

**Source Reduction Recommendations  
for the  
City of Arcata**

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## Introduction

This project attempts to acknowledge the existing source reduction programs within the City of Arcata, set objectives, and evaluate and select effective alternative source reduction programs. Source reduction programs that currently exist or will be added or augmented within the City of Arcata are:

- ◆ Differential solid waste management fees
- ◆ Loan preferences for Source Reduction businesses through the Arcata Economic Development Corporation
- ◆ Subsidized distribution of locally-made backyard composting bins
- ◆ Active promotion of flea markets, swap meets, and farmers' markets
- ◆ Promotion of regional waste exchanges

The term source reduction is a difficult term for people to understand. The words waste prevention are easier for the general public to grasp. This change in terminology would help all aspects of the program move forward. Recognition of businesses who participate in waste diversion activities is another means of passing information to consumers. Consumers are then empowered to choose where their dollars go. It is especially important for promoters to walk the talk, and provide an outstanding example of source reduction participation. This is especially effective in small communities where people are familiar with each other. These suggestions are part of a larger cumulative effort within Arcata that will continue to gain momentum in the future. With the help of monitoring, the community will be able to see the costs and benefits of their actions. Our first goal was to create a problem statement and set of objectives.

**Problem Statement**

The City of Arcata generates too much solid waste. Reduce solid waste generation at the source in the City of Arcata.

**Objectives**

1. Using source reduction, reduce the amount of waste entering the landfill by 20% of 2000 levels by 2005, and 15% of 2005 levels by 2010.
2. Establish a minimum of one take-back policy per year in local business.
3. Educate 75% of public by 2005 about source reduction

After narrowing down our long list of solutions (Appendix A), we decided on four areas that would make the largest impact to the local waste stream. Education, a materials exchange program, packaging, and purchasing were all areas relevant to everyone in the community. The next few sections will address our top four solutions.

**Education**

The importance of education is obvious because without education you could not know anything about source reduction. Therefore we designed a plan called the three pronged approach to source reduction education. The three parts are Public Education, Source Reduction Task Force and Green Stamp Certification Program. We believe education is the cornerstone to any problem solving effort. After conducting a detailed analysis of Arcata's informational structures we determined that our town lacks any source reduction information or infrastructure. Thus, the need for us to design our own

educational campaign from the ground up. The first step in this effort is public education.

The public education part of our campaign consists of five sections. The first section is displaying brochures containing tips on source reduction, phone numbers and web site address for further information. This would be displayed in the major food stores in town: Safeway, Co-Op, Wildberries, Murphy's, Greenview, Ray's, Westwood. Each of these stores has free information distribution services. The only costs for this section is the printing cost that could be done in bulk and on a need basis. The next point is the establishment of a clearinghouse for information on source reduction at Arcata City Hall and on the Arcata.com web site. Costs here are minimal. A Weekly Tips or information in each of the local newspapers would add an additional information link available to the public. Along with this source are the local television and radio stations. Here information would arrive in the form of soundbits and periodic infomercials. Lastly, education packets for our local schools would be presented to all teachers and consist of educational activities and information. These could be presented several times during the school year. These proposed educational solutions would cover the whole populace of Arcata and some of the surrounding areas with constant helpful tips, contact points and offer them access to an updated clearinghouse of information. The methods of gathering source reduction information falls under the job of the Source Reduction Task Force discussed next.

The Source Reduction Task Force is a group formed from the city council. They will be charged with physically handling the management of the source reduction program. This is an all volunteer group of local citizens therefore no cost are expended

on wages or salaries. The task force will be responsible for gathering and preparing information on source reduction; studies of in-town trends, examples from other areas, other source sites of information and other groups involved in source reduction. They would also be charged with designing an Action Plan for Arcata that would be added into the Arcata twenty-year plan. Lastly, the task force would be a liaison between the city and HSU, surrounding cities, Humboldt county and any other entities that source reduction would bring us into contact with. These duties would give the task force an important and continuous job while keeping its fellow citizens informed and the source reduction agenda on track. A further method of involving the public and offering incentives for source reduction that the task force would be responsible for would be the Green Stamp Certification Program.

