CHAPTER 3

WASTE REDUCTION

3.1. PREFACE TO THE WASTE REDUCTION, RECYCLING AND ORGANICS CHAPTERS

Introduction

This chapter and the following two chapters on recycling and organics describe existing programs and future plans for activities that reduce the amount of solid waste being generated or disposed in Skagit County. This chapter discusses waste reduction methods that reduce the amount of waste being generated, while the next two chapters discuss methods that reduce the amounts being disposed. In other words, waste reduction methods prevent wastes from being created, while recycling and composting handle materials after those have been created as a waste. Collectively, these approaches (waste reduction, recycling and composting) are known as “waste diversion” in this plan.

Purpose

Chapters 3, 4 and 5 provide an update of the County’s waste diversion methods and comply with State requirements regarding waste reduction and recycling opportunities and programs. The State requirements are shown in various sections of the Revised Code of Washington (RCW) and the Washington Administrative Code (WAC). Additional guidance is also provided by Ecology’s solid waste planning guidelines and the Beyond Waste Plan.

In 2010, RCW 70.95.080 was amended to include:

(1) When updating a solid waste management plan developed under this chapter, after June 10, 2010, local comprehensive plans must consider and plan for the following handling methods or services:
   (a) Source separation of recyclable materials and products, organic materials, and wastes by generators;
   (b) Collection of source separated materials;
   (c) Handling and proper preparation of materials for reuse or recycling;
   (d) Handling and proper preparation of organic materials for composting or anaerobic digestion; and
   (e) Handling and proper disposal of nonrecyclable wastes.
(2) When updating a solid waste management plan developed under this chapter, after June 10, 2010, each local comprehensive plan must, at a minimum, consider methods that will be used to address the following:

(a) Construction and demolition waste for recycling or reuse;
(b) Organic material including yard debris, food waste, and food contaminated paper products for composting or anaerobic digestion;
(c) Recoverable paper products for recycling;
(d) Metals, glass, and plastics for recycling; and
(e) Waste reduction strategies.

The Legislature’s stated intent for making this amendment was “increasing available residential curbside service for solid waste, recyclable, and compostable materials provides enumerable public benefits for all of Washington. Not only will increased service provide better system-wide efficiency, but it will also result in job creation, pollution reduction, and energy conservation, all of which serve to improve the quality of life in Washington communities. It is therefore the intent of the legislature that Washington strives to significantly increase current residential recycling rates by 2020.”

The Beyond Waste Plan

Another relevant source of guidance on policies and goals is the State Solid and Hazardous Waste Plan. Commonly referred to as the “Beyond Waste plan,” this plan has adopted a vision that states:

*We can transition to a society where waste is viewed as inefficient, and where most wastes and toxic substances have been eliminated. This will contribute to economic, social and environmental vitality.*

This transition is expected to take 20-30 years or more.

The Beyond Waste plan has been recently updated (the “2015 Update”). The plan previously focused on actions that could be taken in five areas (industrial waste, small volume hazardous waste, organic materials, green building, and measuring progress). The updated Beyond Waste plan is divided into five sections:

- Managing Hazardous Waste and Materials
- Managing Solid Waste and Materials
- Reducing Impacts of Materials and Products
- Measuring Progress
- Providing Outreach and Information
Each of these sections presents goals and actions that can be taken over the next five years. The updated plan also incorporates the concept of sustainable materials management, which has been adapted from recent work by the U.S. Environmental Protection Agency (EPA). Sustainable materials management looks at the full life cycle of materials, from the design and manufacturing phase, to the use phase, and then to the end-of-life phase when the material is either disposed or recycled. Materials management still focuses on recycling and disposal issues, but in looking at production methods and the use of materials, this approach can help identify more sustainable ways to design products that use less energy, water and toxics. This is important because the adverse environmental impacts of extraction, production and use can be far greater than those associated with disposal when the product becomes a waste. According to the EPA, a materials management approach is essential to conserving natural resources to meet both today’s needs and those of future generations.

The Beyond Waste plan is referenced in later chapters of this SWMP as appropriate to the topics in each chapter. Copies of the Beyond Waste plan and additional information can also be downloaded from the Ecology’s web site (www.ecy.wa.gov/beyondwaste/index.html).

