Snohomish County
Public Works
*Solid Waste*

# » Changing Waste
## FOR CHANGING TIMES

Snohomish County Comprehensive
Solid and Hazardous Waste Management Plan
Final Draft, 2013

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# » INTRODUCTION

## THE PLAN

This document is a plan for managing the solid waste (garbage) generated in Snohomish County. Part of this plan also addresses hazardous and toxic wastes. This plan is intended to be a guide for the proper management of these wastes.

The current solid waste management system in Snohomish County is working well, but does face some challenges in the future. These challenges include the need to address climate change, sustainability, and other issues, while paying close attention to financial constraints and responsibilities.

## IMPORTANCE OF PLANNING

### The Need for Solid Waste Planning

To ensure that solid waste is collected, handled, recycled, and disposed of in an environmentally sound manner that protects public health, Washington state regulations require the county to have an approved comprehensive solid waste management plan. Snohomish County currently operates an effective solid waste system that benefited from the foresight and development of previous solid waste plans. Building on that foundation, this Solid Waste Management Plan (the "Plan"):

- provides an opportunity to evaluate and refine existing programs and activities;
- identifies policies that will help implement the recommended programs and practices; and
- provides a road map for how the County will handle solid waste issues in the future.

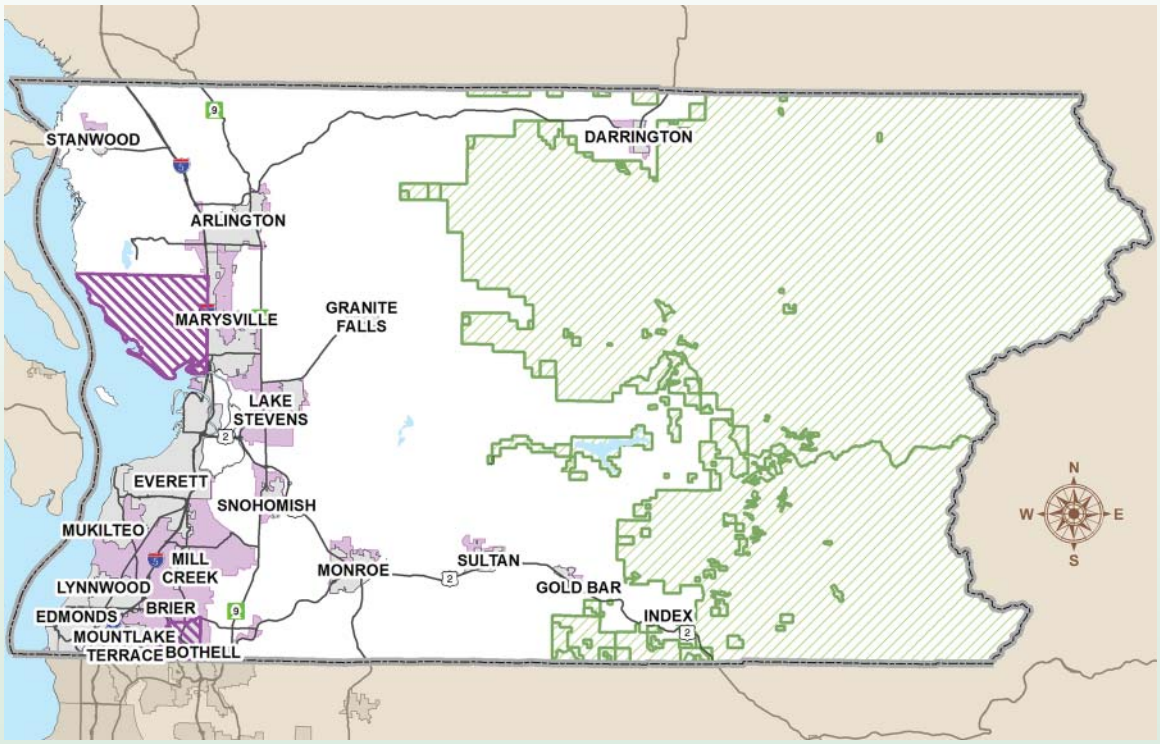
### Participating Jurisdictions

The following cities and towns (depicted in Figure 1 on the following page) have signed an interlocal agreement to participate in the Snohomish County Solid Waste Management Plan:

| | | | | |
|---|---|---|---|---|
| Arlington | Edmonds | Index | Mill Creek | Snohomish |
| Bothell (*) | Everett | Lake Stevens | Monroe | Stanwood |
| Brier | Gold Bar | Lynnwood | Mountlake Terrace | Sultan |
| Darrington | Granite Falls | Marysville | Mukilteo | Woodway |

(*) *part of Bothell is in the King County system.*

FIGURE 1. Map of participating jurisdictions




Areas Outside Snohomish County Jurisdiction

City Boundaries

Urban Growth Areas

## Relationship to Other Documents

This Plan utilizes the Snohomish County Comprehensive Plan for a majority of the planning background information. This includes housing types, population growth, and development projections. More in-depth information on these factors, as well as on the environmental characteristics of Snohomish County and the designation of urban and rural areas, can be found in the Comprehensive Plan.

Other related plans include the Moderate Risk Waste (MRW) Plan, an update of which is attached to this Plan, shoreline master programs, and land use plans and associated zoning codes for Snohomish County and its cities and towns.

# ORGANIZATION OF THIS PLAN

## Vision and Goals for Plan

The vision for this update of the Snohomish County Solid Waste Management Plan is to shift to a more sustainable future, where people are generating less waste and are handling the wastes that they do generate in an environmentally and sustainably sound manner (through recycling and composting, for instance).

This vision is the underlying concept for the two major goals of this Plan:

- GOAL I: Support actions to reduce climate change and promote sustainability.
- GOAL II: Ensure efficient services for a growing and changing customer base.

The goals are in turn reflected in the policies that are used in this Plan to consider additional programs and recommendations for enhancements to the solid waste system. The vision statement, goals and policies are described in more detail in the Moving Forward section of this Plan.

## Structure of this Plan

This Plan consists of this document, which provides background information and a summary of the recommendations, and a series of technical memorandums and appendices that address specific topics in detail. The electronic version of this plan includes numerous links to other sections of this Plan and to external documents and other sources of information.

A more detailed description of the three parts of this Plan is provided below:

Volume I

Volume I is this part of the document, and it contains a narrative summary of background information, policies and recommended alternatives.

### THE PLAN

**Volume I**

Narrative summary of background information, policies and recommended alternatives.

**Volume II**

Technical memorandums that address specific aspects of the solid waste system. Each contains background information and possible alternatives to address policies and service gaps.

**Appendices**

Background information on specific topics and parts that satisfy regulatory requirements; MRW plan; Glossary, References; and other documents.

Volume II

Volume II is a series of technical memorandums that address specific aspects of the solid waste system. Each memo supports one or both of the two overarching goals of the plan and also has its own specific policy statement. The technical memorandums contain background information on each topic, related regulations, near and long-term planning issues, and possible alternatives on how to address policies and service gaps. The alternatives are rated based on three criteria:

- consistency with solid waste planning objectives;
- consistency with other regional plans; and
- cost-effectiveness.

An overall rating is assigned to each alternative based on these criteria and this rating is used to assign a high, medium or low priority to the resulting recommendations.

## Appendices

The Appendices contain background information on specific topics and parts that satisfy regulatory requirements such as the State Environmental Policy Act (SEPA) checklist and the Washington Utilities and Transportation Commission (WUTC) cost assessment. Also included in the appendices are the MRW plan, documents related to the plan adoption process, and other information such as a glossary and references.

# » CURRENT SYSTEM

## INTRODUCTION

Snohomish County's management of solid waste has evolved over time based on population growth and cultural changes. At the inception of the Solid Waste Division (the "Division") in 1972, the County's population was 263,300. By 2010, the population had almost tripled to nearly 726,000. This growth, and the changes that have occurred in the geographic distribution of the population, required a significant investment in facilities and services to ensure adequate accessibility and availability to all users. In addition, there must be coordination and cooperation with the local waste haulers who provide collection services to residences and businesses. The haulers typically have the most direct contact with the residents and are expected to continue helping accomplish the goals and policies set forth in the Plan.

The amounts and types of wastes have also grown over the years, requiring more facilities with new capabilities to properly manage these wastes. Many items that were formerly disposed of are now part of countywide diversion programs that recycle or reuse them. This cultural shift acknowledges the benefits of recycling and has required the evolution and growth of the basic services and policies of the Division.