The Green Stamp Certification Program is to be modeled at the Smartwood certification program. It would provide objective evaluation of source reduction practices in businesses, government and other entities. Using certification criteria developed by the task force, Green Stamp would evaluate companies according to their adherence and award them with certification. The Green Stamp label would guarantee that businesses and governments adhere to the strictest standards of source reduction. Thus citizens would know that the dealing with these organizations would help reduce the amount of materials entering the waste stream.

### Materials Exchange

The Humboldt County Materials Exchange (HumboldtMAX) is a free service designed to help residents, businesses, and organizations find alternatives to the disposal

of valuable materials. The purpose of this is to conserve energy, resources, and landfill space by exchanging materials.

There are many benefits provided to the participants of the HumboldtMAX, some of which extend into the entire community.

- ❖ **Reduced disposal costs**
- ❖ **Lowering start-up costs**
- ❖ **Promoting the local economy**
- ❖ **Helping schools and non-profit organizations**
- ❖ **Increasing environmental awareness in the community**

The exchange of materials offers the possibility of selling materials for a small profit. Since items are being exchanged the cost of disposal is dramatically reduced. A tremendous cost is related to the opening of new businesses. HumboldtMAX makes inexpensive materials available to them. New markets can be established using the excess products. This in turn promotes the local economy. Schools face the constant challenge to provide students with needed equipment and supplies for their education. Non-profit organizations also look to donations as an essential part of their service. Assembly Bill 939 states the solid waste stream must be reduced by 25 % as of 1995 and by 50% as of 2000. HumboldtMAX is one way the community can come together to meet this goal.

The current Materials Exchange offered in Humboldt County can only be found in the northern and southern editions of the Tri-City Weekly. We feel this is inadequate to meet the needs of the environment. The following are ways Humboldt County and the city of Arcata can build on what is already available and implement new ideas to make

the program more successful. Education is the primary way to make the public aware of the program. However, it will not be discussed in this section of the paper (refer to the education section). Various ways to present the information to the public include:

- ❖ Internship or volunteer to implement, update, and monitor the program.
  - ◆ They will be required to take the ideas in this section and more notably in the entire paper and implement them in the city of Arcata.
  - ◆ They will be required to update all listings and distinguish between acceptable and unacceptable materials.
  - ◆ They will be required to monitor the progress, and success of the program. This will be done reviewing the successful exchange form the two parties involved in the exchange are recommended to fill out.
- ❖ Expand on the availability of the program
  - ◆ Establish an Internet site to be accessed through the city and county's web site.
    - ◆ Allows for 24-hour access with more extensive and current listings.
    - ◆ Ability to submit listings more rapidly
    - ◆ Access links to other material exchanges in California
  - ◆ Place ads in other newspapers, newsletters etc.
  - ◆ Make commercials to be placed on the local TV channels, ACTV channel 12, and on local radio stations.
- ❖ Acceptable and Unacceptable Materials

- ◆ To be considered as source reduction, materials must have otherwise gone to the landfill and not be recyclable.
- ◆ Hazardous Wastes are Unacceptable
  - ◆ However, substances in their original container are accepted
- ◆ Out-of County Listings are Unacceptable
  - ◆ Able to list "wanted" but not "available" materials
- ◆ Manufactured Products are Unacceptable
  - ◆ HumboldtMAX is not to be used as a medium for business or to advertise products for sale
- ◆ Specific Unacceptable Materials
  - ◆ Automobiles, food and food wastes, firearms, ammunition, and explosive materials

The city will implement this expansion of the Materials Exchange for one year. Then by monitoring of the program the effectiveness can be evaluated. If the new program is showing progress, additions can be made such as categories for the materials, examples of which are metal, glass, electronics, construction, plastic, and wood. These make it easier for the users to find the materials they need more easily.

### Packaging

Packaging accounts for a large portion of the waste stream. Because of its bulk and use of materials, it is an area that stands out in the issue of source reduction.



