG production .²¹
- When establishments utilize compostable plates and utensils they must be incorporated into organic composting systems since they will not decompose in standard landfill.

²¹ Manufacturing one ton of aluminum cans from its virgin source, bauxite, uses 229 million Btus. Producing the same ton of cans from recycled aluminum uses only 8 million Btus., an energy savings of 96%. -Jeffrey Morris, “Recycling Versus Incineration: An Energy Conservation Analysis” Journal of Hazardous Materials 47 (1996) pp.227-293

Fiscal Impact

Medium Cost (\$30,000 - \$100,000) to purchase and place additional recycling bins.

There will be continuing annual cost to for recycle bin collection and processing from increased number of locations. Even though sorting technology at debris processing facilities has improved, much higher diversion rates are possible with “clean” recyclable materials, so a higher percentage will be marketable.

Potential cost benefits could be realized from the sale of the additional recycled material to the marketplace. Also, increased diversion from landfill means cost savings in use of landfill facilities, extending the life-span of the facility.

Obstacles

- Resistance from businesses to devote more space to recycle bins
- Extra cost burden on disposal pick-up program which may need to be funded by fee increases.
- Effectiveness depends on public participation and cooperation.

Partnerships

California Dept. of Conservation.

City of Mountain View.

Local Businesses.

Chamber of Commerce.

Accenture Technology Labs. - has developed a technology with sensors in the recycling bins to indicate if a bin is full and ready for pick-up, or not.

Appendix

Citations :

Accenture Technology Labs

http://www.accenture.com/Global/Services/Accenture_Technology_Labs/default.htm

Live Earth Farm:

<http://www.liveearthfarm.com/>

"**What else should I bring?** We encourage you to bring your own picnic plates and utensils in order to minimize unrecyclable garbage. We will have a washing station, where you can rinse them when you are through eating. "

Tzu Chi:

<http://www.tzuchi.org>

Web Sites

http://www.conservation.ca.gov/index/news/2003%20News%20Releases/Pages/NR2002-Op-Ed_02-25.aspx

<http://www.conservation.ca.gov/index/news/2002%20News%20Releases/Pages/nr2002-23%20recycling%20grants.aspx>

http://www.conservation.ca.gov/index/news/2005%20News%20Releases/Pages/nr2005-28_recycling_grants.aspx

Main site:

<http://www.conservation.ca.gov/dor/Pages/Index.aspx>

opinion on recycling:

http://www.healinghq.com/index.php?option=com_content&task=view&id=54

how to start a program:

<http://www.bottlesandcans.com/start.php>

grants from the Department of Conservation:

http://www.conservation.ca.gov/index/news/2004%20news%20releases/Pages/nr2004-04_doc_recycling_grants.aspx

Contact Information

Lori Topley, Solid Waste Program Manager, City of Mountain View

Heidi Melander, Northern California Recycling Association

Dan Sharoni, Accenture Technology Labs (dan.sharoni@accenture.com)

Recommendation #9

Title: Waste reduction and recycling programs in the local schools

Working Group: Waste, Waste Reduction, and Recycling

Statement of Issue

The eight schools that comprise the Mountain View Whisman School District (MVWSD) present a significant opportunity to the City in the arena of waste reduction and recycling. In addition to the potential for further reducing and diverting the materials that are added to the waste stream by the schools, they are also an important resource for community education and behavior change in how households manage their conservation and recycling practices.

In Mountain View, where a vast array of first languages is spoken, many residents don't develop mastery of English. While children has long been a source of education and behavior change for their families, this is especially important when the adults in their families have little opportunity to learn about specific issues and practices that are of significance to the larger community.

