

CHAPTER 3: WASTE REDUCTION AND RECYCLING

This chapter describes existing programs and future plans for activities that reduce the amount of solid waste being generated or disposed of in Mason County. Each section will discuss existing conditions, needs and opportunities for improvement, and includes recommendations based on an evaluation of alternatives. The chapter is divided into the following sections:

- 3.1 Waste Reduction
- 3.2 Recycling
- 3.3 Composting
- 3.4 Public Education & Outreach

Recommendations are on the final page of this chapter.

The section on waste reduction focuses on reducing the amount of waste being generated, while the sections recycling and composting discuss methods that reduce the amount of solid waste being disposed. Collectively, these approaches (waste reduction, recycling, and composting) are known as “waste diversion” and play a vital role in solid waste management.

This chapter provides an update of the County’s waste diversion methods as well as fulfills State requirements regarding waste reduction and recycling programs. The State requirements are based in the “Waste Not Washington” Act (ESHB 1671), which are reflected in various sections of the Revised Codes of Washington (RCW) and Washington Administrative Codes (WAC). RCW 70.95 requires that county and city governments assume the primary responsibility for solid waste management and implement effective waste reduction and recycling strategies. In addition, RCW 70.95 requires that local solid waste management plans demonstrate how the following goals will be met:

- Washington State’s goal is to achieve a statewide recycling and composting rate of 50%.
- There is a statewide goal to eliminate yard debris from landfills by 2012 in those areas where alternatives exist.
- Source separation of waste (at a minimum, separation into recyclable and non-recyclable fractions) must be a fundamental strategy of solid waste management.
- Steps should be taken to make recycling at least as affordable and convenient to the ratepayer as mixed waste disposal.

The recycling coordinators for both the City of Shelton and Mason County administer all programs and activities listed in this chapter.

3.1 WASTE REDUCTION

The solid waste planning goals developed for Mason County in the area of waste reduction are:

- To advance waste reduction efforts through support of State and Federal programs.
- To promote waste reduction in Mason County through public information and education programs and other available, appropriate methods.

Activities and practices that reduce the amount of wastes that are created are classified as “waste reduction.” Waste reduction differs from the other two waste diversion techniques (recycling and composting) because the other methods deal with wastes after the wastes have been generated.

Waste reduction is the highest priority for solid waste management according to RCW 70.95, and is preferred over recycling and composting because the social, environmental and economic costs are typically lower for waste reduction. All three methods avoid the cost of disposing the diverted materials as garbage, but recycling and composting frequently require significant additional expenses for collecting and processing the materials.

Existing Practices

Several waste reduction activities and programs are currently conducted in Mason County.

ReUse Shop: There is a limited “dump and pick” operation at the Solid Waste Facility that opened during the winter of 2003. After passing through the scales, the customer voluntarily sets items that are deemed in usable condition in a designated area. Other residents can pick up the item at no charge after signing a hold harmless waiver. In 2005, approximately 13,000 pounds of reusable items, ranging from bicycles to wheelbarrows, were diverted through this site.

Swap Shop: Reusable materials, including paints, garden chemicals, auto products, and other materials brought to the Household Hazardous Waste Collection Center (at the Transfer Station in Shelton) are also set aside for

residents to take. In 2005, approximately 1,350 gallons of paint and other products were reused through this program.

2Good2Toss.com: Mason County and the City of Shelton are participants in the statewide, online materials exchange www.2good2toss.com. This website began in October 2003 and provides a free, online bulletin board for residents to sell or give away used but useable items, instead of sending them to the landfill. As of January 1, 2010, the Shelton/Mason County portion of the site has nearly 1,500 registered members, and has facilitated 1,200 exchanges—diverting more than 150 tons from the landfill.

Packaging Materials: Most of the shipping services in Mason County accept Styrofoam “peanuts”, bubble wrap, air cushions, and other packaging materials for reuse.

Waste Audits: Free technical assistance is available to schools and businesses that are looking to reduce the amount of waste they generate through their daily operations. The potential exists to find a waste stream component that can be easily identified and handled in an alternative manner, reducing waste, making a reusable material available to an end user, or connecting the business with a recycling outlet for the given material. This assistance is available to any requesting entity.

Needs and Opportunities

A significant need in this area is the ability to measure the results of waste reduction activities. Residential and commercial efforts in waste reduction cover a broad range and are not well documented. Waste reduction could be shown to be handling significantly more waste if the residential and commercial efforts could be measured more completely. Therefore, a method to quantify waste reduction is needed.

Reuse of building materials could be practiced more widely. Since building materials typically are a large portion of disposal, and the Beyond Waste Plan identifies the topic as needing attention, Mason County would benefit by focusing on this aspect of the waste stream. With increased awareness of and opportunities for reused building material, some programs may emerge to facilitate reuse, recycling or other diversion. Additionally, data could be collected in the future to establish some diversion measurement.

Alternatives and Evaluation

1. Measuring Waste Reduction Results

Waste reduction is the top solid waste management priority, but it is inherently difficult to measure something that has not been produced. In 1996, the Department of Ecology undertook a literature review to determine the various types of waste reduction measurement methodologies that were being used around the state and country. At the same time, other entities, such as the U.S. Environmental Protection Agency (EPA), UCLA, and Cornell, were working on a similar project. In 1997, EPA finalized a document titled "Source Reduction Program Potential Manual" that Ecology staff believed summarized the work of all parties together in a comprehensive format. In light of multiple financial and project priorities in Ecology at that time, staff recommended that it would be more efficient to use the information the EPA had developed and discontinued the project at the state level.

The work developed by EPA is based on "program potential" and whether a specific waste reduction program has the potential to reduce a significant portion of the waste stream in a cost-effective manner. The manual provides guidance for calculating program potential for the following programs: grasscycling, home composting, clothing and footwear reuse, office paper reduction, converting to multi-use pallets, and paper towel reduction. Using "grasscycling" as an example, the manual calculates program potential by:

- Identifying a general waste category (e.g., yard trimmings) and relying on national or local data for baseline composition of the waste stream,
- Multiplying by an "applicability factor" (e.g., amount of grass in yard trimmings waste category),
- Multiplying by a "feasibility factor" (e.g., portion of grass that could be reduced through grasscycling programs), and
- Multiplying by a "technology factor" (e.g., technical or physical limitations to grasscycling).