## HOW DID WE GET HERE?

### Our Interaction With Garbage

Prior to the nineteenth century very little household waste was produced and very little of what was produced was permanently disposed of. Most of it was organic, such as food scraps, and was fed to livestock or rendered and remade into other products. Clothing was patched until it was no longer wearable, and then the scraps were used as rags or sewn together for other uses. The majority of waste produced at this time was ash from industrial processes.

*Depiction of early solid waste collection service.*

With the advent of the industrial revolution came the proliferation of disposable items and the association of these items with wealth and progress. Consumerism had arrived. Suddenly there was an ever-growing selection of products from which to choose. From napkins to watches, people were able to purchase inexpensive items and toss them out at the end of their life. This was associated with increased product marketing and a continual need to develop new and improved "things."

The ongoing growth of consumerism created more garbage and the need for waste management services. Private companies developed to serve this need. Cities and towns began to pass ordinances and regulations for managing waste. Entire departments and divisions were established to handle the growing volumes of this new waste stream. At the same time industry was developing their own new wastes that contained more chemicals, composites and engineered materials that had never been seen before. These materials were different and some required special disposal methods to protect the public and the environment. It took decades to fully understand the potential dangers to the public posed by some of these materials.

By the end of the twentieth century, waste management had become a combination of science and art. New technologies are constantly being tried to find the "best" way to dispose of or recycle waste. Landfills win awards for becoming parks and open spaces, as well as becoming alternative sources of energy. In addition, the idea of waste and how much we produce is being pushed to the forefront of the consumer's mind more than ever before. Today, an individual shopping at a store faces the decision of buying a product that is packaged with or without recycled material. Or, before they throw something out, they need to determine whether the object is reusable, recyclable, compostable, garbage, or a household hazardous waste.

## Snohomish County Solid Waste Beginnings

Historically, the solid waste disposal needs for Snohomish County were satisfied by a number of relatively small, independently operated, open dumps. None of the disposal sites would be considered acceptable by today's standards. Rats, odors, contaminated water, and uncontrolled gas production characterized most of the old disposal sites. In addition, poor service levels, inadequate planning, lack of inter-agency coordination, and inadequate handling of special wastes was also a problem.

*McCollum Park was built on the Emander Landfill.*

A major change occurred with the closure of the Emander Landfill (McCollum Park) in 1967. As a result of this closure, use of the City of Everett Landfill increased greatly, to the point that its estimated site life was less than five years. (The Everett landfill stopped accepting waste in 1974.) Furthermore, no coordinated solid waste planning between various jurisdictions had taken place to ensure that a replacement disposal site was available.

In response to the disposal capacity problem facing the urban areas of the county, the Board of Health for the Snohomish Health District directed its staff to spearhead the formation of a group tasked to identify and develop alternative solutions to existing solid waste disposal problems, with an emphasis on regionalization. The Solid Waste Disposal Steering Committee was created by formal resolution of the County Council in 1968.

In the midst of the Solid Waste Disposal Steering Committee's early planning efforts, the Washington State Legislature adopted major solid waste management legislation. This Solid Waste Management Act of 1969 required that every county in the state of Washington prepare a comprehensive solid waste management plan.

An interim plan, completed in May of 1971, offered recommendations to the Solid Waste Disposal Steering Committee covering additional steps required for the implementation of a regional solid waste management system. Although the act did not require the implementation of regional systems, the framers of the act saw the efficiency that could be gained through inter-jurisdictional coordination, with management of transfer and disposal systems taking place at the county level.

The Snohomish County Public Works Department was established in April 1972. The department was directed, authorized, and empowered to implement all public works projects undertaken by the County. With the appointment of a Director of Public Works in January of 1973 and a Solid Waste Director in March of 1973, efforts intensified to implement the interim plan's recommendations for the physical disposal system and to develop new alternatives where needed.

A model drop box site was opened near Gold Bar in June of 1974 and as a result, both the Index and Gold Bar dumps were closed and removed from service. The Granite Falls Drop Box and the Lake Roesiger Drop Box were constructed shortly after and

*The County currently operates three drop box sites.*

the Sultan Drop Box opened in the spring of 1977. The Oso Drop Box was opened in 1987(in 2009, the Oso and Gold Bar Drop Box sites were closed). Waste from the drop box sites is currently taken to a county transfer station where it is compacted and sent to a landfill in eastern Washington.

Snohomish County's first comprehensive solid waste management plan, written under Washington State's new regulations, was completed in October 1974 and approved by the State of Washington Department of Ecology in April 1975. This plan recommended that Snohomish County assume jurisdiction over all disposal and collection sites within Snohomish County including drop boxes, transfer stations, and landfills. All of the cities and towns yielded their authority over planning and designation of transfer and disposal locations to the Snohomish County Department of Public Works Solid Waste Division (the "Division").

## CURRENT FACILITIES AND PROGRAMS

An overview of the current system is provided below, followed by more detailed information on facilities and programs as these relate to the two major goals of this planning process. The two goals are to:

1) Support actions to reduce climate change and promote sustainability.
2) Ensure efficient services for a growing and changing customer base.

These goals and the associated policies are also discussed in the next section of this Plan (Moving Forward).

### System Overview

The current system involves a large number of private companies and public agencies that provide the services and programs to address various components of solid and hazardous waste management.

There are four private collection companies in Snohomish County: Waste Management, Republic Services (formerly Allied Waste Services and Rabanco), Rubatino Refuse, and Sound Disposal. In addition, two cities in the county (Marysville and Sultan) provide collection services within their boundaries. The other cities and many other private collection companies are also involved to varying degrees in the solid waste system in Snohomish County. These activities are discussed in several of the technical memorandums that make up this Plan. Most of the rest of this section provides information about the County's role and activities.

Facilities and Operations

Transfer Stations and Neighborhood Recycling and Disposal Centers (NRDCs), formerly known as drop box sites, have managed the bulk of waste produced in the county since the Division's inception. Currently the Division operates four transfer stations and three NRDC sites.

In addition, the Division has two closed NRDC sites that are available for emergency use. The transfer stations are located in the more urbanized areas of the County and provide service to the greatest number of residents, while the NRDCs are distributed throughout the more rural areas of the County. The waste collected at the transfer stations and NRDCs is compacted and trucked to an intermodal facility in Everett, from which it is shipped by rail to the Roosevelt Regional Landfill in Klickitat County. On an average day, the County ships 1,500 tons of waste to Roosevelt.

*The County's Southwest Recycling and Transfer Station in Mountlake Terrace.*

Prior to the waste-by-rail system, garbage had been disposed of at the Cathcart Landfill, which operated from 1980 to 1992 and received 3,641,560 tons of waste.

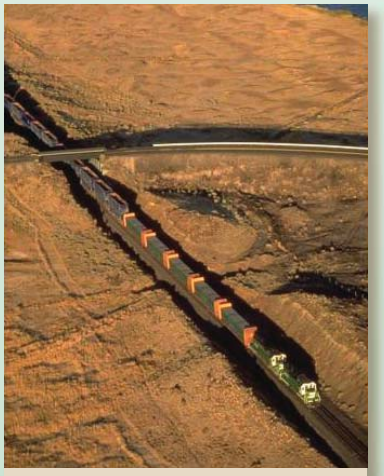
The Cathcart landfill was one of the first in the country to be constructed under new standards regulating landfills. These standards included a flexible membrane liner system, leachate collection system, and an active landfill gas extraction system for capturing methane gas produced from the landfill.

Shortly after the facility was opened, the site selection process for another larger landfill was started in combination with the siting process for an incinerator waste-to-energy (incinerator) facility. The concept for the county's waste disposal system was one large landfill and one incinerator. At the conclusion of the siting process, it was determined that the best site for a new landfill was adjacent to the Cathcart Landfill. The design and construction process for the new landfill was started.

Simultaneously, the siting process for an incineration facility was moving forward when Klickitat County announced the construction of a large regional landfill near Roosevelt, Washington. Snohomish County studied the concept of transporting its waste by train or truck to a distant landfill, and determined that it would be less expensive than incineration. Subsequently, the County requested proposals from the owners of such disposal sites, and wound up awarding a contract to the Rabanco Company to use the landfill it had built in Klickitat County. In committing to the waste by rail system for disposal, the County abandoned the concept of incineration. Since the County was one of the first jurisdictions in the country to implement waste by rail, however, and since the Klickitat landfill was not yet completed at the time the contract was signed, it was decided to construct the first phase of the County's new "Regional Landfill" as a backup facility. Every effort was made to avoid placing waste into this first phase of the new landfill due to the long-term regulatory and maintenance costs that would follow.