Educating students about the importance of environmental sustainability by incorporating related topics into the curriculum and teaching them how to make wise and practical choices about purchase, packing, consumption, and disposal of food as well as other materials that they routinely use (e.g. paper, natural gas, and electricity), results in several notable outcomes:

- Further reduction in consumption of and increase in properly sorted and diverted material at their schools
- Increased awareness and knowledge about sustainability related issues
- Development of personal practices and behaviors that are environmentally beneficial and will have life-long impact
- Diffusion of learning and practices to their families; reduced consumption and increased diversion over time

Recommendation

Partner with the Mountain View Whisman School District to create waste reduction and recycling programs in the schools by doing the following:

1. Sponsor and form a joint task force representing the City and the MVWSD to develop detailed feasibility and implementation recommendations for a waste reduction and recycling pilot program at least one school, and then extend it to the rest of the district.
2. Explore the creation of partnerships between local businesses and schools to supplement the resources available to schools to become "green," and maximize

- the opportunities for intra-community collaboration, education, and involvement.²²
3. Extend the partnership to include the Los Altos School District where many Mountain View residents are students.
 4. Utilize the research and recommendations contained in the extensive report prepared by Stanford students for their Public Policy seminar (Puerta, O., Rubino, R., Sepe, C., Whinery, T., & Woolley, J. (2008, March). *“Greening” Mountain View Elementary Schools: An Analysis of Options for the Mountain View Whisman School District to Reduce Greenhouse Gas Emissions and Preserve Natural Resources*. Report prepared for the City of Mountain View and the MVWSD.).
 5. Implement a Zero Waste Lunch program at all schools.²³

Environmental Impact²⁴

- Reduction of waste created²⁵
- Increase in waste diversion rates
- Increased community awareness of waste issues.

Fiscal Impact

- Sponsorship and eventual implementation of school greening programs may require additional city (and school district) staff.
- Reduction in waste results in reduced hauling and disposal costs to schools
- Increased adoption of conservation activities, such as recycling handouts, double sided printing, turning off electronics on standby, etc., will reduce (or offset) the cost of supplies, electricity, heat, etc. to schools

Obstacles

Because the MVWSD is not under the jurisdiction of the city, the city will not have a direct role in driving the activities that could result in environmental and financial benefits. The city will need to establish a partnership with the school district, including identifying roles and responsibilities, and determine the other investments it is willing to make in the school system to increase its environmental sustainability.

²² Other partnerships and pilots currently being explored by the city, e.g. with Google, suggest opportunities for collaboration that will benefit the schools and the community in the area of waste reduction and diversion.

²³ For more information on Zero Waste Lunch programs see the California Integrated Waste Management Board web site at <http://www.ciwmb.ca.gov/schools/wastereduce/Food/ZeroWaste.htm> and <http://www.wastefreelunches.org/>

²⁴ These are the potential benefits of actual implementation of a “greening” program in schools. These recommendations address a partnership with the MVWSD and will not in themselves result in direct environmental or fiscal benefits; rather, they may require an investment by the city.

²⁵ It is estimated that each child who consumes a disposable lunch creates approximately 67 pounds of waste per year (<http://www.wastefreelunches.org/>). Incremental progress and education would reduce this number and likely household waste as well.

Partnerships

Go Green Initiative, Kate Jupina, Operations Manager, 925-484-1851
Pleasanton, CA 94556

www.gogreeninitiative.org

See especially their Planning Guide, <http://gogreeninitiative.org/PDF/PlanningGuide.pdf>

Green Schools Initiative
Deborah Moore, 510-525-1026

www.greenschools.net

Encinal and Laurel Schools, Menlo Park/Atherton

California Integrated Waste Management Board
<http://www.ciwmb.ca.gov/schools/wastereduce/Food/ZeroWaste.htm>

Zero Waste Alliance <http://www.zerowaste.org>

Appendix

Web Sites

Community Outreach Program that includes providing information about city programs and services in several languages

http://www.mountainview.gov/city_hall/city_managers_office/community_outreach.asp

The Foundation for Environmental Education; solar schools program

<http://the-environment.org/index.html>

Zero-Waste Lunch Programs

Obentec, Inc. (www.obentec.com)

Recommendation #10

Title: Material and product re-use

Working Group: Waste, Waste Reduction and Recycling

Statement of Issue

As established in this section of the task force report, it is essential that the City and its residents do everything they can to reduce output to the waste stream. Reuse of materials and products is a key component of any such effort.