3.2. EXISTING CONDITIONS FOR WASTE REDUCTION

Definition of Waste Reduction

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 of the diverted materials as garbage, but recycling and composting frequently require significant additional expenses for collecting and processing the materials. Those additional expenses are avoided in the case of waste reduction, where the waste is not produced. Examples of waste reduction methods include:

- Reuse a product.
- Reduce consumption of materials and products.
- Reduce materials used to manufacture products.
- Increase the useful life of a product through durability and reparability.

By definition, waste reduction also includes activities and practices that reduce the toxicity of wastes that are created.

Several waste reduction activities and programs are currently conducted in Skagit County. These include a variety of public programs as well as private efforts, with
the latter including a broad range of activities that are not well documented. Waste reduction could be shown to be handling significantly more waste if the private efforts could be measured more completely.

**Private Reuse Activities**

A significant amount of waste reduction is accomplished by second-hand and thrift shops, garage sales, used bookstores, rental shops and through similar activities. A few charitable organizations provide collection services. Various websites also facilitate a large amount of reuse, most notably Craigslist, eBay and FreeCycle. No estimates are available for the amount of goods handled through these methods in Skagit County, but a recent study for Clark County, Washington, concluded that there were 357 companies involved in waste reduction activities (reuse, rentals and repairs) in that county. These companies employed 1,193 workers and were creating almost $86 million of sales in Clark County annually. These estimates do not include the value of goods given away or sold on websites, through garage sales and similar activities. All of these activities benefit the economy by creating local jobs and by helping residents and businesses to “stretch” their budgets (by allowing them to purchase used or repaired goods or to rent items needed only for a short time).

**Backyard Composting**

An effective method of waste reduction is the composting of yard debris and vegetative food scraps on the property where it was generated (typically called “backyard” or “on-site” composting). In Skagit County, backyard composting is encouraged through demonstration gardens, workshops, the County’s website and other efforts. In 2014, five free workshops were conducted for backyard composting and six workshops were conducted for vermicomposting (use of earthworms to break down vegetable matter). Brochures and other information are available on the County’s website for these activities and for natural (non-chemical) lawn care. Home composting talks are also offered on a case by case basis to community groups, and volunteer trainings are provided throughout the County, such as the WSU Master Gardener Spring Intern Training and Skagit Conservation District’s Backyard Wildlife Habitat Training.

**Other Activities**

Many other waste reduction activities are being conducted currently in Skagit County. A few examples of these include:

- The Skagit County Master Composter/Recycler Volunteer Program is offered annually, each spring. The program trains up to 30 volunteers per year in waste reduction methods, zero waste lifestyle tips, recycling, hazardous waste reduction, organic gardening, and home composting. Volunteers receive 30 hours of free training, including books, tours of area facilities, and hands-on composting experience. In return, they agree to give 40 hours of volunteer service back to the Skagit County community as recycling and composting educators.
Each year, a minimum of 600 volunteer hours are returned to Skagit County residents in the form of Master Composter/Recycler volunteer hours.

- Skagit River Steel & Recycling actively pursues reuse opportunities for the materials they receive for recycling, including a wide range of metal parts and other supplies.

- For building materials, there are three locations in Skagit County that sell salvaged materials, including Skagit Habitat for Humanity, Skagit Building Salvage and Duluth Timber Company.

- There are at least three shipping services in Skagit County that accept Styrofoam “peanuts,” “bubble wrap” and other materials for reuse (see the County’s website for current information about these services).

- Waste reduction practices have been implemented in many offices in both the public and private sectors, including reusing blank sides of paper for drafts, increased use of email and digital copies in lieu of paper copies, increased double-sided copying, and avoiding non-recyclable packaging. Recycling in all Skagit County offices has also been upgraded since 2010. All County offices now offer options for compost, recycling, as well as garbage in common areas of buildings. Desk side recycling containers are also offered and made available to all individual work stations.

- The Fidalgo Island community (“Transition Fidalgo & Friends”) has developed a plan (Vision 2030) and is regularly conducting activities that address waste reduction and other aspects of a sustainable community. Waste reduction activities include “fix-it days,” which is a booth at the Anacortes Farmers Market staffed by volunteers who help repair products, and a gleaning group (the Fidalgo Island Gleaners), who pick surplus fruit and vegetables to prevent it from going to waste. Beginning in 2015, there will be a fix-it booth at the Anacortes Farmers Market on Saturdays.