In order to maximize efficiency with the waste by rail process, Snohomish County needed to update its transfer stations to accommodate waste compactors. Up until this time, waste was compacted directly into heavily built tractor trailers, which were impractical to use in the long haul plans. Lighter weight shipping containers necessitated the installation of larger compactors which could create denser bales and insert them into the containers. New compactors were installed at the Southwest Recycling and Transfer Station and North County Recycling and Transfer Station in 1992. The Everett station did not have compactors installed until 2001. Prior to the installation of a compactor at the Everett Station, upgrades to the temporary transfer station facility at Cathcart were completed for its use. This began the use of the Cathcart Way Transfer Station as a temporary facility to be used during construction and maintenance at other solid waste facilities.

The Everett Station was located on land leased from the City of Everett. That lease was set to expire at the end of 1994, and the City expressed the desire to redevelop the property, requiring development of a new transfer station. A lease extension was negotiated, but the County had to push to develop a new station.



*Train hauling waste in eastern Washington.*

The siting process for new stations consumed much of the 1990's. The process focused on replacing the Everett station, meeting the needs of the growing population in east Snohomish County (which had previously been served by the Cathcart Landfill), and planning for overall county growth. Eventually the Airport Road Recycling and Transfer Station was sited and built in 2003, and a new, much larger Southwest Recycling and Transfer Station was built at the previous SWRTS location in 2004. Although these two new facilities provided greater capacity than needed at the time, they established a stable solid waste disposal system for the County which is capable of meeting the County's solid waste needs into the future. The large flat floor designs also provided increased flexibility in handling and recycling waste.

*The Airport Road Recycling and Transfer Station was built in 2003-2004.*

Waste-by-rail has proven to be a reliable and environmentally-sound method to manage the County's wastes.

The Division also operates a vactor facility at the Cathcart Way Operations Center in unincorporated Snohomish County. This facility accepts street sweepings and vactor waste from the maintenance of storm water control structures.

In response to the Hazardous Waste Management Act, the Moderate Risk Waste (MRW) collection facility was opened in 1996 in Everett. This facility offers free disposal of household hazardous wastes from Snohomish County residents. For a fee, it also accepts hazardous waste from commercial businesses that generate small quantities of hazardous waste.

Programs

In 1989, the State of Washington passed the Waste Not Washington Act. The act requires local governments to plan for providing recycling services. This served as the impetus for the Division to develop an implementation strategy as part of the Comprehensive Solid Waste Management Plan.

At the same time, Snohomish County had started a pilot program of recycling domes. Seventeen sites across the county contained a series of domes in which a resident would deposit the appropriate recyclable. These sites provided opportunities to recycle mixed paper, newspaper, aluminum tin, glass (brown, clear, green), and cardboard.

*Recycling domes.*

This approach to recycling was abandoned in 2003, because by this time 90-95% of the population in Snohomish County had access to curbside recycling, which was much more convenient and cost-effective. By the end of 2003, all residents in the county had access to curbside recycling. Solid waste facilities continue to provide recycling opportunities to the general public using an updated, more efficient container system.

The Division has more recently developed additional policies and programs for specific types of recyclable commodities and organics, which will be discussed in later chapters of this document. These new programs reflect the emergence of growing markets and responses to recent legislation.

## GOAL I: SUPPORT ACTIONS TO REDUCE CLIMATE CHANGE AND PROMOTE SUSTAINABILITY

The following information provides more details about facilities and programs that help achieve the goal of reducing climate change and promoting sustainability.

### Sustainability and Greenhouse Gases

The primary role of the Snohomish County Solid Waste Division is to ensure the sound management of solid waste produced within Snohomish County. To accomplish this, the Division adopts and implements policies and programs that affect the environmental health of the region. These policies and programs are based on ecologically-sound principles that reflect the values of county residents and that preserve and improve their quality of life.

Greenhouse gases (GHG) produced by human activity contribute to climate change and global warming. Because of the public's concern about the impacts of global warming on environmental and human health, governmental bodies including Snohomish County and the State of Washington have adopted policies to quickly and significantly reduce their emissions of GHG and reduce their contribution to global warming.

The Division can play a key role in executing the County's policies and programs to reduce GHG emissions and promote sustainability. The Division has unique resources, such as the Cathcart Landfill, that can be used to create opportunities and partnerships to provide energy for County facilities and vehicles, while reducing emissions of methane and carbon dioxide into the environment.

The Division has, and will continue to develop and offer, new programs that encourage the recovery and reuse of materials and the reduced use of virgin materials. In addition, the Division continually reviews its operations, programs, and facilities to ensure that its decisions and policies help to reduce greenhouse gas emissions and support changing business practices that are cost-effective. This will be accomplished by maintaining and growing current programs as well as establishing new programs and partnerships throughout the County.

### Waste Prevention

Waste prevention or reduction is an important aspect of resource management because it preserves the intrinsic value of manufactured and natural products, avoids the need for collection and processing of materials that would otherwise be treated as recyclables or wastes, and is the highest priority activity in the waste management hierarchy.

Emphasis on waste reduction can be focused on end users such as consumers, through educational campaigns; as well as on manufacturers, through product stewardship campaigns that establish benefits for manufacturers to reduce the amount of resources used in their products.

Waste prevention has positive benefits, but can also cause financial instability in the current solid waste system for both consumers and businesses. If it happens too rapidly and in an unplanned manner, the current system will not be able to successfully adapt. This can result in loss of funding for other solid waste programs and services offered. This Plan will help anticipate and stage different programs while allowing time to adapt to the impacts.

There are many local actions that can be implemented and maintained. However, some of the most effective programs for successful waste prevention will need to be conducted regionally and nationally. Snohomish County will continue to actively participate in these discussions and programs that are aligned with its goals and policies.

Individuals can participate in waste reduction practices through purchasing used goods, reusing materials for other purposes, and making environmentally smart purchases that use minimal packaging.

## Snohomish County Operations

The Division employs 122.5 employees. They are responsible for the operation, maintenance, planning, and administration of all solid waste facilities and activities, and employ sustainable practices whenever possible. In addition to the Solid Waste Division, Fleet Management is responsible for providing and maintaining all vehicles used by the Division, and they also play an equally important role in accomplishing the goals of reducing greenhouse gas emissions and promoting sustainability.

One of the Division's most significant sustainability practices was started in 2008. Facility operators recover scrap metal and wood debris from unsorted loads that have been dumped onto the transfer station floor, separating them for recycling or reuse. In 2010, the Division diverted 1,667 tons of scrap metal. This sustainable practice is visible to customers at the transfer stations.

Snohomish County currently rail-hauls its mixed solid waste (MSW) to the Roosevelt Regional Landfill near Roosevelt in Klickitat County, Washington. Shipping waste by rail uses less fuel per ton-mile than trucking, and emits fewer GHG per ton.

## Solid Waste Division Facilities

The Division owns and operates four transfer stations, three Neighborhood Recycling & Disposal Centers (NRDCs) and one Moderate Risk Waste (MRW) Facility. Staff at these facilities can share information with the public and demonstrate what is being done to promote sustainability and reduce GHG emissions.

Solid waste facilities can also serve as a testing ground for new technologies in alternative energy and energy efficiency.

The canola processing facility at the closed Cathcart Landfill is an example of how the Division can use its existing resources to provide alternative sources of energy while creating synergies within the county to promote sustainability. Storage silos and

grain-handling equipment allow canola and other oil-seeds to be received and stored at the site. The canola seed is dried using methane gas produced by decomposing waste at the landfill, which is otherwise flared (burned without heat recovery). The dried seed can be crushed on-site to release canola oil, which is then hauled to a refinery to be converted into biodiesel. This contributes to the supply of biodiesel that the County fleet uses in its vehicles. GHG emissions are reduced by using biodiesel in the County fleet and by using landfill gas (which would have been flared anyway) to dry the seed, instead of propane or natural gas.