Recommendations

1. Establish more regular Annual City-Wide Garage Sale and Community Yard Sales (currently, city-wide garage sales take place only once a year) and promote reuse of materials and products by public education, and by establishing, enhancing, and promoting these sales.
2. Identify existing web-based tools for recycling and free-cycling materials and products to new owners. Centralize reference to these web sites through the City web pages. Create customized search tools which would allow residents to search across multiple recycled and free-cycled product sites at one time.
3. Support a regular Used Goods Market to which residents can bring used items that they wish to exchange with or sell or donate to others in the community. This market should be held at least once a month and could take place alongside the Farmers' Market on Sundays. The types of items sold or traded could include any household or personal item (excluding food items).

Environmental Impact

- Reduced purchase of new goods will result in reduced manufacture and transport of such items and hence in reduced production of GHGs
- Reductions in the quantity of discarded items will delay their contribution to landfills.
- Greater interaction between residents from all over Mountain View will strengthen the community, and lead to more ideas on reducing the production of GHGs.

Fiscal Impact and Synergies

There are some low administrative costs associated with sponsoring more frequent Community-wide sales.

The cost will to set up and support web site access will be ongoing but will require a minor amount of staff time, and will be low cost.

The cost for setting up/facilitating the Market should be small, while the gain should come from reduced landfill tipping fees.

Synergies exist with the Communications, Public Education & Outreach working group

Obstacles

- Existing second-hand stores may object to the plan, but on the other hand could find the Used Goods Market to be a good place to augment inventory for resale.
- Limited City staff resources
- The availability of parking near the Farmers Market would be reduced, but the establishment of a goods drop-off and pick-up area for very short duration stopping would ameliorate this.

Partnerships

Ideal partnerships would be with those able and willing to create customized search tools that would allow Mountain View residents to search across multiple recycled and freecycled materials and products sites at one time.

California Farmers' Market Association

Goodwill

Green citizen

Appendix

Web Sites

Re-use and Free-cycle web sites include:

- Craigs List (<http://sfbay.craigslist.org/sby/sss/>)
- Freecycle.org
(<http://www.freecycle.org/group/United%20States/California/Mountain%20View>)
- Google Groups: Mountain View Freeshare
(http://groups.google.com/group/mv_ar_freeshare?lnk=)
- Resource Area for Teaching (RAFT) (<http://www.raft.net>)
- Yahoo Groups: Mountain View Free Recycling Group
(<http://groups.yahoo.com/group/mvfree/?yguid=20944555>)
- TechSoup.org: Computer Recycling and Reuse
(http://www.techsoup.org/recycle/index.cfm?cg=nav&sg=content_topicrecycle)²⁶

Contact Information

- Lori Topley, Solid Waste Program Manager, City of Mountain View, 650-903-6488, lori.topley@mountainview.gov

²⁶ This web site is better suited for informational purposes rather than for listings.

Ideas not on the Top Ten Recommendation List
(or covered in other Work Groups)

1. Council to support Extended Producer Responsibility legislation
2. Encourage landscapers who work in the city, and for the city, to compost green waste (City Operations)
3. Programs to reduce use of pesticides on private property (Biodiversity)
4. Programs to reduce use of pesticides on city property (Biodiversity)
5. Ban plastic water bottles at city events and venues
6. Add more water fountains in public locations
7. Green purchasing guidelines for city operations (City Operations)
8. Green purchasing guidelines for businesses (Outreach)
9. Recycle options for used mattresses
10. City to supply compostable pet refuse bags at parks
11. Encourage use of compostable diaper service
12. Collection and re-use of newspaper rubber bands
13. Reduced use of plastic bags for delivery of local newspapers
14. Resources for sharing excess worm bin compost material
15. Recycle of plastic plant containers from nurseries