- The Skagit Gleaners, based in Mount Vernon, gathers surplus, slightly damaged and donated food from stores, farms, restaurants and individuals throughout the Skagit Valley and provides this to 250 local families that are in need of support. This non-profit group has operated since 1984 and currently diverts about 320 tons of food from disposal.

- Community-wide garage sales help promote waste reduction through reuse. The Shelter Bay Community (near La Conner), for example, organizes a community-wide garage sale annually.

- Waste reduction is promoted as part of Skagit County Zero Waste Event program, which certifies public and private events at either a silver or gold level for addressing waste reduction, recycling and composting at the event. This program provides recycling and organics collection containers, logos and signage and technical assistance for events.
• The EnviroStars program conducted by the Skagit County Health Department recognizes and promotes businesses that practice waste reduction and use less toxic materials. The Local Source Control Program encourages businesses to use less-toxic alternatives for the products they use, and encourages other waste reduction methods.

**Volume-Based Waste Collection Rates**

A successful and effective tool for encouraging waste reduction (and recycling) is the use of “variable rates” or “volume-based rates,” where households are charged more for disposing of more garbage. Businesses are generally already charged according to the amount of garbage disposed and this approach is essentially impossible to implement for individual apartments, so this strategy typically refers only to single-family homes. Volume-based rates are currently in effect throughout the County for single-family homes.

### 3.3. PLANNING ISSUES FOR WASTE REDUCTION

Waste reduction is the highest priority waste management strategy but can be the most difficult to implement because these programs may require changes in production methods and consumption pattern. Specific waste reduction issues are discussed below.

**Food Waste**

Food waste is one of the largest components of the waste stream (see Table 2-8) and so its potential for waste reduction deserves attention. At the same time, there is increasing national awareness as to the amount of edible food that is going to waste. According to a recent report by the Natural Resources Defense Council,1 40% of edible food is wasted as it travels from farms to kitchen tables. According to the USDA, a family of four could save $2,275 per year by avoiding food waste through simple changes in the way they handle food purchases and storage. A recent study for Thurston County (the 2014 Thurston County Waste Composition Study) showed that 7.2% of that county’s waste stream was edible food.

**Reuse as a Benefit to the Local Economy**

Many of the reuse activities currently occurring in Skagit County may seem minor or even trivial in scope, but these activities are actually providing a substantial amount of benefit for the local economy. Promoting these activities and finding ways to facilitate more of these activities would significantly benefit Skagit County residents.

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1 From “Wasted: How America is Losing up to 40 Percent of its Food from Farm to Fork to Landfill,” by Dana Gunders, staff scientist with the Natural Resources Defense Council, August 2012.
Clothing Reuse
Despite the large number of organizations addressing clothing in Skagit County and other areas, the results of waste composition studies for other areas (see Table 2-8) show that almost 4% of the waste stream consists of clothing and shoes. Not all of this amount would be reusable, but virtually all of this could be either reused or recycled (converted to rags or other products).

Yard Debris
Despite the wide range of options for yard debris (backyard composting, mulching of grass clippings, drop-off sites and collection programs), there is likely a significant percentage of this material disposed in Skagit County’s waste stream. Based on waste composition data from other areas, the waste stream typically consists of 2-4% of yard debris.

Promotion of Volume-Based Garbage Rates
Existing volume-based garbage rates are being promoted on the websites of Skagit County, Waste Management, and Sedro-Woolley, but could be promoted better on Anacortes and Mount Vernon websites. In general, every possible opportunity should be used to promote the ability to save money on disposal fees by treating certain materials as a resource instead of a waste.

Climate Action Plan
The Skagit County Climate Action Plan adopted in 2010 included goals and activities for waste reduction. One of the goals in that plan is to reduce the amount of garbage to 10% below 2008 levels. This plan also made a number of specific recommendations regarding waste reduction and recycling, including:

- reduce and then eliminate polystyrene (Styrofoam) food containers.
- prohibit marine use of expanded polystyrene.
- reduce the use of single-use food containers by County departments and educate the public to avoid these containers.
- eliminate permit fees for deconstruction projects.
- ban disposal of yard debris.
- more promotion of backyard composting in East County.

Measuring and Evaluating Waste Reduction Activities
Measuring waste reduction is difficult because the amount of waste generated in a specific area fluctuates with many variables, including economic conditions, seasonal changes and local weather. Hence, it can be difficult to demonstrate the cost-effectiveness or productivity of specific waste reduction techniques.
3.4. ALTERNATIVE WASTE REDUCTION STRATEGIES

The following alternatives were considered for new or expanded waste reduction activities. The listing of an alternative in this section does not mean that it is considered feasible or desirable, nor that is recommended (see Section 3.6 for waste reduction recommendations).