*Oil-seed crop near the Cathcart Landfill.*

In the future, the Division will evaluate facility upgrades and retrofits that promote sustainability and reduce greenhouse gas emissions. This includes purchasing and/or incorporating recycled or sustainably-produced construction materials for facility improvements. Specific projects the Division may execute include installing upgraded fluorescent and/or LED lighting systems at facilities to replace less-efficient incandescent and fluorescent lights, installing solar panels on facilities to provide a portion of the energy needed for operations, and using methane gas to provide alternative energy for heating facilities. The Division will continue to look at ways to improve and enhance existing facilities to achieve its goals, before considering building new stand-alone facilities.

*Landfill-gas-fired seed dryer and seed storage silos at the Cathcart Landfill.*

## Solid Waste Division Programs

Solid Waste Division programs that address sustainability and climate change include:

- The biodiesel initiative
- Recycle Right Campaign
- Alternatives to burning program

These are three of the more significant activities being undertaken by the County, but are certainly not the only activities being conducted in Snohomish County.

County Biodiesel Initiative

Snohomish County as a whole adopted an initial goal of reducing community GHG emissions by 20% below 2000 levels by the year 2020. In 2005, County Fleet Management committed to burning cleaner fuels in its diesel vehicles. The first step was to switch to biodiesel B-20 (20% derived from non-petroleum feedstock) in road maintenance and solid waste trucks. Since that time, the entire County diesel fleet has been converted to run on various blends of biodiesel.

Recycle Right Campaign

In 2011, an educational campaign was conducted for the updated flow control ordinance. The purpose of this campaign was to encourage construction companies and others to "Recycle Right" by separating recyclables from garbage. This campaign helped to educate people about the 90-10 rule, which requires that recycling containers at construction sites and other commercial locations contain less than 10% non-recyclable materials.

*Demolition debris.*

Changes made in early 2011 to Snohomish County Code 7.35 and 7.41 clarify the requirement that wastes generated in Snohomish County go to transfer facilities in the County ("flow control"). The purpose of the change was to:

- provide transparency about which materials are being recycled and which materials are being disposed at a landfill;
- support Solid Waste Division programs;
- promote recycling; and
- ensure that landfill-disposed materials are properly handled and are disposed in the Snohomish County solid waste system for the benefit of all citizens and businesses.

Disposal fees for waste generated in Snohomish County pay for the ongoing monitoring of nine closed landfills, operation of five disposal facilities, illegal dumping cleanup, recycling and program planning, operation of a household hazardous waste

drop-off station, and disaster debris planning. The County's solid waste system benefits all residents and businesses in Snohomish County and receives no local taxes or general fund revenues. An important aspect of flow control is to keep disposal fees for waste generated in Snohomish County in the local solid waste system to cover the cost of these community programs and services.

The increase in recycling caused by flow control enforcement coupled with promotion of recycling through the Recycle Right Campaign will have significant environmental benefits. The reuse or recycling of construction and demolition (C&D) materials such as wood, concrete, and metal reduces GHG emissions in two ways. Diverting wood waste from landfill disposal keeps it from decomposing and producing methane, a greenhouse gas twenty times more potent than carbon dioxide. Reuse of wood avoids the use of fossil fuel and associated GHG emissions involved in harvesting and milling trees into lumber. Similarly, recycling concrete and metal uses less energy and produces fewer GHG than mining, refining, and processing ores and other raw materials to make concrete and steel products.

Alternatives to Burning

The alternatives to burning program was funded by a grant from the Department of Ecology (Ecology) and managed by the Division. The goal of the program was to develop infrastructure that is financially sustainable and that would provide alternatives to backyard burning of residential yard and woody debris in the Towns of Darrington, Sultan, and Gold Bar.

The program allowed residents to bring their wood waste to a processing site within close proximity to the cities. The site was staffed and equipped with an on-site chipper to process the wood waste into "hog fuel," which is sold as boiler fuel for industrial plants. Burning a ton of wood waste in a hog fuel boiler to make steam produces roughly the same amount of $CO_2$ as backyard burning a ton of wood waste. The hog fuel replaces the fossil fuel (e.g. oil or natural gas) that would otherwise have been burned to generate the steam. In turn, this avoids introducing ancient, fossil-source $CO_2$ into the atmosphere. In addition, burning wood waste at a central facility that meets state and federal regulations will produce fewer

*Wood debris drop-off.*

emissions than numerous small backyard burners that lack emission controls and are spread over a wide geographic area.

By harvesting the energy of wood waste that would otherwise be burned in backyards or disposed of in the landfill, the Division and Ecology have reduced $CO_2$ emissions and have prevented the use of virgin fuel materials. In addition, burning has been reduced in areas that typically are more susceptible to air pollution due to their geographical location. The environmental health of Snohomish County residents has been improved in these areas.

This is now an ongoing program that is being financially sustained by private businesses in cooperation with the cities.

## Regional Coordination of Solid Waste Issues

The Division is required to comply and continually coordinate with regulatory agencies such as the Department of Ecology, Washington Utilities and Transportation Commission, and the Snohomish Health District. Beyond these agencies is another level of coordination and participation that the Division must consider to ensure that local efforts build upon and strengthen regionally agreed-upon policies.

A few of the more significant regional efforts include:

- Vision 2040
- Puget Sound Partnership
- Product Stewardship
- Beyond Waste

Vision 2040

Vision 2040 is a regional strategic plan to accommodate the projected population and job growth in the Puget Sound region by the year 2040. It lays out a strategy for maintaining a healthy region and environment. The Vision 2040 plan will help contain the outward spread of the region's urban areas and by doing so control and better manage the adverse effects of growth. Vision 2040 was adopted by Snohomish County in 2008.

Solid waste is addressed under the Public Services portion of the plan as policy MPP-PS-7 "Develop conservation measures to reduce solid waste and increase recycling".

Puget Sound Partnership

In May 2007, Governor Gregoire signed Senate Bill 5372 (codified in RCW 90.71), which created the Puget Sound Partnership to bridge gaps in the highly fragmented

system intended to protect and restore Puget Sound. The Partnership is a community effort of citizens, governments, tribes, scientists and businesses working together to restore and protect Puget Sound.

RCW 90.71 also established nine objectives to help restore, protect and preserve Puget Sound. The objective that directly relates to the Solid Waste Division is to "significantly reduce toxics entering Puget Sound fresh and marine waters."

One way that the Division reduces toxics in fresh and marine waters is through its Household Hazardous Waste collection services that include the drop-off center in Everett and periodic household hazardous waste collection events in other areas of the county. These services provide outlets to remove harmful chemicals from residences and reuse or dispose of them safely.

Pharmaceuticals have become a pollutant of concern and have been found in fresh and marine waters as a result of past disposal practices. Since they are not accepted at County-operated facilities, pharmaceuticals are difficult to dispose of. Furthermore, their improper disposal can pollute Puget Sound waters even after treatment at a wastewater facility. A 2006 pilot program, the Unwanted Medicine Return Program, provided for the safe disposal of pharmaceuticals by allowing residents to return medicines to retail outlets such as drugstores. The program ended in 2008, although some drugstores and medical centers are still participating. Currently, law enforcement agencies and other partners have established prescription drug drop-off locations throughout Snohomish County. These law enforcement locations accept narcotics and prescribed controlled substances, as well as other medications. Several Bartell Drug stores, Group Health Cooperative clinics and other locations also collect pharmaceuticals, but not narcotics. In addition, a link was created to the Snohomish County Solid Waste website for pharmaceutical disposal.

*A 2006 pilot program provided for the safe disposal of unwanted medicines.*

By addressing the products that contain toxins such as heavy metals, we avoid future costs and environmental degradation associated with cleanups.

Product Stewardship

Product Stewardship (PS) is an important tool to address GHG emissions from the production, consumption and end-of-life management of products.

The United States Environmental Protection Agency (EPA) released a report in September 2009 that provides new information on the greenhouse gas impacts of products bought and thrown away in the U.S. The EPA report concluded that the provision of goods and materials is responsible for the largest share, by far, of direct U.S. greenhouse gas emissions (37%).

In the late 1990s, a coalition of local and state government agencies in Washington and Oregon, in conjunction with EPA Region 10, formed the Northwest Product Stewardship Council (NWPSC) to research and promote product stewardship in the Northwest. The Division was a founding member and continues to coordinate all of its product stewardship activities with the Council. By working together through the Council, the member agencies have been able to combine resources, expertise and efforts to maximize the effectiveness of each agency's work and work toward state, regional or national solutions.

While the impacts of product and packaging waste are at the local level, the decisions and negotiations often happen at a national level. By working together through NWPSC, local governments have been able to work with national and multi-national corporations on pilot programs and policies, and participate in national dialogues on product stewardship approaches.