The solid waste manager is then left to design and document a program for addressing that portion of the waste stream. Numeric measurement would likely rely on a waste audit or waste composition study after implementing the program to determine if the amount of targeted waste decreased between the two time intervals. If necessary, numeric waste reduction goals could then be re-examined and changed.

Waste reduction successes can also be measured qualitatively, through observed changes in industrial processes, purchasing patterns, shifts in public perception as identified through surveys, business policies, and city initiatives and ordinances.

Advantages: Provides a more accurate picture of the diversion efforts and results of Mason County. Given measurable results, programs are more likely to receive attention and continued funding.

Disadvantages: Can be time consuming and difficult to get a starting baseline.

2. Promote Commercial Waste Focus

This strategy makes commercial waste reduction a priority. A systematic approach would involve developing a clear picture of the types of businesses and their related wastes that are currently produced in the County, and following up with waste audits on a case by case basis. A less intensive option would be to develop a handout type of document that would be distributed via mailing or billing. Another possible method would be to utilize the North American Industrial Classification System (NAICS) Codes are used throughout North America to group establishments into broad and specific industries. Industries within the same NAICS code are likely to exhibit similarities in the composition of their disposed waste streams. If one industry is particularly prevalent in a region, for example, it might be cost-effective to target businesses in that particular industry. Outreach to the businesses would offer free technical assistance and waste audits.

Advantages: Commercial sources produce a significant portion of solid waste in Washington. Focusing waste reduction efforts towards the business sector can have a large impact on the waste stream as a whole. Measurable data would be much easier to obtain from businesses rather than residents. This alternative complements the State's Beyond Waste Plan (Initiative 1).

Disadvantages: Interest in waste reduction practices would be voluntary and, therefore, would vary from business to business. Time intensive for staff.

3. Recognition for Waste Reduction Successes

The County could provide recognition to groups or businesses that successfully prevent waste. Many communities publicly recognize and reward local businesses and organizations for their environmental achievements. For example, the County could host special events, publish case studies, and help businesses and organizations attract positive press.

Advantages: As mentioned above, commercial sources produce a significant portion of solid waste. Waste reduction efforts in the business sector can have a large impact on the waste stream as a whole.

Disadvantages: Again, waste reduction practices are voluntary and it may take time for businesses to come forward with documented waste reduction.

Rate Structure Changes

Although volume-based rates are already used in the City of Shelton and throughout the unincorporated County, the use of a linear rate structure, with the cost of each additional can of garbage set at the same amount as the first can, has been shown to provide more incentive for waste reduction and recycling.

Advantages: Greater application of variable solid waste rates can encourage businesses and residents to reduce waste. A linear rate structure shows a direct relationship to the amount of solid waste generated and its corresponding cost of collection and disposal.

Disadvantages: The Washington Utilities and Transportation Commission (WUTC) control the rates in the unincorporated areas of Mason County. State law and the WUTC rules require that rates be based on cost of service calculations that prevent the use of a linear rate structure. However, this is still a viable alternative for the City of Shelton and at County self-haul drop box sites.

4. Product Stewardship

Economic prosperity has increased per capita spending over the past several years and increased the need for local governments to provide expanded recycling and disposal programs. Product stewardship is a concept designed to alleviate the burden on local governments of end-of-life product management. Product stewardship is a product-centered approach that emphasizes a shared responsibility for reducing the environmental impacts of products. This approach calls on:

- **Manufacturers:** To reduce use of toxic substances, to design for durability, reuse, and recyclability, and to take increasing responsibility for the end-of-life management of products they produce.
- **Retailers:** To use product providers who offer greater environmental performance, to educate consumers on environmentally preferable products, and to enable consumers to return products for recycling.

- Consumers: To make responsible buying choices that consider environmental impacts, to purchase and use products efficiently, and to recycle the products they no longer need.
- Government: To launch cooperative efforts with industry, to use market leverage through purchasing programs for development of products with stronger environmental attributes, and to develop product stewardship legislation for selected products.

The principles of product stewardship recommend that a role of government is to provide leadership in promoting the practices of product stewardship through procurement and market development. Environmentally Preferable Purchasing (EPP) is a practice that can be used to fulfill this role. EPP involves purchasing products or services that have reduced negative effects on human health and the environment when compared with competing products or services that serve the same purpose. They include products that have recycled content, reduce waste, use less energy, are less toxic, and are more durable. For example, federal agencies are now encouraged to consider a broad range of environmental factors in purchasing decisions.

Mason County could develop purchasing policies that encourage environmentally sound products and restrict contracts to these products. This strategy represents a way Mason County can share responsibility for the environmental impacts of products and promote:

- Reduced product toxicity.
- Increased resource conservation.
- Reduced cost to the county for waste management programs.

This alternative also supports the State's Beyond Waste Plan, Initiative 2: Reducing Small Volume Hazardous Materials and Wastes.

Given the number of products that local governments typically purchase, it can be challenging to determine which products to substitute for safer ones. Computer products can be a good candidate for Mason County to consider for EPP because of the potential environmental impacts associated with the manufacture, use, and end-of-life management of computers. Local governments often identify electronic waste as the most significant waste problem with respect to management costs and potential environmental impacts. Furthermore, electronic waste has become a primary concern as a result of the increase of new electronic products combined with their rapid obsolescence, low recycling rate and their potential to contain hazardous materials.

Mason County could develop environmentally preferable purchasing criteria for computers and electronics (such as CPUs, monitors, keyboards, printers, fax machines, and copiers) that could include:

- Compliance with federal Energy Star Guidelines
- Reduced toxic constituents
- Reduced toxic materials used in manufacturing process
- Recycled content plastic housing
- Pre-installed software and on-line manuals
- Designed for recycling/reuse
- Upgradeable/long life
- Reduced packaging
- Manufacturer provides product take-back service
- Manufacturer demonstrates corporate environmental responsibility

Advantages: Adoption of EPP practices allows government agencies to reduce the harmful environmental impacts of their activities as well as promote the development of products that have improved environmental performance. Specifically, implementing an EPP program for computers can result in the purchase of computers with lower operating costs, extended useful lives and reduced disposal costs.

Disadvantages: Requires staff to review products they are currently purchasing. Staff may be comfortable with the products they are using and familiar with application procedures and performance expectations.