Alternative A – Ban Yard Debris from Garbage Disposal
Of all of the materials in the waste stream, yard debris is possibly the easiest material to handle through other means. Yard debris can be left on the lawn (mulching of grass clippings), applied as a mulch in landscaping and gardens, handled through backyard composting (for leaves, grass clippings and some types of food wastes), chipped on-site (for branches and other woody materials), or recycled through residential and commercial yard waste collection programs.

Some of the cities in Skagit County already ban yard debris from disposal. Hence, there is not much yard debris currently being disposed as garbage, but this approach could eliminate up to 2% of the current waste stream (see Table 2-8). If a ban is implemented, it should be accompanied by additional public education to promote alternatives such as mulching of grass clippings, backyard composting, and even vermicomposting (using worm bins to convert food wastes into a desirable soil amendment).

Alternative B – Focus on Wasted Food
A substantial amount of edible food waste is unnecessarily discarded. A public education campaign could be used to inform residents of the meaning of expiration dates, opportunities to donate food, and other steps that could be taken to reduce food waste. Skagit County could partner with other organizations, such as the Skagit Valley Food Co-Op, to help spread information about this (and for the next option, on smart shopping). Much of the materials for this campaign could be provided by other programs, such as EPA’s “Too Good To Waste” program and the various strategies being used by Thurston County.

Alternative C – Promote Smart Shopping
The Cities and County could conduct more promotion on the subject of smart shopping, such as buying in bulk (at least for non-perishable items). The Cities and County could conduct a campaign that encourages:

- buying in bulk.
- buying concentrates.
- purchasing reusable products.
- buying secondhand items.
- avoiding over-packaged items.
• avoiding products containing hazardous ingredients.
• borrowing or renting when possible.
• purchasing durable and repairable products.
• using reusable shopping bags.
• shared ownership of large items with a neighbor or friend.

These activities could provide benefits to personal finances as well providing benefits to the local economy (to the extent that local businesses can provide repair and rental services).

**Alternative D – Fix-It Workshops**
An idea that is gaining in popularity is the use of fix-it workshops, where people can bring items in need of repairs and knowledgeable volunteers show them how to fix the item. Organizing this type of workshop is probably better accomplished by a non-profit group, but the County could help promote the workshops, provide space for the events, and possibly assist in other ways.

**Alternative E – Promote Volume-Based Collection Fees**
Information on volume-based rates could be more easily accessible and this approach could be more widely promoted as a way to save money by recycling and reducing wastes. The success of this approach could be monitored by the number of people who sign up for lower service levels.

**Alternative F – Promote More Clothing Reuse and Recycling**
Educational materials could encourage people to bring reusable or recyclable clothing to charities and other collection programs for those. Specific educational materials could be designed for clothing, but it would probably be more cost-effective to include this topic in existing materials and websites. Clothing reuse and recycling could also be a special focus of a newspaper ad, fair booth and other educational opportunity. Additional recycling options could be explored or promoted, although this idea should be approached carefully so as not to undermine existing efforts that are collecting reusable clothing for charitable purposes.

**Alternative G – Collect Reusable Materials at Skagit County Transfer Station**
One option to divert reusable materials from disposal could be a cooperative effort with Goodwill or another charity to collect reusable materials at the main transfer station. Several counties in Washington are working with charities to divert reusable materials through staffed trailers located prior to the entrance of a landfill or transfer station. This could also take the form of a joint effort or cooperative arrangement with one of the reusable building material operations to collect building materials. One consideration for this approach would be the degree of access to the tipping floor that would be allowed by this arrangement. If employees of the charities were allowed full access to the tipping floor to observe materials being dropped off there,
rather than depending on customers to voluntarily stop at a trailer, then much more material could be recovered.

**Alternative H – Promote Waste Reduction through Videos**

Waste reduction lifestyle tips could be encouraged by creation of educational videos that can be viewed through a high traffic website, such as YouTube. Short, informational videos could be created to show people the basic steps to reducing waste at home. This educational outreach method is capable of reaching many people, without a tremendous amount of work, and could cover a wide variety of topics. The time and other costs for this approach can be reduced by using videos prepared by others.