Council members review strategies and information that are then relayed to national processes and stakeholders. Through the Council and other organizations, Snohomish County has been able to amplify and coordinate its work without having to take a lead role on every related issue, as other governments take their turn or provide greater expertise.

Through its involvement with the non-profit Product Policy Institute, the Division has helped establish producer responsibility legislation for electronic wastes (televisions, computers and monitors). In the first 18 months of operation, the E-Cycle Washington program kept 28,781 tons of electronic waste from being landfilled.

Beyond Waste

In 2004, the Department of Ecology developed the Beyond Waste Plan as a regular required update of previous hazardous waste and solid waste management plans for the State of Washington. The visions and goals of the 2004 plan emphasize a movement away from strictly managing wastes and focuses on waste prevention and reduction.

The Beyond Waste Plan identifies five initiatives that address industrial wastes, small-volume hazardous wastes, organic wastes, green building, and measuring

progress (data needs). In addition to these initiatives, the Beyond Waste Plan identifies four areas of the current solid waste system, including solid waste authorities and local planning issues; waste reduction, recycling and the technical nutrient cycle; disposal; and financing. Most of the initiatives and all of the areas of solid waste system issues are addressed to some degree in one or more of this Plan's technical memorandums.

The Solid Waste Division's high-priority recommendations in this Plan align with the Beyond Waste Vision. Just a few examples of these recommendations and how they contribute to moving the county beyond waste include increased outreach to businesses that generate small quantities of hazardous waste, continuation of coordinated activities to establish product stewardship, and encouragement of food waste diversion.

## GOAL II: ENSURE EFFICIENT SERVICES FOR A GROWING AND CHANGING CUSTOMER BASE

The collection and transfer of waste and recyclables will need to adapt to serve a growing population which demands alternative services as opposed to mere disposal of waste. This will include the increase of source separation of waste for disposal; organics such as yard and food waste; and the traditional recyclables of paper, metal, plastic, and glass. The Division must find a suitable balance in this process to ensure it is financially sustainable to meet its mandated service requirements.

The following information provides more details about facilities and programs that help achieve the goal of providing efficient services.

### Facilities

The major points for the County's facilities to achieve the goal of ensuring efficient services in the future include:

- additional and alternate use of the existing transfer stations;
- meeting east county needs; and
- planning for future Moderate Risk Waste programs and disposal options.

Existing Transfer Stations

The Division's facilities must be able to adapt to a volume shift from waste to recyclables. One way to accomplish this is by forming partnerships with local commercial haulers and recyclers to find additional and alternative uses for existing solid waste facilities.

These partnerships should be beneficial to all involved and will ensure that the Division continues to play a role in solid waste management for the long-term. An example of this is the current acceptance of curbside-collected recyclables at the North County Recycling and Transfer Station. Beginning in 2009, local curbside recyclables have been brought in by Waste Management to be compacted and reloaded into a large capacity transport trailer that is hauled to its Cascade Recycling Center in Woodinville. Use of County's compactor to consolidate recyclables eliminates the need for five to six route trucks to make the round trip from North County to Woodinville, thus reducing truck traffic and GHG emissions. This is a successful adaptation of existing facilities that benefits both parties while reducing greenhouse gas emissions.

*Aerial view of Cathcart Way Transfer Station.*

East County Needs

Population growth continues in east county urban areas.[1] As the population grows, the need to provide more efficient and local collection facilities becomes more urgent. The Division has made upgrades to the Cathcart Way Transfer Station (CWRTS) in order for the facility to be capable of being utilized as a regional transfer station for commercial haulers serving eastern parts of Snohomish County only, if deemed necessary in the future. The facility is currently open only when other stations are temporarily closed for maintenance or during an emergency. Opening this facility to commercial haulers on a full-time basis would reduce GHG emissions from vehicles hauling waste from urban areas of the east county to the more densely populated west side. This would also reduce transportation times and help keep costs down for local haulers.

In addition, the Division routinely reviews waste generated in this geographic area with the understanding that at some point, the population density could justify construction of a new solid waste transfer and recycling station to serve this area.

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[1] *Based on population forecasts by the Puget Sound Regional Council showing a 46% increase in the population of the northeast and southeast parts of the county from 2010 to 2040.*

Moderate Risk Waste

Moderate risk waste (MRW) refers to waste materials that have the characteristics of, and pose the same risks as, hazardous wastes. In other words, these wastes are flammable, corrosive, toxic, and/or reactive. The state of Washington developed a list of materials as a starting point that can be addressed by local MRW plans.

Some of these wastes are generated by households and are referred to as Household Hazardous Waste (HHW). Some examples include oil-based paints, anti-freeze, and used oil. In addition businesses and institutions produce similar wastes, but typically on a larger scale. If the amount is relatively small, it is referred to as Conditionally Exempt Small Quantity Generator (CESQG) Waste.

Snohomish County is required to plan for the management of these wastes. They are currently managed through the HHW facility located in Everett. Residents can bring their MRW wastes to this facility for free and the Division safely disposes or recycles them. In addition to this facility, the Division also conducts roundup events in outlying areas of the county to encourage residents to dispose of MRW wastes without the inconvenience of driving into Everett. In 2009, the Division held round up events in Darrington, Sultan, and Index.

*County residents can bring their items to the Household Hazardous Waste Drop-off Station in Everett.*

Moving forward, the Division needs to plan for the acceptance of potentially new products that may pose a hazard and become a required component of the MRW plan. In addition, through participation with product stewardship programs, certain materials may have alternative disposal or reuse options associated with them. These alternatives would include the costs necessary to implement the programs thereby reducing the burden on local governments.

## Programs

The major programs that will impact the County's ability to achieve the goal of ensuring efficient services in the future include:

- Recycling
- Education
- Organic wastes
- Disaster debris

Recycling

During the life of this plan, residents could experience a significant transition in how waste and recyclables are managed in the County. The collection and processing of recyclables could take a leading role over the management of solid waste destined for disposal. A day may come when residential customers will have their garbage serviced every other week while recyclables, green waste, and other categories yet to be identified are collected weekly from the curbside.

As local and international markets fully develop for the reuse of certain disposed commodities, more programs will be developed and put in place to take advantage of the economic benefits to recycling of wastes. A good example of this can be seen with the prominent emergence of the management of organic wastes over the last decade.

*Curbside waste, organics and recycling containers.*

Organic Wastes

For the purposes of this Plan, organics includes yard debris, wood waste, food waste, agricultural wastes and biosolids. Organic materials have the potential to create significant problems if not managed properly, but these materials also present significant opportunities. With increasing urban development and modern garbage collection practices, separate yard debris collection has emerged as the standard practice for residential organics. In the past few years, food waste collection and composting has also become more common practice.

With rising fuel prices and the need to decrease backyard burning of waste, wood waste is being increasingly collected as a commodity for energy generation. Historically, agricultural organics have been managed on-site (on the ranch or farm where generated) to reduce expenses and to improve soil quality, but management practices for these wastes continue to evolve. As regulations for disposal of wastewater treatment solids became more stringent, the industry began to compost biosolids. Now there is an increasing interest and need for doing more with all of these organics due to climate change and sustainability issues.

Alternative disposal options are available for many organic commodities. Woody brush and yard debris are accepted at solid waste facilities as a recyclable and have

a reduced tip fee compared to solid waste for disposal. The curbside collection of yard debris was started in the early 90's, allowing this organic waste to be used for mulches or compost. Clean wood is collected by local recyclers that produce hog fuel (chipped wood) that is sold to local manufacturing plants that use the wood as fuel for boilers.

Food scrap collection is currently available to most county residents and businesses, expanding each year to new customers. Residential curbside collection of food waste began in 2009, and today has grown to encompass approximately 50% of the county population. Food scraps and food-soiled paper are collected with yard debris and taken to local composters for processing and resale. Food scraps represent almost 15%[2] of the current waste stream in Snohomish County.

Commercial food scrap collection began in 2006, with eight businesses participating, funded in part by a grant from the Department of Ecology. The County provides support in establishing programs for commercial and public establishments. It is estimated that 65% of waste from restaurants or food service business is compostable food scraps. To date, over 3,000 tons of waste have been diverted from the landfill through commercial food scrap collection.

*An estimated 65% of waste from food businesses is compostable food scraps.*

The Solid Waste Division must be ready to plan and assist for this growing trend affecting its customers. As the volume of recyclables increase per capita, the volume of waste for disposal decreases. This affects the funding of the programs and services offered by the Division and have the potential to increase tip fees to make up this lost revenue.

