

Source Reduction Memorandum for Division of Sustainability, Office of the Mayor City of Atlanta,

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BACKGROUND

Source reduction is a traditional part of solid waste management and has been a focus at the local, state and federal levels. Source Reduction reduces the waste stream by eliminating the generation of waste in the first place. It is the most cost-effective and efficient strategy in solid waste management. Examples include backyard composting that can reduce the household waste stream by 15 percent and eliminate all future collection and handling costs. In the business sector, companies have been reducing the material content of their packages in efforts to decrease production and transportation costs.

What is Source Reduction?

According to the US Environmental Protection Agency, “source reduction programs seek to change people’s behavior by helping them find less waste-intensive practices or alternative uses for existing waste materials without having to dispose of or recycle them. Source reduction eliminates the need to manage waste.”¹ A smart person recycles; a smarter person reduces waste to begin with. Source reduction includes reuse activities and a social enterprise such as St. Vincent De Paul in Eugene, Oregon is considered a source reduction enterprise. It has hundreds of workers repairing furniture, mattresses, appliances, computers, and pays good wages and benefits. When you reuse or repair you extend the life of an existing product and support more higher-skilled jobs.

Environmental benefits of source reduction include:

- resources used more efficiently, often resulting in cost savings;

- decreased amount of materials in the waste stream that need to be collected, transferred, and landfilled or incinerated;
- reduction in the toxicity of materials in the waste stream;
- extending the useful life of products through reuse and repair;
- reducing the need to extract virgin materials from the earth.

PLANNING

As with any major initiative, source reduction requires serious planning in order to create a program that can be effective over time. It is valuable to call upon the expertise of others who have successfully organized programs including state and municipal officials as well as professional consultants.

In-House Government Programs

A first important consideration is the development of an in-house government program to show the city's commitment to source reduction through leading by example. Source reduction does require behavior changes so it is important to enlist stakeholders in the planning process. One way to do this is by establishing an inter-agency task force. Support of top management is key so having the task force report to the Mayor or one of the Mayor's staff will be incentive for task force members to make source reduction a high priority.

The inter-agency task force can be comprised of procurement staff along with representatives with purchasing power from other agencies. Establishing goals and policies are important first steps.

Some commonly-used source reduction actions are:

- Practice of double-sided copying
- Purchase of durable items in place of disposable ones
- Reducing the amount of product packaging from suppliers as well as packaging used by the agencies

- Reusing materials whenever possible
- Composting yard waste at government facilities and using the finished product for landscaping
- Grass-cycling at government facilities as a landscape management practice.

These activities are all first considerations for the inter-agency task force. At the same time, it is important for the task force members to assess what they purchase and what ends up in the waste and to carefully examine the following issues:

- How can we reduce or eliminate the toxicity of products that we use?
- Are there alternative products that are cost-competitive and durable that can replace single-use ones?
- Are there options to reuse, donate, or recycle products when they are no longer needed?

Based on these findings, **procurement policies** can be put in place to encourage the purchase of:

- reused or reusable products
- products with minimal and/or reusable packaging

Education and training is essential to ensure the success of the program. It is understandable that many procurement staff members may prefer to keep their regular practices of buying products that are not considered sustainable. To address this resistance to change, it is necessary to inform all purchasing staff about source reduction procurement guidelines and the benefits of the practice. It is also valuable to provide guidance on making these purchases.

Organizers of the Newton, Massachusetts source reduction program provided the following advice based on their experiences in motivating employees, “Many people still don’t know or care about recycling, let alone source reduction, and you will need to make a

direct correlation that recycling is good for them. You may want to consider an incentive program in which a department receives back a portion of savings they have achieved through source reduction.”²

Tracking and reporting source reduction purchases are necessary activities in an overall source reduction strategy because it enables participants to evaluate the effectiveness of the program. Success stories can be acknowledged through award programs and the local media.

It is recommended that the source reduction efforts be incorporated into a comprehensive “green” city procurement program that includes all types of sustainable purchasing practices.

Household Source Reduction

Communities that are serious about household source reduction put in place unit-based pricing policies that have fee structures requiring residents to pay for trash collection based on the weight or volume of material they are putting out for disposal. Pay-as-you-throw programs provide a strong financial incentive for residents to examine ways that they can reduce their trash and lower their disposal fees.