### 3.5. EVALUATION OF WASTE REDUCTION ALTERNATIVES

**Review of Rating Criteria**

The above alternatives can be evaluated and rated according to several criteria and then a decision can be made as to whether to pursue it or not based on the overall rating.

**Consistency with Solid Waste Planning Goals:** All of these alternatives support the goal of emphasizing waste reduction as a fundamental management strategy, and support other planning goals as well.

**Feasibility:** In judging the alternatives for technical and political feasibility, most of the alternatives can be adopted without controversy or legal issues. Alternative C (the yard waste ban) has potential issues with public acceptance and so is rated low for this criterion. Alternative D (fix-it workshops) may depend on others to implement and could be challenging to arrange, and so this alternative is rated medium. Alternative F, more clothing reuse and recycling, is rated Medium for feasibility due to the questions about conflicts with existing operations (if additional reuse and recycling opportunities are established).

**Cost Effectiveness:** All of these alternatives can be considered to be cost-effective. The alternatives are self-financing (such as for Alternatives F and G, more clothing reuse/recycling and collecting reusables at the transfer station), depend on volunteer labor (Alternative D, the fix-it workshops), or have significant potential for diverting materials from disposal.

**Diversion Potential:** The alternatives are rated High for diversion potential if the alternative could potentially reduce the waste stream by more than 1%, Medium for 0 to 1%, and Low for alternatives that would have an impact of 0% or near zero. The alternatives for yard debris, food waste, and clothing are all rated as High because these alternatives address materials present in the waste stream in amounts much
higher than 1%. Likewise, volume-based fees are rated as High because these could influence the waste stream by at least this much. Alternatives G, collecting reusable materials at the transfer station, and H, producing videos that provide waste reduction tips, were rated Medium based on the potential to divert a significant amount of material. Other alternatives, while still valuable, were rated Low because the amounts of materials potentially diverted (or avoided) are fairly small.

**Rating of Alternatives**

The evaluation of the alternatives is summarized in the following table.

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<thead>
<tr>
<th>Alternative</th>
<th>Consistency with Planning Goals</th>
<th>Feasibility</th>
<th>Diversion Potential</th>
<th>Overall Rating</th>
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<tr>
<td>A, Ban yard debris</td>
<td>H</td>
<td>L</td>
<td>H</td>
<td>M</td>
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<td>B, Focus on wasted food</td>
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<td>C, Promote smart shopping</td>
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<td>D, Fix-it workshops</td>
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<td>F, Promote more clothing reuse and recycling</td>
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<td>G, Collect reusables at transfer station</td>
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<td>H, Waste reduction videos</td>
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</table>

**Rating Scores:** H – High, M – Medium, L – Low

### 3.6. WASTE REDUCTION RECOMMENDATIONS

The following recommendations are being made for waste reduction programs.

**High-Priority Recommendations**

WR1) A program educating residents and businesses about avoiding food waste will be implemented.

WR2) The availability of volume-based rates will be publicized by the County, Cities and waste collectors.

WR3) Options for clothing reuse and recycling will be promoted.

WR4) Skagit County will explore the possibilities for a charitable organization to collect reusable materials at the Skagit County Transfer Station.
WR5) Skagit County will produce and distribute videos that provide waste reduction tips.

**Medium-Priority Recommendations**

WR6) A county-wide ban on yard debris disposal will be considered.

WR7) Smart shopping will be promoted.

WR8) Fix-it workshops will be encouraged and promoted.

The lead agency responsible for implementing these recommendations will be Skagit County, with assistance from the Cities as appropriate. The costs for these activities are minor, and funds are expected to come from available County and City funds, and possibly the CPG grant program administered by Ecology.

The costs for five of these recommendations (WR2, WR3, WR4, WR5, and WR8) consist primarily of staff time. Recommendations WR1 and WR7 could cost up to $15,000 each, depending on the level of effort expended on promoting smart shopping and food waste issues. The costs for Recommendation WR6 would include a campaign to inform the public of a yard waste ban and possibly also costs for enforcement activities.

The implementation of all of these recommendations should begin next year (2016), but implementation of many of the recommendations will be contingent upon the hiring of an additional staff person (a Recycling Coordinator, see Chapter 8 for more details).

More details on the implementation of these and other recommendations are shown in the Implementation Chapter (Chapter 10).