Education

In the 1990s, the Division emphasized and invested in educational programs that focused on recycling. This helped the County increase its recycling rate to 49% in 2009. Recycling has now become "mainstream" in this region; people understand its importance and curbside service is available to all single family residences. The educational focus now shifts to how best to recycle. Future educational programs

[2] *From the 2009 Waste Composition Study, prepared by Green Solutions, April 2009.*

will focus on what is, and what is not, recyclable and how best to prepare recyclables for collection. This will increase efficiencies and volumes for local processors of recyclables, helping to ensure that final markets receive loads of consistently high-quality commodities.

The Division's emphasis on education and outreach will continue into this new planning period. However, the messages conveyed will focus on the importance of greenhouse gases and climate change, regulatory conditions, and the growing social movement to become more sustainable in one's personal and professional activities. The messages will be more holistic, supportive and integrated with other campaigns around the region that focus on environmental health and sustainability. This provides an opportunity to demonstrate to students and the general public the role that solid waste management plays in this larger context. In addition this will help broaden the public's understanding of what solid waste management means and its influences on other aspects of their daily lives.

The demographics of Snohomish County's population have also changed significantly over the past ten years. Our residents are more culturally diverse than ever before. This requires us to adapt how we communicate with the public. This will require the Division to have multiple channels to convey a similar message.

Disaster Debris

In 2008, the Division began the process of developing a Disaster Debris Management Plan (DDMP). The Plan is a blueprint on how to respond to waste generated from a disaster such as a flood or earthquake. It is a component of Snohomish County's Continuation of Operations Plan, or COOP. The COOP enables government to preserve, maintain and/or reconstitute its capability to function effectively in the event of an emergency.

*Debris from flooding.*

The plan will not only ensure the County is prepared to handle the wastes generated from a large scale disaster event, but will also ensure that these wastes are put to the best use, saving costs in disposal as well as supplying local markets with raw materials.

In the event of a disaster, solid waste facilities may not be able to handle all of the resultant waste. It is necessary to have designated areas throughout the County that could accept a wide range of wastes produced from such an event. The County

worked with haulers, commercial recyclers, neighboring jurisdictions, and other agencies to ensure an effective plan.

In 2009, the plan was the first in the country to be approved by the Federal Emergency Management Agency (FEMA). It provides a framework for deciding how much of a plan to activate (if at all) and a process for activating the plan. The plan was first implemented in January 2009, in response to flood events that had occurred that winter.

## Explore New Opportunities and Evaluate Current Technology

Snohomish County already has a reliable and cost-effective solid waste disposal system, but the County may wish to consider additional methods of managing its solid waste in the future. The motivation for this step may be related to a variety of factors including disposal costs, climate change, energy prices, materials markets, and environmental concerns.

The recovery of energy from solid waste is likely to be a primary consideration. In this Plan, the term "energy from waste" (EfW) is used to include a broader group of technologies known as conversion technologies and to avoid the pollution-related stigma attached to the term "waste-to-energy." In addition, the term "conversion technology" refers to a process that converts the carbon-based portion of solid waste into a useful form of energy and/or a useful byproduct. Conversion technologies typically involve four major process steps:

1. Pre-processing: removal of undesirable materials and/or recyclables to create a suitable feedstock.
2. Conversion: use of thermal, biological, chemical, and/or physical processes to produce energy and/or a byproduct from a feedstock.
3. Post-processing: clean-up of solid, liquid, or air emissions.
4. Production: generation and clean-up of energy and byproducts.

Conversion technologies can be grouped into two major categories: thermal technologies and biological/chemical technologies.

In the U.S., conversion technologies were first considered as a response to either declining landfill capacity or the increasing cost of landfilling. Landfill capacity is not a problem in the Pacific Northwest, where numerous cities and counties dispose of their MSW at remote regional landfills. Conversion technologies could still be considered for inclusion in an integrated solid waste management system, however, and could provide benefits such as greater waste diversion and energy recovery, reduced carbon and other air emissions, reduced transportation requirements, and improved system reliability and diversity.

# » MOVING FORWARD

INITIATIVES TO BE A REGIONAL LEADER IN SOLID WASTE MANAGEMENT

## VISION FOR THE FUTURE

The vision for this update of the Snohomish County Solid Waste Management Plan is to continue moving toward a more sustainable future that is in line with other county and regional goals and policies. The Division anticipates that in the future, citizens will be generating less waste and handling the wastes they do generate differently than in the past. This will happen through alternative methods such as increased recycling, composting, and product stewardship programs. It is not expected that this movement or shift will happen quickly or that it will be a path that replaces the current solid waste system. New approaches to waste management and new technologies must respect and build upon the previous work and programs that have been put in place and that have served the county and its citizens well for decades. The Solid Waste Division understands and respects that ultimately, it is up to the individual to decide what and how to consume, and will strive to provide a variety of environmentally- and socially-responsible disposal options that further the goals and policies of the County and the Puget Sound Region.

This vision is the underlying concept for the two major goals of this Plan:

- GOAL I: Support actions to reduce climate change and promote sustainability.
- GOAL II: Ensure efficient services for a growing and changing customer base.

These goals are reflected in the policies that are used in this Plan to consider additional programs and recommendations for enhancements to the solid waste system. These policies are shown below and are used in the technical memorandums.

## GOAL I: SUPPORT ACTIONS TO REDUCE CLIMATE CHANGE AND PROMOTE SUSTAINABILITY

### Policies

The following policies are adopted in this Plan to reduce climate change and promote sustainability.

- Policy 1-1, Climate Change – Support efforts and actions by County and other agencies to reduce GHG emissions and to lessen and prepare for the impacts of climate change.

- Policy 1-2, Energy-from-Waste – Continue to monitor new and existing technologies for potential benefits to produce energy, fuel, or other useful byproducts.
- Policy 1-3, Product Stewardship – Continue to be a leader in product stewardship initiatives and legislation.
- Policy 1-4, Waste Prevention – Continue to offer and develop programs that encourage waste prevention.

## Recommendations

The following high-priority recommendations to reduce climate change and promote sustainability were discussed in their respective technical memorandums. They are expected to be implemented in the next few years. Other, lower-rated recommendations are listed in the technical memorandums.

Climate Change

CC1) Document annual Solid Waste Division greenhouse gas emissions.

CC2) Evaluate energy-saving opportunities for new projects and conduct cost-benefit analysis for energy conservation measures.

Energy from Waste (EfW)

E1) Continue to monitor developments and progress in EfW, including new technologies, pilot plants, facility procurements, and facility operating track records, and if the results appear promising, the County may at some point in the future choose to explore EfW in more depth, perhaps in the next solid waste planning period.

Product Stewardship

PS1) Continue to pursue and develop product stewardship programs, in coordination with other public and private entities.

PS2) Conduct research into how product stewardship programs could help finance curbside and other recycling/reuse collection services.

Waste Prevention

WP1) Promote activities such as smart shopping, the use of durable grocery bags, and buying in bulk when appropriate.

WP2) Implement upgraded procurement policies.

WP3) Continue to target specific products for waste reduction in cooperation with manufacturers and distributors.

WP4) Conduct increased promotion of waste exchanges.

## GOAL II: ENSURE EFFICIENT SERVICES FOR A GROWING AND CHANGING CUSTOMER BASE

### Policies

The following policies are adopted in this Plan to ensure efficient services for a growing and changing customer base.

- Policy 2-1, Recycling – Continue to offer and develop programs that encourage recycling.
- Policy 2-2, Organics – Continue to promote and expand the collection and non-landfilling of yard debris, wood waste, and food waste.
- Policy 2-3, Waste Collection – Provide a variety of equitable and efficient collection services to County residents and businesses that are in line with the Division's other goals and policies.
- Policy 2-4, Waste Transfer – Provide a variety of equitable and efficient waste transfer services to County residents and businesses that are in line with the Division's other goals and policies.
- Policy 2-5, Waste Disposal – Continue to evaluate and monitor waste disposal options and services that meet customer needs and are in line with other goals and policies of the Solid Waste Plan.
- Policy 2-6, Outreach and Education – Meet required educational components mandated by the State of Washington.
- Policy 2-7, Administration and Regulation – Ensure that administrative services and regulatory activities provide adequate support for policies and programs undertaken by the Division.
- Policy 2-8, Moderate Risk Waste – Continue efforts to reduce the generation and toxicity of moderate risk waste, and to ensure that convenient, cost-effective and sustainable options for its safe management are available.