5. Procurement of Recycled Products

Local, state, and federal government agencies can and do use their tremendous purchasing power to influence the products that manufacturers bring to the marketplace. In the last decade or so, most efforts have focused on encouraging procurement of products made from recycled content. The goal of these procurement programs is to create viable, long-term markets for recovered materials. The U.S. Environmental Protection Agency (EPA) has developed a list of designated products and associated recycled content recommendations for federal agencies to use when making purchases. These are known as Comprehensive Procurement Guidelines. To date, EPA has developed more than 60 guidelines that fall into the general categories of construction products, landscaping products, nonpaper office products, paper and paper products, park and recreation products, transportation products, vehicular products, and miscellaneous products. For example, federal agencies are instructed to buy printing or writing paper that contains at least 30% post-consumer recycled content.

Mason County could draw upon the extensive work completed by EPA and include its guidelines in purchasing policies.

Advantages: Without consumer support, markets for recyclables, and products made from them, will not reach their full potential. Procurement programs create viable, long-term markets for recovered materials and provide more efficient use of valuable resources. Research is necessary to determine the types of recycled content products that are available, their specifications, performance, and cost. Much of this research is available, however, through the King County, Washington, website (www.metrokc.gov/procure/green/index.htm).

Disadvantages: Government purchasing agents often have concerns about the quality and price of recycled-content products. Careful testing and selection of recycled content products can minimize concerns about product quality. Certain recycled-content products may have a higher initial purchase cost, but may require less maintenance or long-term costs over the life of the product. Cost concerns can be addressed by considering short-term and long-term costs (life cycle costs) in comparing product alternatives.

6. Internal County Waste Reduction Policies

In addition to educating consumers and businesses, it is important for local governments to “practice what they preach.” Through the numerous small choices employees make each day, large amounts of waste can be prevented. Employees should be encouraged to learn more about waste reduction practices and work toward implementing and promoting such practices.

Such practices by city and county employees should be implemented whenever practicable and cost-effective. Examples include:

- Electronic communication instead of printed, double-sided photocopying and printing.
- Using copiers and printers capable of duplexing.
- Allowing residents to submit electronic rather than paper forms and applications.
- Washable and reusable dishes and utensils.
- Rechargeable batteries.
- Streamlining and computerizing forms.
- “On-demand” printing of documents and reports, as they are needed.
- Leasing long-life products when service agreements support maintenance and repair rather than new purchases, such as carpets.
- Sharing equipment and occasional use items.
- Choosing durable products rather than disposable.

- Reducing product weight or thickness when effectiveness is not jeopardized in products, such as, but not limited to, paper and plastic liner bags.
- Buying in bulk, when storage and operations exist to support it.
- Reusing products such as, but not limited to, file folders, storage boxes, office supplies, and furnishings.
- Mulching pruned material from parks and using on site.

The County's employees are most knowledgeable about ways that waste can be reduced or even eliminated and their ideas are essential. Adopted policies should be reinforced through employee incentives for outstanding performance.

Advantages: Certain workplace practices can help prevent waste before it is created. Many practices can reduce local government costs through avoided disposal fees and can also save natural resources. By implementing waste reduction programs in their offices and facilities, local governments not only reduce their own waste but also show their commitment to such programs. They can use their waste reduction experiences to illustrate the benefits of source reduction when developing similar programs in the commercial and residential sectors of their communities.

Disadvantages: Other factors to consider in changing workplace practices are energy, water, disposal and labor costs as well as toxicity, safety and training changes. For example:

- Energy requirements of different products can result in measurable cost changes for the organization. Energy for lighting, heating water and running appliances can vary between products.
- Water usage may also change with different procedures or products.
- Labor costs may also change with product or procedure changes.
- Safety and training are two other factors that come into play with product or procedure changes. The alternative product must be at least as safe as the old one. Sometimes, additional staff training is required to implement the reduction action.

3.2 RECYCLING

The goals developed for Mason County in the area of recycling are:

- To support private efforts in waste recycling in Mason County.
- To achieve an increase in waste recycling throughout Mason County.
- To provide recycling opportunities at drop box, transfer station facilities, and other approved sites in Mason County.