Current source reduction programs rely more on lightweight packaging as opposed to recyclable packaging. This is mainly because recycling of the materials only takes place about 25% of the time. In order for the recycling to be successful, the rate at which it occurs must equal or exceed the weight reduction level. Consequently, it is more efficient and cost effective for companies to simply reduce the amount of material they use in packaging, i.e. lightweight packaging, than to rely on consumers to recycle.

The benefits of lightweight packaging are two-fold. The first benefit involves the use of fewer materials. Examples of this are drink containers. Aluminum cans and plastic bottles have reduced their material use by 25% over the past 20 years. Other examples include milk cartons and soup cans, which have reduced their material use by 22%. Another benefit of lightweight packaging is the reduction in cost. The decrease in cost refers to both the production and the transportation expenses. Most obvious is the reduction in production costs; use of less material means less cost. The transportation cost is decreased because it costs less for lighter loads and lightweight packaging usually means it is more compactable. Most companies are already going to lightweight packaging because the aforementioned reasons.

The most efficient type of packaging is flexible packaging. Because of their compactability and minimal use of materials, they are preferred by landfill reductionists over all other types of packaging. Flexible pouches and refill containers weigh 75-90% less than traditional rigid containers. For example, vacuum pack bricks can be used for items such as coffee instead of the traditional metal cans. These types of changes will reduce the amount of landfill dramatically.

More on the order of actual source reduction, instead of landfill reduction, is the Take-back Program used in most European countries. When one initially purchases a product (usually food like yogurt and milk) you pay a deposit fee. However, when you need to restock your refrigerator, you simply take back your empty jar to the store and exchange it for a new item at a reduced cost. The empty jars are returned to the producer and refilled. A similar program used here is the milk bottle exchange at the Co-Op, or the bottle exchange that Pepsi used to implement before the introduction of cans and plastic bottles.

Things we can do to reduce the amount of packaging that goes into the landfill include the following:

- ◆ Look for products with reduced packaging
- ◆ Use concentrated products (fabric softener refills)
- ◆ Use lightweight packages that hold a lot of product without adding much weight
- ◆ Buy larger sizes when appropriate
- ◆ Don't take what you don't need, and make the most of what you do (reuse)
- ◆ Use all types of bags as many times as possible
- ◆ Reuse cardboard and plastic containers for storage
- ◆ Reuse packing materials like foam peanuts or "bubble wrap"

Most of the currently practiced packaging programs that have been implemented address landfill reduction more so than source reduction. In order to truly source reduce, there would have to be regulations placed on producers that initiated the reduction of

packaging. For example, selling cereals in bags only instead of bags and boxes. Some companies have already gone to this type of packaging, but we have a long way to go.

### Purchasing

It is important to pay attention to purchasing and to use one's purchasing power wisely. There are few ways that one can force manufacturing companies to limit the amount of packaging they use for their products. Legislation is one way, but another way is to not purchase products from companies that over package their products. Use the power of the consumer and avoid products that are wasteful.

Not enough attention is paid to reducing the amount of waste. When consumers shop, they need to try to buy the most product with the least amount of packaging. Unfortunately approximately 1/3 of your household waste is derived from the packaging of products. If we think before we buy, and buy just what we need - **with reuse in mind**- we can help conserve resources while we shop.

Amazingly, packaging is now the fourth largest industry in the United States. It's true that we need some packaging for health and shelf life reasons, but some manufacturers over-package their products. They use one package to send the product to the warehouse, then they use another package to transport the product, and then they use another package to bring the item to the store. It seems endless.

With this in mind, take a little care before you buy something. Pick the ones with the least amount of wrapping and avoid single-serving items and products that are overly wrapped. When it makes sense to, buy in bulk. Yes, there are some things that no one needs in bulk, but be practical. You will avoid over packaging and probably save money

too. Buy concentrates such as drink mixers, cleaners, and detergents. Again, these use far less packaging and are often cheaper.

A common question asked at many grocery stores is, paper or plastic? Well I say –No, I brought my canvas bags today. Sure, both paper and plastic bags are recyclable, but the focus needs to be on reduction, not just recycling. Many stores even offer a five-cent rebate for using canvas bags. If you don't have your own bag with you it's not the end of the world, but ask yourself if you really need a bag. If you just have a couple of items, you can just carry them out. You do not need to get a bag every time you go to the store. Today is the day to start the anti – bag campaign. If you don't need one, don't let the stores give one to you. The clerk may look at you funny, but you know that you are doing the environment a service.