Municipalities with PAYT programs also need to provide education and outreach programs to inform residents about source reduction practices (see Appendix A for a comprehensive list of activities):

- Purchasing items that can be reused or recycled
- Purchasing products that have less packaging
- Selecting cleaning supplies and other household chemical products that are less toxic
- Setting up a backyard composting system to handle food and yard waste
- Doing grass-cycling as a lawn management strategy.
- Preparing source reduction plans for construction and demolition

projects

To further support household source reduction, some New Jersey municipalities are considering an ordinance that would allow residents to sign a registry to prevent delivery of unsolicited materials (advertising flyers, menus, etc.) to their yards.³

After reviewing source reduction credit programs in Oregon and Minnesota, the State of Maryland established a program that provides its counties with opportunities to earn source reduction credits that can be translated into percentage points toward their annual waste diversion goal of 40 percent. Counties fill out a source reduction activities checklist each year and are able to earn up to 5 percentage points toward their goal. Activities include composting, grass-cycling, research, and public education (see Appendix C for outreach activities). The program encourages the following general public outreach activities by county staff:

- sponsorship of general public events
- setting up exhibits at county fairs and similar events
- working with programs in the schools
- partnering with the local media to inform the public about source reduction practices
- conducting food composting outreach including bin distribution programs
- providing source reduction information on web sites
- conducting focus groups of local residents.

Source Reduction in the Commercial Sector

Businesses can greatly benefit from implementing source reduction programs because they can result in lower costs and can be touted as an example of the company's commitment to sustainability. In some communities, the municipal sanitation workers collect trash from small businesses. When this is the case, businesses, as is true for

households, will be motivated to reduce their waste if there is a PAYT policy in place. Companies that pay their own trash fees definitely will benefit from implementing source reduction practices because they will be in a position to negotiate lower hauling fees.

An important step in a city's promotion of commercial source reduction is the creation of a task force with representation from both the government as well as the business sector. This partnership can work in designing an effective approach to enlist businesses in taking on this issue.

Informing businesses about success stories is a valuable incentive. Simple actions can result in savings for instance Pizzeria Uno in New York experienced savings of more than \$1,000 annually by replacing cocktail napkins with coasters and a Minnesota power company changed from disposable to reusable cups and saved \$1,600 per month.⁴

A major goal of the task force can be determining how best to reach out to the business community. The sponsorship of source reduction workshops and training sessions can be effective in this process. There are many excellent source reduction publications, guides, and resource materials that can be made available to interested businesses. Emphasizing potential cost-savings and following up with resource information is important.

Another way to elevate this issue for businesses is to sponsor annual award ceremonies where model programs are acknowledged. This type of event showcases businesses as "good citizens" and provides success stories for other companies to emulate. When institutions make source reduction part of a larger sustainability plan, results can be very significant.

Case Study Highlights – Three US Hospitals⁵

According to Terry Grogan, hospital waste comprises about 1 percent of the municipal waste stream. About 15 percent of the hospital-generated waste falls in the category of infectious waste requiring incineration. The vast majority of hospital waste, 85 percent, is comprised of paper, plastic, food, and other materials.

Terry Grogan presented three hospital case studies and found common approaches

to success:

- Procurement practices that reduce waste,
- Donation of unneeded materials to non-profit organizations and community groups
- Comprehensive recycling plan.

Through a very comprehensive program that included C&D debris recovery, **Kaiser Permanente**, not only reduced its solid waste by 26 percent, but also reduced the amount of infectious waste by shifting non-infectious items into the solid waste stream.

The **Dartmouth Hitchcock Medical Center** in Lebanon, New Hampshire increased the amount of solid waste diverted from the waste stream from 10 to 32 percent through recycling. During a 7-year period of time, the Medical Center reduced its infectious waste by almost 250 percent for \$100,000 per year disposal savings.

In addition to its material donation activities and recycling, the **Bert Fisher Medical Center** in New Smyrna Beach, Florida established an effective program that replaced disposable items with reusable ones that provide comparable product performance and savings through avoided disposal costs and reduced material purchase expenses.

RESOURCES

Responsible Purchasing Network

Government agencies, businesses, higher education institutions, and non-profit organizations have joined the RPN to secure purchasing tools, to be aware of current news, and for the networking opportunities. Five hundred dollars is the annual fee for an agency in a city with a population greater than 250,000.

The RPN web site (www.responsiblepurchasing.org) contains resource information for both general viewers and for members.

COOL 2012

This is a national outreach and education effort for state and local jurisdictions to provide guidance in diverting compostable organics from the waste stream. The campaign provides tools, resource materials, and public policy recommendations to communities throughout North America (www.cool2012.com).

WasteWise

EPA offers this free program of tools, resources, and events to organizations interested in reducing their solid waste. Organizations can join WasteWise as partners, endorsers, or both.

(www.epa.gov/epawaste/partnerships/wastewise/index.htm).

City of Newton Citywide Waste Prevention Policy -- See Appendix C

APPENDIX A – WHAT HOUSEHOLDS CAN DO

What You Can Do

Purchasing Decisions

- Purchase products with minimal packaging and with packaging that is recyclable.
- Buy products in concentrate or bulk form.
- Look for products that are made from recycled material.
- Use reusable or refillable products and those with a longer life span and that are easy to repair.
- Avoid products that contain toxic ingredients.