Existing Practices

City of Shelton

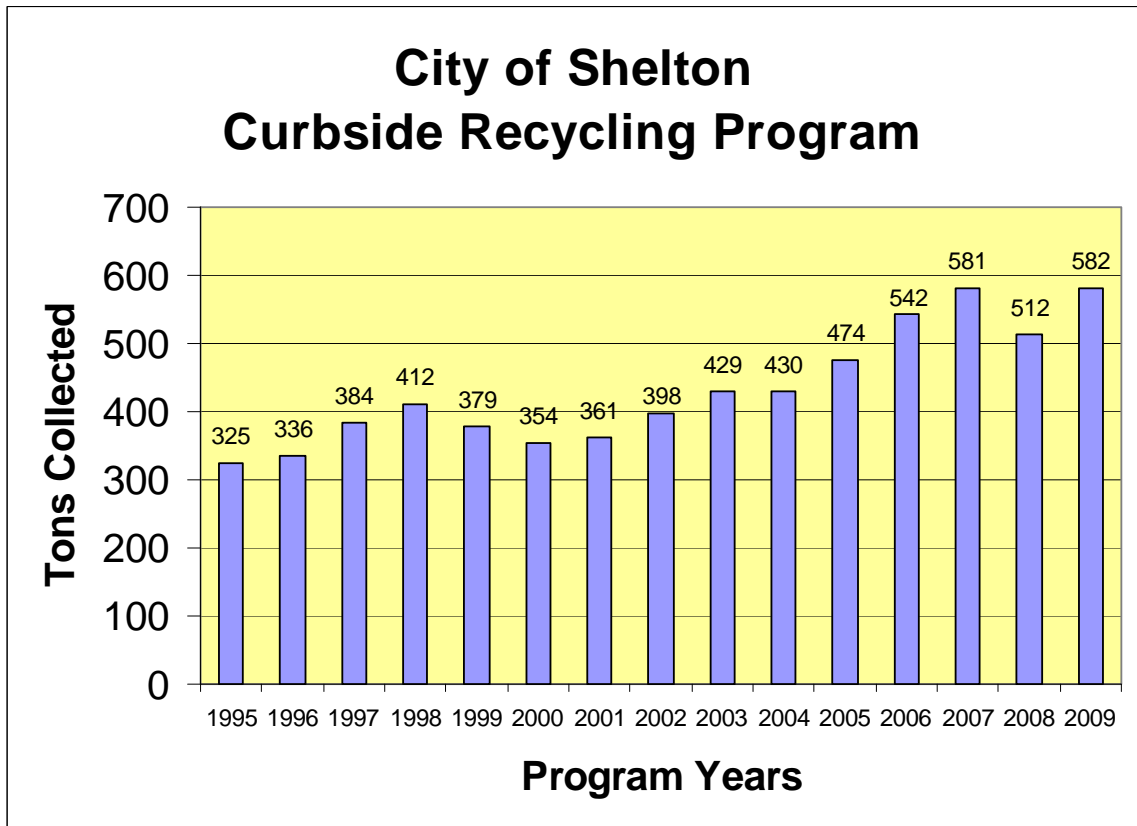
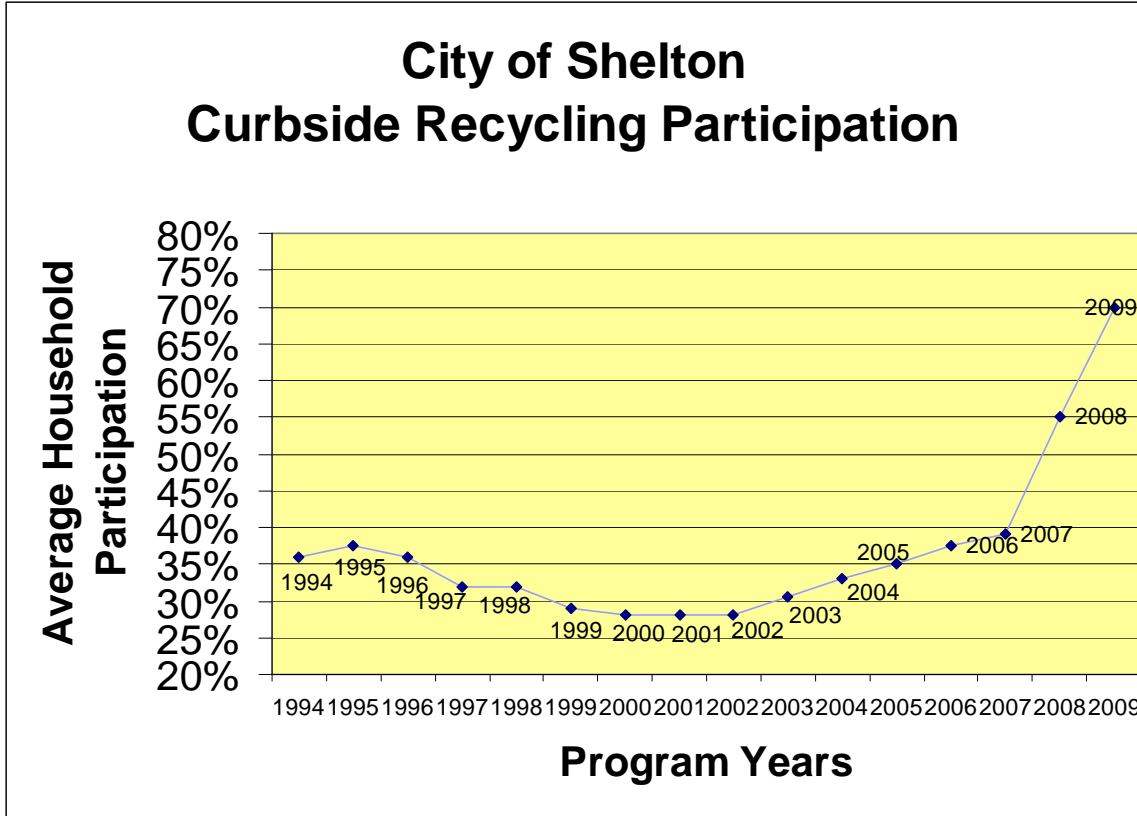
The City of Shelton has operated a residential single-family curbside recycling program within the City limits since September 1994. The cost of recycling for is a mandatory charge for all households in the City of Shelton and is incorporated into their overall solid waste fee, whether they use the service or not. The participation rate has fluctuated from an original participation rate of 36% in 1994, dropping to a program low of 28% in the years 2000 through 2003, and increasing to a current high of 70% participation in 2009. This is presumably due, in a large part, to the City introducing a two bin (dual stream) program in 2006 and instituting mandatory every other week trash collection in 2008. Beginning in 2004, residents who live just outside of City limits but receive a City utility (water or sewer) were given the option of receiving curbside recycling collection for the same rate as residents.

The residential curbside program uses two covered rolling bins for collection; a brown bin for mixed paper, newspaper, magazines, and cardboard and a blue bin for glass bottles, jars, plastic bottles, aluminum and steel cans, milk jugs, etc. In 2009 the City collected a total 582 tons of recyclables from residential customers.

The City of Shelton instituted a dual stream multi-family recycling program in February 2009 for all multi-family (apartment) residential complexes. The program is mandatory for multi-family residential projects and the fee is incorporated into the solid waste fee for the site whether the service is utilized or not. Since February 2009 the program has resulted in a total of 19.6 tons of recyclables being collected from multifamily customers.

The City of Shelton also instituted a curbside yard waste program in February of 2009 for \$5.50 per month for single-family residential customers. This program has resulted in a total of 287 yards of grass clippings, leave, prunings, etc. being composted into mulch.

Figures 3.1 and 3.2 illustrate the history of the residential curbside program in the City of Shelton, detailing the annual participation rates and collection tonnage totals, respectively.