When you are shopping, look for products that are made from recycled materials. This could be as simple as buying eggs packaged in recycled containers. Don't buy the Styrofoam containers; they are bad for the environment and they don't make sense.

It is important to remember that if you are not buying recycled, then you are not recycling. Sorting used products for recycling and then taking them to the recycling center is not enough. Recycling is a good beginning though, and we have done a good job at it. But recycling is not the only R in the in the circle. The other R's are reduce and reuse. These are important because they reduce the volume of the waste stream. These are things that can be done before the need to recycle.

Some simple things that can be reused that are not terribly inconvenient, but reduce waste include:

- ◆ Using sponges instead of throw away wipes. A problem with sponges is that they need to be wrung out after each use and they should be rinsed with a teaspoon of Lysol every couple of days to prevent bacteria growth.
- ◆ Purchase rechargeable batteries. Sure regular batteries can be recycled, but focus on reduction. Rechargeable batteries last a long time and reduce the need to take up too much landfill space.
- ◆ Purchase washable cloth napkins instead of throwaway paper ones.
- ◆ Buy washable plastic plates and cups for picnics instead of disposable ones. Just put them back in the picnic basket and wash them at home.
- ◆ Buy razors with replaceable blades. The plastic disposable ones are wasteful.
- ◆ Seek out reusable or refillable containers. Try to buy products that will have multiple uses for you.
- ◆ Save plastic containers with lids instead of buying aluminum foil, plastic wrap, or plastic bags for leftovers.

Remember, if you are not buying recycled products, you are not completing the Recycling loop. Some simple, convenient recycled products to buy include coffee filters, greeting cards, paper products, and paper boxes. The University of Texas at San Antonio openly campaigns on the recycling loop. The Purchasing Department openly encourages all University staff to complete the recycling loop with the buy-recycled program.

Rewards are given out to staff members who do a commendable job on reducing the need for virgin materials. These actions address the root of the problem in addition to many of the symptoms associated with the problem of solid waste reduction.

## References

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# ENVIRONMENTAL PRACTICUM - Log Timesheet

<u>DATE</u>	<u>Time</u>	<u>TASK/TOPIC</u>
<del>Jan 1</del>		
2/2	2:00-3:00pm	Made our groups/choose topic
2/9	2:00-4:00pm	Discussed solutions
2/11	2:00-3:15pm	Discussed Topic/Background, history
2/16	2:00-3:00pm	'Social Marketing Research MET WITH MAUREEN
2/20	4:30-6:00	
2/23	2:00-5:00pm	Research on previous solutions Energy efficiency
<del>2/25</del>	2:00-4:30pm	WORKED ON BACKGROUND & PROBLEM STATEMENT
2/28	4:30-5:20	Discussed solutions with Maureen
<del>3/1</del>	2:00-3:00pm	Discussed Alternative solutions
3/3	6:00-8:00pm	Reached consensus on Goals and Objectives MET WITH MAUREEN
3/5	4:30-5:00pm	
3/8	2:00-3:00pm	Strategy implementation
3/10	7:00pm-8:00pm	Alternatives weighted
3/12	4:20pm-6:00pm	Alternative preferred chosen <del>Research on guide</del>
3/24	2:00-4:30pm	Research on guide <del>Alternative Preferred Chosen</del>
3/29	2:00-3:30pm	Monitoring and Evaluation
3/31	2:00-4:00pm	Implementation strategy Research Discussion
4/5	2:00-3:00pm	Implementation strategy written
4/12	2:00-3:00pm	Research (addition on guide)
4/19	2:00-4:00pm	LIBRARY - MONITORING & Evaluation written
4/23	4:30-5:00	RCCA - MET w/ MAUREEN
4/26	2:00-4:00pm	COMPILE RESOURCE GUIDE
5/6	2:00-9:00pm	FINAL POINT PRESENTATIONS