Reduce, Reuse and Recycle

- Get your name off junk-mail lists.

- Donate usable goods to a charity.
- Use your own cloth or paper bags when shopping.
- Take a reusable mug to work instead of using disposable cups.
- Circulate magazines to friends or neighbors.
- Reuse gift wrap again for a smaller package.
- Use scrap paper that is printed on one side for phone messages or notes.
- Maintain existing equipment and appliances rather than buying new ones.

Household Hazardous Waste and Landscaping

- Buy chemicals only in quantities you will use.
- Use the least toxic product possible.
- Take household hazardous waste to the Recycling Depot for reuse or disposal.
- Compost yard waste and food scraps.
- Grass-cycle - leave grass on the lawn after mowing.
- Keep lawn at 2-3" to conserve water and control weeds.
- Choose low maintenance landscaping.

Be a Strong Consumer

- Let store managers know the products you want them to carry.
- Ask for products that aren't over-packaged or are in returnable containers.
- Let manufacturers know any concerns you have on products or

packaging.

- Ask merchants if they will take back items such as oil, paint, appliances, and packaging.

From “How To Reduce Waste in Municipal Government: A Guide To Source Reduction,” City of Newton, Massachusetts, page 12, May 2005 (Sources: City of Newton Green Pages; Minnesota Office of Environmental Assistance; U. S. Environmental Protection Agency; Congressional Research Services)

APPENDIX B -- GOVERNMENT OUTREACH ACTIVITIES

Outreach Activities from the Maryland Department of the Environment’s “County Source Reduction (SR) Credit Report”

- Staff a display at a county fair or similar event.
- Host an event for the general public.
- Include information on a web site.
- Promote in schools on a regular basis.
- Implement curriculum or on-going activity at school.
- Publicize success stories through county awards program or through local media.
- Include an employee training or education.
- Recognize county success stories.
- Conduct a focus group or survey of residents about SR activities and assistance needs.
- Conduct a focus group or survey of businesses about SR activities and assistance needs.
- Conduct a SR training session, workshop, or presentation at a business, institutional or community event.

- Conduct SR site visits to the businesses in the county with the most employees or the highest waste generation.
- Conduct a SR waste audit or survey of county facilities where at least 10 percent of county employees work.
- Develop/maintain a home food composting bin distribution program for (county) residents.
- Conduct workshops demonstrating proper food composting techniques.

<http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/CountyCoordinatorResources/Documents/www.mde.state.md.us/assets/document/SOURCE%20REDUCTION%20CHECKLIST.pdf>

APPENDIX C: NEWTON CITYWIDE WASTE PREVENTION POLICY

Statement of Purpose

The City of Newton (including municipal departments and the public schools) supports the development and implementation of a comprehensive waste prevention program to preserve natural resources, reduce solid and hazardous waste, and conserve energy.

The City of Newton shall establish quantifiable waste prevention goals and targets and shall reduce the quantity and toxicity of wastes generated by all City operations, municipal departments, and public schools.

The City of Newton shall purchase and use environmentally preferable products and services, as defined in its Environmentally Preferable Purchasing Policy, to strengthen markets for materials collected in the City of Newton's recycling collection system, to reduce waste, and to reduce packaging waste.

The City of Newton shall reduce the number of products purchased that contain toxic chemicals.

The City of Newton shall engage in community outreach campaigns to encourage residents and businesses to reduce the quantity and toxicity of their waste streams.

Statement of Policy

It is the policy of the City of Newton to:

1.1 review practices and procedures for all municipal and school operations to identify opportunities to reduce, at its source, the quantity of waste generated.

1.2 purchase waste preventing products and/or recycled products containing the highest amount of post-consumer material practicable or, when post-consumer material is impracticable for a specific type of product, containing substantial amounts of recovered material. Such products must meet reasonable performance standards, be available at a reasonable price and be available within a reasonable time.

1.3 purchase, when practicable, products and services that do not contain any of the harmful constituents targeted by the U.S. Environmental Protection Agency for elimination. These constituents are identified in Attachment 1 to this policy.

1.4 ensure that all equipment purchased, leased or rented shall be compatible with the waste prevention and recycled product standards. The City of Newton shall require contractors to implement waste preventing practices when providing contracted products and services.

1.5 promote use of products that reduce waste and contain recycled content whenever feasible within the all

departments, schools, and to the general public.

1.6 develop and encourage community-based waste prevention initiatives and support voluntary efforts by local businesses to implement practices to reduce waste.

2.0 Definitions

2.1 City of Newton refers to all City offices and departments throughout the municipality including public schools.

2.2 "Contractor" means any person, group of persons, business, consultant, designing architect, association,

partnership, corporation, supplier, vendor or other entity that has a contract with the City of Newton, or serves in a subcontracting capacity with an entity having a contract with the City of Newton, for the provision of goods or services.