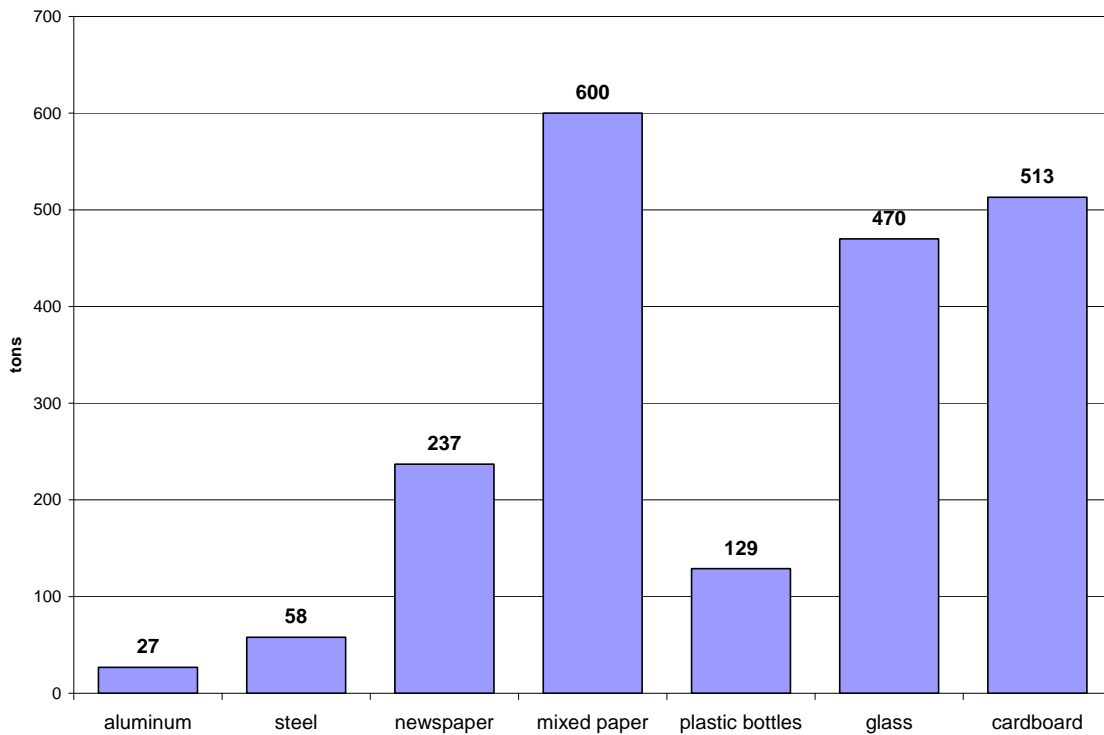
Mason County

The County began its self-haul recycling program in 1993. Over the years the program has expanded and in early 2009 was up to 12 sites Countywide, including all solid waste drop box stations. Each site has at least three “blue boxes” (compartmentalized drop boxes used to facilitate source separated collection) that collect corrugated cardboard, brown paper bags, glass bottles and jars , plastic bottles and jugs, aluminum and steel cans, and newspapers and magazines. As of 2008 all of the sites also accept mixed paper.

Table 3.2 shows the locations and materials collected for the blue box program. The program has experienced a steady increase in the quantity of materials collected. In 2004, approximately 2,000 tons of recyclables were collected; 2008 it was nearly 2100 tons.

In 2006-2009, Mason County Garbage had a pilot curbside program in four communities: Lake Limerick, Oak Park, Lakeland Village and Island Lake. The rate for the bi-monthly service was established by the WUTC. As of January of 2007, more than 200 customers were participating in the program.

TABLE 3.2 MASON COUNTY BLUE BOX COLLECTION 2008



Needs and Opportunities

City of Shelton

The City's curbside recycling program has enjoyed an increase in participation primarily beginning with the implementation of a dual stream recycling system in 2007 and changing to every other week trash pickup in 2009. With an increased local interest in recycling and composting the City of Shelton could see additional reductions in landfill tonnages through effective implementation of a commercial recycling system as well as a commercial food diversion program.

Mason County

The County's self-haul recycling program is facing several challenges. Retention of blue-box sites on private property has been very difficult over the last few years, and was discontinued in 2009. County sites still offer this service on their regular days of operation.

Alternatives and Evaluation

1. Commingled Curbside Collection—City of Shelton

Communities around the state are moving from a multiple-sort, multiple bin system of curbside recycling to a one bin, single-stream method of collecting recycling at the curb. Although this may seem like a move in the right direction, it remains a complicated and highly debated issue.

Advantages: Several of the densely populated cities and counties in the state have switched to single-stream recycling citing higher collection efficiencies, reduction in worker injuries, and greater participation by residents. Residents typically love a single bin system because it does not require sorting, the bin has a large capacity and so overflowing of recyclables is not an issue, and the bin has a lid and wheels, keeping the materials dry and conveniently mobile.

Disadvantages: The disadvantages to a commingled collection of recycling primarily have to do with the marketability of the recycled materials. Paper mills that accept recycled paper from commingled streams report severe damage to their screens and other components due to the glass mixed in with the paper. The glass also becomes a safety hazard in the materials recovery facility, as workers hand-sort materials. Some communities have addressed this issue by not accepting glass in the commingled bin and either having a separate curbside bin for glass or providing drop off boxes for self-haul glass recycling. This latter option has greatly reduced the amount of glass collected for recycling—it is easier for people to throw it away than to haul it to a separate location.

Contamination also becomes a larger problem when using a single bin method of recycling collection. The bin usually looks like a garbage can and people tend to treat it that way, since the materials they put in are not visible at the time of collection.

The City decided to switch to a dual stream system for collection, with one container for paper goods and one for beverage and other containers. The expense for these bins was supported by grants funds awarded to the City. An extensive outreach program was implemented in order to educate the residents on the changes.

2. Commodity Credit—City of Shelton

In some communities, residents are given a monthly credit for the value of the recyclable commodities collected. It is often a minimal credit of less than \$2.00 and this number is based on the contract between the jurisdiction and the hauler and the current market value of the various commodities.

Advantages: This alternative provides a direct incentive for residents who don't see the less explicit cost-savings involved in recycling. Although there is a mandatory monthly recycling fee for all households within city limits, this would encourage more participation in the program, as residents would feel rewarded for their efforts.

Disadvantages: The City has historically been limited to one hauler for recycling collection services, so the competitive nature of securing the collection contract is not present. This can make it difficult to institute new incentives for residents if the hauler does not feel it is in their best financial interest. A system would need to be developed to track participating households in order to provide commodity credits to those households who recycle. This accounting technology can be expensive.

3. County-owned Property for Blue Box Sites—Mason County

Given the aforementioned difficulties in retaining blue-box sites, locating the boxes on County-owned property would provide some stability to the program. With curbside recycling available Countywide in late 2009, the need for additional drop off sites has reduced dramatically. Future needs will dictate the necessity of increasing drop off locations.