### Recommendations

The following recommendations are proposed in this Plan to ensure efficient services for a growing and changing customer base. Only the high-priority recommendations (those expected to be implemented in the next few years) are shown here. Additional (medium- and low-priority) recommendations are shown in each of the technical memorandums.

Recycling

R1) Increase the focus on multi-family recycling with outreach to apartment owners and tenants.

R2) Increase educational efforts on the contamination issues with commingled recycling systems.

R3) Design consistency into programs by working with neighboring jurisdictions on items such as materials collected, new programs such as disposal bans, and joint education and outreach programs.

Organics

O1) Possibly implement a transfer system for organics at Snohomish County transfer stations.

O2) Promote the use of compost by working together with all appropriate County departments.

O3) Explore methods to encourage the diversion of additional amounts of edible food to charitable programs.

Waste Collection

C1) Provide automated access at transfer stations to commercial haulers.

C2) Evaluate increased use of every other week residential garbage collection.

Waste Transfer

TS1) Consider operating Cathcart Way Recycling and Transfer Station full-time for commercial haulers to increase transfer capacity, reduce traffic at other stations, and reduce miles traveled and associated greenhouse gas emissions when waste tonnages in east county warrant it.

Waste Disposal

D1) Establish policy and guidelines for appropriate uses of closed landfills.

D2) Continue enforcement of the flow control elements of the revised County Code.

Outreach and Education

O&E1) Participate in a regional effort to provide more consistent messages for solid waste programs and issues.

O&E2) Take the lead on messaging solid waste issues.

O&E3) Make greater efforts to extend recycling outreach to a diverse audience.

Administration and Regulation

A&R1) Maintain support for enforcement activities for illegal dumping and litter cleanup programs.

A&R2) Encourage volunteer efforts for litter cleanup.

A&R3) Explore alternative funding sources to reduce tipping fee surcharges for waste diversion and other non-disposal programs.

A&R4) Annually review programs and activities to explore program modifications that could increase the effectiveness of waste prevention, recycling, GHG reduction and other programs.

Moderate Risk Waste (MRW)

MRW1) Conduct public education programs for household hazardous wastes through collaboration with other agencies and groups.

MRW2) Research alternative financing methods for MRW programs.

MRW3) Implement additional product stewardship programs through a combination of voluntary and mandatory methods, and possibly including framework legislation on a statewide level.

MRW4) Collect materials shown in Table 1 (the Hazardous Household Substances List) at the MRW Facility from residential and commercial (CESQG) sources, with the exception of e-waste and the materials shown in Group 7.

MRW5) Distribute Conditionally Exempt Small Quantity Generator (CESQG) standards and requirements more widely through a combination of additional locations and regular communications.

MRW6) Explore user fees for residential customers of the MRW Facility and mobile collection events.

MRW7) Implement a promotional campaign to identify and address barriers that are preventing greater usage of the MRW Facility.

MRW8) Implement an environmentally-preferable purchasing program to reduce the use of toxic materials by County agencies.

MRW9) Conduct a survey to determine waste disposal practices for key MRW materials.

# NEXT STEPS

## Implementation Plan

The next step for the Snohomish County Solid Waste Division is to implement the high-priority recommendations of this Plan. Medium and low-priority recommendations may also be implemented, time and budget permitting, but the emphasis for the next five to six years will be the high-priority recommendations.

Table 1 lists the Plan recommendations that are rated high-priority and shows the implementing organization and the estimated year(s) of implementation. More information on all of the recommendations (rated high, medium, and low-priority) can be found in the individual technical memorandums.

Each year during the annual budget process, work plans will be prepared by the Solid Waste Division that describe the recommended programs and actions to be implemented in the upcoming fiscal year for County Council consideration. The work plans will include the estimated staff, resources, budget required, and any rate impacts for implementation and the projected results.

Further efforts to plan for realistic implementation of Plan recommendations and track progress will include an annual report prepared by the Solid Waste Division and presented to the County Council. This annual report will include the following:

- Prior year's goals and accomplishments
- Quantitative / measurable results
- Upcoming year's goals and expected results
- Recommendations for any Plan updates or modifications over the next 5 years

## Six-Year Capital Acquisition Plan

RCW 70.95 requires the Plan to project the anticipated cost of solid waste construction and capital acquisition programs for a six year period. The Division is not planning any major new facility construction projects in the upcoming six year period. Its capital programs are focused on facility repair and maintenance projects and the purchase of a few additional pieces of equipment. Only one recommendation being

made in this Plan leads to "construction and capital acquisition" costs. The Waste Collection Technical Memorandum describes a high-priority recommendation to install equipment at each of the four transfer stations that would allow commercial haulers to access the stations during extended hours. The estimated cost of this equipment is $40,000-$60,000.

Two other recommendations lead to possible capital costs in the future, one in the Organics Technical Memorandum (#O1, for possibly transferring yard debris from the transfer stations) and the other in the Transfer System Technical Memorandum (#TS3, to begin siting an east county transfer station), but neither of these are defined well enough at this point to say what those capital costs would be or even if these actions will proceed.

## Twenty-Year Implementation Program

Solid waste management in Snohomish County will continue to evolve based on changes in population, demographics, the local, state, and national economy, regulations, and advancements in waste handling and recycling systems. Because this Plan is being developed during an economic downturn and the timing and extent of a recovery are currently unknown, it is particularly difficult to project waste generation and the resultant need for additional facilities and programs. It must be recognized that some amount of flexibility will be needed to see Snohomish County and their partners through the next few years and into the next twenty years.

## Procedures for Amending the Plan

This Plan is meant to be dynamic. It is not intended that the Plan sit for the next five years, and then to be totally revised. While the Plan's mission and goals are expected to remain the same, the Plan is designed upon the assumption that information will be updated gradually, and the action plan will be altered appropriately in a timely manner.

The mechanism to facilitate modifications and revisions has the following goals:

- For minor modifications, which are modifications that do not affect the basic goals or direction of the Plan, allow the plan to be modified relatively easily when circumstances require change.
- Allow the Solid Waste Advisory Committee (SWAC) to maintain its role as advisory to the Solid Waste Division and the County Council as defined in bylaws, County code, and state legislation.

- Allow cities and towns to maintain their desired level of control over Plan modification.
- Keep all players involved to ensure that there is political dialogue for minor Plan modifications and consensus for major modifications.

The following steps will be used to revise and modify this Plan:

1. This Plan anticipates that the activities in the Six-Year Implementation Schedule (see Table 1) will be undertaken, but that, as circumstances change, it may be beneficial to deviate from the planned activities in order to better achieve one or more of the Plan's goals.

   Deviating from one or more activities in the Six-Year Implementation Schedule is defined as a minor plan revision, and in such cases the County will:

   a. explain in writing how the deviation will better contribute to accomplishing one or more of the Plan's goals;
   b. notify all cities and towns;
   c. notify and give the public an opportunity to comment, either prior to, or at a regular SWAC meeting;
   d. notify Ecology of the proposed modification;
   e. discuss the issue with SWAC; and
   f. schedule a County Council vote on the modification no less than 60 days after the public, cities and towns, and SWAC have been notified. It is expected that the 60 day period will be used by SWAC members and the public to notify their respective cities and towns or interest groups of the proposed modification, and for opinions concerning the modification to be conveyed to the County Council.

2. Decisions to either undertake actions outside the Six-Year Implementation Schedule or that alter the Plan's Vision, major goals, or policies, will be defined as major plan revisions. In such instances a full approval process will be required.

Implicit in the development and adoption of this Plan is the understanding that in the future, the County may need to take emergency action for various reasons, and that these actions can be undertaken without the need to amend this Plan beforehand. In this case, Snohomish County staff will endeavor to inform the SWAC and other key stakeholders as soon as feasibly possible, but not necessarily before new actions are implemented. If the emergency results in permanent and significant changes to the Snohomish County solid waste system, an amendment to this Plan will be prepared in a timely fashion. If, however, the emergency actions are only undertaken on a

temporary or short-term basis, an amendment will not be considered necessary. Any questions about what actions may be considered “temporary” or “significant” should be brought to the SWAC for their advice and then presented to the County Council for review and decision.