2.3 "Environmentally Preferable Product" means a product that results in a net reduction in the generation of waste compared to the previous or alternate version and includes durable, reusable and remanufactured products; products with no, or reduced, toxic constituents; and products marketed with no, or reduced, packaging.

2.4 "Post-consumer Material" means a finished material that would normally be disposed of as a solid waste, having completed its life cycle as a consumer item, and does not include manufacturing or converting wastes.

2.5 "Pre-consumer Material" means material or by-products generated after manufacture of a product is completed but before the product reaches the end-use consumer. Pre-consumer material does not include mill and manufacturing trim, scrap, or broke which is generated at a manufacturing site and commonly reused on-site in the same or another manufacturing process.

2.6 "Recovered Material" means fragments of products or finished products of a manufacturing process, which has converted a resource into a commodity of real economic value, and includes pre-consumer and post-consumer material, but does not include excess resources of the manufacturing process.

2.7 "Recycled Content" means the percentage of recovered material, including pre-consumer and post-consumer materials, in a product.

2.8 "Recycled Content Standards" means the minimum or maximum level of recovered material and/or postconsumer material necessary for products to qualify as "recycled products," as established by the City of Newton.

2.9 "Recyclable" means any product or package that can be diverted from the solid waste stream for recycling via a program (curbside or drop-off) operated by the City of Newton or other entity.

2.10 "Recycled Product" means a product that meets the City of Newton's recycled content policy objectives for postconsumer, pre-consumer and recovered material.

2.11 "Remanufactured Product" means any product diverted from the supply of discarded materials by refurbishing and marketing said product without substantial change to its original form.

2.12 "Reused Product" means any product designed to be used many times for the same or other purposes without additional processing except for specific requirements such as cleaning, painting or minor repairs.

3.0 Policy Implementation

3.1 The Mayor or authorized representative shall, in cooperation with City Officials and any other relevant

departments, develop administrative guidelines to implement this policy.

3.2 The Mayor or authorized representative shall establish the position(s) of waste prevention coordinators within all departments and the schools. The waste prevention coordinators shall be selected by each department and school.

3.3 The City of Newton's Waste Prevention Coordinators shall be charged with identifying and implementing waste preventing practices within their areas of responsibility.

3.4 The Waste Prevention Coordinators shall be:

- trained in conducting waste audits,
- required to establish waste prevention goals for their department,
- required to manage an audit of the storage, use and disposal of hazardous products, and

- required to file annual, written reports of waste prevention plans and progress toward meeting goals for each department.

3.5 The City of Newton's purchasing department shall ensure that purchasing documents, specifications, and contracting procedures do not discriminate against waste preventing, recycled or recyclable products and packaging.

3.6 The City of Newton's purchasing department shall establish recycled content standards to guide the purchase of recycled content products and shall be authorized to set those standards to meet the objectives of this policy. The decision to change any recycled content standard shall be substantiated in an annual report.

3.7 The City of Newton's purchasing department shall be authorized to prohibit the purchase of products that contain any of the toxic constituents provided in Attachment 1 to this policy. The purchasing department shall maintain, and update annually, a list of products exempted from this policy.

3.8 The City's Purchasing Department shall be authorized to participate in, and encourage others to participate in, cooperative purchasing agreements.

3.9 The Mayor shall designate departments responsible for designing and implementing waste prevention outreach campaigns for the residential and business communities.

4.0 Precedence

4.1 In the evaluation of waste prevention opportunities or the selection of products, the following hierarchy shall be applied:

- Reduction in quantity, volume, weight or toxicity;
- Reusability;
- Recycled content.

Waste prevention program activities also shall include recycling. Products shall be evaluated for recyclability.

5.0 Application

5.1 This policy applies to all City of Newton operations, offices, schools, vendors, and contractors.

6.0 Reports

6.1 On an annual basis, Waste Prevention Coordinators shall report to the Mayor concerning each Department's progress in waste prevention. The reports shall be presented on standardized forms to streamline reporting and data management and shall be filed electronically to reduce paperwork. They shall address reduction goals, progress toward goals, program descriptions, and any areas where additional resources may be necessary to achieve waste prevention goals.

6.2 The purchasing department shall report on waste preventing purchases and recycled content purchases, annual dollar expenditures, percentage change from previous years, percentage of total purchasing budget, total savings or cost for using recycled or waste preventing purchases, and the number of product types bought in each category. The annual report shall also include identification and discussion of instances in which this policy has been waived or found impracticable, a discussion of barriers to the procurement of recycled products, and any instances when recycled content standards were adjusted.

7.0 Effective dates

7.1 This policy shall take effect on [date].

7.2 The Mayor shall issue implementation guidelines within one year following the effective date of this policy.