Advantages: The boxes would have sites that were stable and not at risk of sudden changes due to private land ownership. Stable sites make the recycling program more convenient and consistent for the residents traveling to the sites.

Disadvantages: Locating County-owned properties that are large enough and are conveniently located to population centers or on main arterials is difficult. Of the few properties that meet the above requirements, in some cases the land would need to be cleared, graded and gravel laid to be effectively used as a blue-box site.

Mason County should periodically evaluate the range of recyclables managed by existing recycling programs and determine whether new materials should be added. Additional materials should be considered on a case-by-case basis, but could potentially include all plastic food containers, paint, electronics, household food waste, and pre-consumer business food waste. Evaluation criteria could include: the potential for waste diversion; collection efficiencies; processing requirements; market conditions; market volatility; local market availability; and continuity with existing programs.

Advantages: Adding a new material to the recycling stream is a positive change.

Disadvantages: The purchase of additional boxes may be required as new materials are included in the program. Currently, the cost of a blue box is approximately \$6,000.

4. Business Recycling

For businesses, incentives to recycle wastes include: reduced disposal costs, increased material handling efficiencies, monitoring and awareness of manufacturing processes or operations waste, and opportunity for recognition within the community. Mason County could provide businesses with free technical assistance focusing on: (1) information on recycling technologies not currently being used by local businesses, (2) information on waste exchanges, and (3) information on services available from Mason County Garbage or others offering recycling services.

For recycling outreach, businesses could be targeted by the type of waste they generate. As discussed earlier in this chapter, industries within the same NAICS code exhibit similarities in the composition of their disposed waste streams. Mason County could use this system to assess local industries and use the information to provide insight as to the types of materials most likely to be recovered and the prevalence of particular industries in the region. By targeting business outreach efforts to just one or two NAICS codes, Mason County will be able to focus research on materials to just one or two waste streams and focus its education efforts.

Several private waste exchanges operate around the country, and in Canada. Waste exchanges operate much like "classified ads." Businesses, offices,

schools, and individuals "advertise" their surplus/unwanted materials, or materials they want to get, by completing an electronic listing form. 2good2toss is an example of this model. Once the form has been completed and submitted, the listing is posted in the waste exchange. Users can look for and find materials in a waste exchange by browsing or searching the materials categories. Users interested in trading posted materials then contact each other directly. Mason County could provide educational materials to businesses describing waste exchange opportunities.

Mason County Garbage presently provides commercial recycling services throughout the county, offering cardboard, mixed paper, office paper and commingled containers programs with weekly, bi-weekly and monthly pick ups. Other recycling is available locally for material drop off of non-curbside materials. Some businesses may even generate enough recyclable material to make collection from their site attractive. Recycling collection and acceptance is not regulated in the same manner as garbage, and competition for vendors is open. Businesses should be encouraged to participate in these programs and explore options.

Advantages: Commercial sources produce a significant portion of solid waste in Washington. This alternative supports the State's Beyond Waste Plan (Initiative 1) by promoting sustainable materials management.

Disadvantages: Interest in waste reduction practices would be voluntary and, therefore, would vary from business to business.

5. Recycling Services in Unincorporated Areas

In 2007, Mason County Garbage had a pilot curbside program in four communities: Lake Limerick, Oak Park, Lakeland Village and Island Lake. In the remaining unincorporated areas of the County, residential recycling collection was made available with the passage of County Ordinance 147-08 in December of 2008. This Minimum Service Level Ordinance was revised in 2009 to facilitate immediate implementation, which occurred in late 2009. Under this ordinance, all subscribers pay for garbage and recycling collection, whether both services are utilized or not. Recycling only service is available, but garbage only service is no longer an option. A reduction in can size or frequency of pick up (such as in the City of Shelton program) is an option which many have explored in the initial phase of the program.

Residents may still choose to self-haul their recyclables to a blue-box location, of which the four County sites remain.

The collection and transportation of recyclable materials from single-family and multifamily residences is regulated under RCW 81.77 and RCW 36.58. Under these statutes, counties have the authority to directly regulate the collection of source-separated recyclable materials.

County staff could investigate further the possibility of providing collection for recyclables, however this option is not being considered at the present time.

Advantages: Implementing curbside collection could decrease the need for self-haul locations. As population densities increase, more efficient route collections and cost-effectiveness will be experienced by haulers. With both options still available, total tons of recyclables collected will increase.

Disadvantages: Because the program is not voluntary, cancelled collection subscribers still need a recycling outlet for the County to provide.

3.3 COMPOSTING

Previous to this plan, there have been no solid waste planning goals for Mason County in the area of composting and yard waste diversion. One of the initiatives of the State's Beyond Waste Plan is to increase recycling of organic materials. Burning of organic materials is also common practice, and with bans on burning and statewide changes, composting becomes increasingly attractive for organics.

Existing Practices

City of Shelton

The City of Shelton collects Christmas trees at curbside during the first week of January at no charge. The trees are mulched at the City shop and used in the facility's compost pile. In recent years, compost bin sales have been offered to City residents via the City's recycling newsletter. The bins are sold at well below wholesale cost and hundreds of bins have been sold since the programs' inception. The City also actively attends various local events to promote composting and vermicomposting as a viable recycling alternative.

Mason County

Until 2009, Mason County has two annual yard waste collection events—one in April and one in October. In addition to accepting yard waste from residents at no charge at the Shelton and Belfair solid waste facilities at these events, three of the local yard waste recycling companies also accept materials at no charge

during these events. Yard waste is still accepted at the Shelton facility, at the same rate as disposal. The County also accepts Christmas trees from residents at no charge during the first couple of weeks in January. Over the years, the County has offered reduced rate compost bins for sale on an irregular basis. The County also helps to staff a compost education booth at local events and has run a vermicomposting station at an environmental education event held every-other-year for local schools.

Needs and Opportunities

City of Shelton

Although the City has implemented a residential yard waste collection service, the additional charge (\$5.50) to City residents seems to be an impediment for some to add the service. Further, the City could benefit from finding an economical and effective food diversion (composting) solution for many of the local large food waste producers (schools, hospital, long term care facilities, nursing homes, etc.).

Mason County

Mason County has the opportunity to reach much higher diversion rates of yard wastes than previously attained. While it is recognized that the rural nature of the county lends itself to household onsite disposal, yard debris does arrive at the transfer station for disposal—both from landscape businesses and individual residents. Currently, if yard wastes reach the Solid Waste Facility they are separated out from the MSW stream in the same way that scrap metal and tires are diverted. Since long haul transportation is the means for disposing of MSW, there is no reason that yard debris—which can be recycled at the local level—should be making this trip. There are two wood recyclers within 10 miles of the solid waste facility in Shelton, and two wood recyclers within 10 miles of the Belfair drop box.

Alternatives and Evaluation

1. County Operated Onsite Compost Facility

This alternative would result in the County Solid Waste Facility becoming permitted as a commercial composting facility. As yard debris was brought to the transfer station, it would be diverted to an area that was devoted to producing compost.

Advantages: The yard debris would be diverted from the landfill and become a resource that could be sold or given away to residents. Because yard waste would not be long-hauled, a reduced rate could be charged providing an incentive for residents to separate it from their garbage.

Disadvantages: Operating a compost facility would require significant capital and staffing costs. Given that there are two wood waste recyclers within 10 miles of the County facility, the County may be viewed as competing with private enterprise. It is doubtful that the County could operate its own compost facility for less than it would cost to contract with a local wood recycler to haul or receive the same yard debris, and would accomplish the same diversion goal.

2. County Facility Diversion

All yard wastes that arrive at the Solid Waste Facility are now separated in the same way that the metals and tires are handled. This began full time in 2008.

Advantages: This alternative provides residents with the convenience of making one trip to dispose of all their waste. The yard waste would be diverted from the landfill to a recycling operation, or could be chipped/ground on site and made available to residents at no charge or for a small fee. The County could also invest in the purchase of a mobile chipper/grinder, which could be periodically transported to select drop-off sites for chipping and grinding of materials brought to these sites. This alternative would result in the capacity of the landfill preserved for wastes that cannot be disposed of elsewhere. This alternative is in keeping with the State's Beyond Waste Plan, which encourages viewing wastes as a resource. If the cost of diverting this resource was less than the cost of transporting it to the regional landfill, the public would, potentially, pay less than the MSW per ton fee to dispose of yard waste.

Disadvantages: Special handling of this waste would require space for pile storage or a facility for customer drop box depositing and storage. An exemption or variance to the facility operating permits would be required. A firm would also need to be hired to haul and/or accept the yard wastes collected. It would, potentially, also require a rate change to account for the new, segregated material.

3. Public Education—City of Shelton and Mason County

Continue to inform residents and businesses of the local, private yard waste recycling operations in Mason County.

Advantages: This is already happening on a seasonal basis for the residents of the City of Shelton in the form of a utility bill newsletter and via the Website year-round.

Disadvantages: This method relies on residents and businesses to be both aware of yard waste recyclers in the area and willing to transport their wastes to those sites. It does not provide customers the convenience of making a trip to one location to dispose of their wastes. There is currently little outreach to the residents of unincorporated Mason County about the yard waste recycling opportunities.

4. Disposal Ban

Because of the number of private yard waste collection facilities in operation in Mason County, a total ban of yard wastes could be put in place at the transfer station and outlying drop box stations.

Advantages: This would provide a clearer policy in regard to this waste than is currently in place.

Disadvantages: Any type of ban can elicit a negative reaction from the public. Depending on the political climate, a ban may not be feasible or sustainable. A yard waste disposal ban at the County facility may lead to increased illegal dumping of these materials.

3.4 PUBLIC EDUCATION AND OUTREACH

The solid waste planning goals in the area of public education and outreach are as follows:

- To educate and inform the public regarding waste reduction techniques.
- To educate and inform the public regarding existing and planned methods for recycling.
- To develop a sense of environmental responsibility in the public.
- To inform the public regarding community progress and to gain feedback on agency progress or needs.

Existing Practices

City of Shelton

The central outreach method for the recycling program is utilizing stuffers in the City's utility billing envelopes. These reach every household and business within the City limits and postage costs are already covered. Beginning in 2004, a recycling newsletter entitled *Recycle This!* has been distributed quarterly in conjunction with the seasons. A special holiday edition is also distributed with the November billing. In addition to the quarterly newsletter, which has information on recycling, waste reduction and hazardous waste disposal, City residents receive a yearly curbside recycling pick up schedule and magnetic information card on what they can recycle through the curbside program.

Mason County

Mason County's outreach efforts primarily rely on the local newspaper and radio stations, both in paid advertising and press releases and public service announcements. The recycling coordinator has historically been present at county events such as the fair, Oysterfest, and Summerfest. The recycling program has a brochure that is available at various sites throughout the County and at all events. Transit ads ran on Mason County Transit from 2003-2004, specifically addressing the county's participation in www.2good2toss.com, the cost benefits to recycling, and the fluorescent bulb recycling program. There is also limited information about the recycling program on the County's website.

Each spring, Mason County Garbage sends recycling information in their residential statements. In addition, all new customer starts are mailed the same information when they sign up for service.

Needs and Opportunities

City of Shelton

The City of Shelton needs to address the communication needs of the increasing bilingual population. To date, very little of the recycling and solid waste information materials are available in Spanish. The curbside-recycling brochure is mostly pictorial though difficult to understand; however, a Spanish translation is needed to effectively reach the Spanish-speaking segment of the community. A larger presence in schools is also needed with regard to recycling technical assistance and education.

Mason County

The success of the City of Shelton's recycling program over the last few years is directly attributable to the increased effort at public outreach. The results of a solid waste survey conducted at the 2005 Mason County Fair show that the majority of Mason County residents are unaware of the various services available to them through the recycling and solid waste programs. Although the recycling coordinator has been present at a few annual events, there is a need to reach a broader audience in communities outside of the greater Shelton area—Allyn, Belfair, and Hoodspout in particular—by participating in the various local community events (i.e. Allyn Days, Grapeview Day, Tahuya Day, and Celebrate Hoodspout). A larger presence in schools is also needed with regard to recycling technical assistance and education. The County also needs to address the communication needs of the increasing bilingual population, and produce outreach materials in English and Spanish.

Alternatives and Evaluation

1. PUD Billing Stuffers—Mason County

This alternative recognizes the barriers present in using the standard method of utilizing garbage utility bills for outreach dissemination. The use of in-house utility billing stuffers is unavailable because the department uses postcards to inform residents of payments due. Research into stuffing notices into the garbage hauler's bills proved to be cost prohibitive due to the restriction involved in the California-based billing firm that the garbage hauler utilizes.

Advantages: Information would reach every household in the County. It would be a cost effective alternative because the PUD already pays for the postage.

Disadvantages: Size of stuffer is limited. This alternative requires the permission of the PUD, which may not want to be seen as favoring any one County department.

2. Direct Mailing Newsletter—Mason County

This alternative would include the mailing of an annual or twice yearly newsletter mailed directly to each household in the county. Content of the newsletter would include information on recycling, waste reduction, solid and hazardous waste disposal, and littering and solid waste enforcement issues.

Advantages: Guaranteed information dissemination to every household in the county at least once a year. Changes in the program could be easily communicated. Would provide a mechanism for public feedback in the form of surveys.

Disadvantages: Postage is costly; however, a partnership with the County environmental health department, the recipient of the county litter funding, and the garbage hauler could help divide the costs while proving space for each contributor's message.

3. *Phone Book Section Insert (i.e., "Dex Guide")*

This alternative utilizes an existing medium—the phone book—to reach every household. A four to eight page section near the front of the local phone book describing rates, facilities, programs and laws related to solid waste and recycling.

Advantages: With the exception of North Mason, every household in Mason County receives a Shelton phone book. People generally rely on the phone book as a place to go for information and therefore keep it in their home year round.

Disadvantages: Can be expensive. This alternative would require additional outreach so people know to look to the phone book for solid and hazardous waste information. North Mason communities use Kitsap's phone book, so they would not receive the Shelton phone book with Mason's program information. The phone book representatives have said that the solid waste section would have to be in black and white due to the printing constraints of the Shelton phone book.

4. *Web Site*

Little information currently is offered on Mason County's website concerning solid waste or recycling program activities. Mason County should update its website to be a successful component of a waste reduction and recycling education campaign. As with any promotional medium, the website must be user-friendly, accurate, and interesting. The website should be professionally designed, if possible. In 2010, the SWAC recommended an update to the website, which was overhauled and replaced by a public/private partnership. The new website, masoncountyclecycling.com is the product of County staff, Ecology support and additional funding from the local hauler and the local e-cycle drop off partner. The site incorporates a wide range of waste-related information, and is not biased in favor of any service provider.

Advantages: People increasingly rely on the Internet as a place to go for information.

Disadvantages: Would require additional outreach so people know to look to the web site for solid and hazardous waste and recycling information.

5. College Interns—City of Shelton and Mason County

Given the proximity to four colleges—Olympic College, The Evergreen State College, South Puget Sound Community College, and Saint Martin's College—this alternative would employ one to two student interns to work on special projects throughout the year. Examples of current available intern positions: education specialist, focusing on school outreach and presentations, and preparation of articles for publication in newspapers; business assistance recycling specialist, focusing on commercial outreach and waste audits; school composting program specialist, focusing on on-site composting at schools; and school recycling specialist, focusing on school outreach and waste audits. A web site design position could also be created.

Advantages: Unpaid interns may be available or those under a work-study program, creating little or no expense for the County. Interns could focus on special projects that staff currently has not had the time to work on.

Disadvantages: Unpaid interns are difficult to attract, especially those based in Olympia. Staff has been unsuccessful over the last two years at attracting any applicants. Time spent to manage interns, if recruited, is also a consideration.

6. Technical Assistance to Schools and Businesses—City of Shelton and Mason County

This alternative recognizes the need to reach schools and businesses regarding their handling of waste—making commercial waste a priority. Outreach to schools and businesses would offer free technical assistance and waste audits, as well as distribution of newsletter at schools.

Advantages: Commercial sources produce a significant portion of solid waste in Washington. Focusing waste reduction efforts towards the business sector can have a large impact on the waste stream as a whole. Measurable data would be much easier to obtain from businesses rather than residents. This alternative is inline with the State's Beyond Waste Plan (Initiative 1). It is also important to provide waste audit assistance to schools. A functional waste reduction and recycling program in a school yields daily reminders to the students of their direct impacts on the environment.

Disadvantages: Staff intensive. Interest in waste reduction practices would be voluntary and, therefore, would vary from business to business, and school to school. Barriers to a school program include overworked custodial staff, and lack of support from either the principal and/or the district.

7. *On-site Blue Box Signage—Mason County*

This alternative involves improving and expanding from the current level and quality of signs and instructions present at each blue box recycling site. Improving the signs that appear on the front of the box which describe the overall rules of use of the recycling boxes, in-ground commodity instructional signs and residential “thank you” signs, and roadside signs indicating the presence of the recycling site are all examples included in this alternative. The signs are also in Spanish as well.

Advantages: Clearer and more attractive signs may result in cleaner commodities and less contamination of non-recyclable goods. Effort in this regard would show the County’s commitment and dedication to the program, and would validate the sites as recycling locations rather than garbage dumps. Signs that thank the residents who use the sites reinforce their positive behavior and contribute to positive feelings about the program as a whole. Directional roadside signage may educate non-users that there is a recycling site nearby, potentially changing their behavior.

Disadvantages: Not everyone reads signs. The initial expense was completed in 2007 with the assistance of a grant from the Department of Ecology.

Recommendations

The following actions related to waste reduction, recycling, public outreach and composting are recommended for this Plan:

1. Outreach improvements—Improve and regularly update the information available on Mason County's web site. Bilingual information to include signage at blue-box sites and web page information. Prepare for direct mailing to all County residents an annual summary of the County's solid waste and recycling programs.
2. Continue to evaluate the Blue-Box Recycling Program to improve opportunities and improve site access. Consider adding sites on available public properties and develop an incentive for private site owners to continue to provide land for siting the boxes.
3. Local governments should develop and expand electronic billing options to reduce paper mailings.
4. Offer businesses and schools waste audits and education designed to reduce their waste stream and disposal costs.
5. Improve recycling options for employees at local government facilities.
6. Support the efforts of the private sector to implement and expand curbside-recycling program in Mason County.
7. Diversion of organics at county owned solid waste facilities for composting or other beneficial use.
8. Support local efforts to expand recycling options for common products, such as electronics, Styrofoam, additional plastics and other materials.