TABLE 1. Six-Year Implementation Schedule

| Recommendation | Implementation Responsibility | Year of Implementation | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| **Climate Change** | | | | | | | |
| CC1) Document annual SWD GHG emissions. | County | X | X | X | X | X | X |
| CC2) Evaluate energy-saving opportunities for new projects and conduct cost-benefit analysis for energy conservation measures. | County | Ongoing | | | | | |
| **Energy from Waste (EfW)** | | | | | | | |
| E1) Continue to monitor developments and progress in EfW and if the results appear promising, choose to explore EfW in more depth. | County | Ongoing | | | | | |
| **Product Stewardship** | | | | | | | |
| PS1) Continue to pursue and develop product stewardship programs, in coordination with other public and private entities. | County | Ongoing | | | | | |
| PS2) Conduct research into how product stewardship programs could help finance curbside and other recycling/reuse collection services. | County | X | X | | | | |
| **Waste Prevention** | | | | | | | |
| WP1) Promote activities such as smart shopping, the use of durable grocery bags, and buying in bulk when appropriate. | County and cities | Ongoing | | | | | |
| WP2) Implement upgraded procurement policies. | County and cities | Ongoing | | | | | |
| WP3) Continue to target specific products for waste reduction in cooperation with manufacturers and distributors. | Service-providers | Ongoing | | | | | |
| WP4) Conduct increased promotion of waste exchanges. | County | Ongoing | | | | | |

1. *An "X" indicates year of implementation.*
2. *CESQG: Conditionally Exempt Small Quantity Generator.*
3. *CWRTS: Cathcart Way Recycling and Transfer Station.*
4. *GHG: greenhouse gas.*
5. *HHW: household hazardous waste.*
6. *SCC: Snohomish County Code.*
7. *SWD: Snohomish County Solid Waste Division.*

TABLE 1. Six-Year Implementation Schedule (continued)

| Recommendation | Implementation Responsibility | Year of Implementation | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| **Recycling** | | | | | | | |
| R1) Increase focus on multi-family recycling with outreach to apartment owners and tenants. | Service-providers | Ongoing | | | | | |
| R2) Increase educational efforts on the contamination issues with commingled recycling systems. | Service-providers | Ongoing | | | | | |
| R3) Design consistency into programs by working with neighboring jurisdictions on items such as materials collected, new programs such as disposal bans, and joint education and outreach programs. | County and cities | Ongoing | | | | | |
| **Organics** | | | | | | | |
| O1) Possibly implement a transfer system for organics at Snohomish County transfer stations. | County | X | X | | | | |
| O2) Promote the use of compost by working together with all appropriate County departments. | County | Ongoing | | | | | |
| O3) Explore methods to encourage the diversion of additional amounts of edible food to charitable programs. | County and cities | X | X | | | | |
| **Waste Collection** | | | | | | | |
| C1) Provide automated access at transfer stations to commercial haulers. | County | X | X | | | | |
| C2) Evaluate increased use of every other week residential garbage collection. | County and cities | X | X | | | | |

1. *An "X" indicates year of implementation.*
2. *CESQG: Conditionally Exempt Small Quantity Generator.*
3. *CWRTS: Cathcart Way Recycling and Transfer Station.*
4. *GHG: greenhouse gas.*
5. *HHW: household hazardous waste.*
6. *SCC: Snohomish County Code.*
7. *SWD: Snohomish County Solid Waste Division.*

TABLE 1. Six-Year Implementation Schedule (continued)

| Recommendation | Implementation Responsibility | Year of Implementation | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| **Waste Transfer** | | | | | | | |
| TS1) Consider operating CWRTS full-time for commercial haulers to increase transfer capacity, reduce traffic, and reduce miles traveled when waste tonnages in east county warrant it. | County | Ongoing | | | | | |
| **Waste Disposal** | | | | | | | |
| D1) Establish policy and guidelines for appropriate uses of closed landfills. | County | X | X | | | | |
| D2) Continue enforcement of the flow control elements of the SCC. | County | Ongoing | | | | | |
| **Outreach and Education** | | | | | | | |
| O&E1) Participate in a regional effort to provide more consistent messages for solid waste programs and issues. | County and cities | Ongoing | | | | | |
| O&E2) Take the lead on messaging solid waste issues. | County | Ongoing | | | | | |
| O&E3) Make greater efforts to extend recycling outreach to a diverse audience. | County | Ongoing | | | | | |
| **Administration and Regulation** | | | | | | | |
| A&R1) Maintain support for enforcement activities for illegal dumping and litter cleanup programs. | County | Ongoing | | | | | |
| A&R2) Encourage volunteer efforts for litter cleanup. | County | Ongoing | | | | | |
| A&R3) Explore alternative funding sources to reduce tipping fee surcharges for waste diversion and other non-disposal programs. | County | X | X | | | | |

1. *An "X" indicates year of implementation.*
2. *CESQG: Conditionally Exempt Small Quantity Generator.*
3. *CWRTS: Cathcart Way Recycling and Transfer Station.*
4. *GHG: greenhouse gas.*
5. *HHW: household hazardous waste.*
6. *SCC: Snohomish County Code.*
7. *SWD: Snohomish County Solid Waste Division.*

TABLE 1. Six-Year Implementation Schedule (continued)

| Recommendation | Implementation Responsibility | Year of Implementation | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| A&R4) Annually review programs and activities to explore program modifications that could increase the effectiveness of waste prevention, recycling, GHG reduction and other programs. | County | X | X | X | X | X | X |
| **Moderate Risk Waste (MRW)**<br>MRW1) Conduct public education programs for HHW through collaboration with other agencies and groups. | SWD and other County departments | Ongoing | | | | | |
| MRW2) Research alternative financing methods. | SWD | X | X | | | | |
| MRW3) Implement additional product stewardship programs through voluntary and mandatory methods. | SWD and Ecology | Ongoing | | | | | |
| MRW4) Collect materials shown in Table 1 (the Haz. Household Substances List) at the MRW Facility, except e-waste and materials shown in Group 7. | SWD | Ongoing | | | | | |
| MRW5) Distribute CESQG standards and requirements more widely. | SWD and SHD | Ongoing | | | | | |
| MRW6) Explore user fees for residential customers of the MRW Facility and mobile collection events. | SWD | X | X | | | | |
| MRW7) Implement a promotional campaign to address barriers that are preventing greater use of the MRW Facility. | SWD | X | X | | | | |
| MRW8) Implement an environmentally-preferable purchasing program to reduce use of toxic materials by County agencies. | SWD and other County departments | Ongoing | | | | | |
| MRW9) Conduct a survey to determine waste disposal practices for key MRW materials. | SWD | X | | | | | |

1. *An "X" indicates year of implementation.*
2. *CESQG: Conditionally Exempt Small Quantity Generator.*
3. *CWRTS: Cathcart Way Recycling and Transfer Station.*
4. *GHG: greenhouse gas.*
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# CHANGING WASTE FOR CHANGING TIMES

## The Snohomish County Comprehensive Solid and Hazardous Waste Management Plan

## Volume II

## Final Draft 2013



FINAL DRAFT

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# CLIMATE CHANGE

## SUMMARY

This technical memorandum discusses the existing programs in which the Snohomish County Solid Waste Division is working to reduce greenhouse gas emissions. It also identifies relevant planning issues, and develops and evaluates alternative strategies. The evaluation of alternatives is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

This technical memorandum recommends additional steps that can be taken to document existing greenhouse gas emissions and evaluate potential reductions. The proposed additional measures are directed primarily at Solid Waste Division operations but can serve as a model for other departments and entities.

## BACKGROUND

The primary role of the Solid Waste Division (the Division) is to ensure the environmentally sound and cost-effective management of solid waste produced within Snohomish County. To accomplish this, the Division implements policies and programs that impact the environmental health of the region. These policies and programs should be based on ecologically sound principles that reflect the values of county residents and that preserve their quality of life.

Because of the public's concern about the impacts of global warming on environmental and human health, government bodies including Snohomish County, some communities within the county, and the State of Washington have adopted policies to reduce their emissions of green house gasses (GHG) that would otherwise contribute to climate change and global warming.

Solid waste management can play a key role in executing the County's policies and programs to reduce GHG emissions and promote sustainability. Through its existing solid waste outreach programs, the Division already educates, promotes, and helps change the everyday behaviors of county residents that affect GHG emissions. Furthermore, the Division has unique resources such as the Cathcart Landfill that can be used to create opportunities and partnerships to provide energy for County facilities and vehicles, while reducing GHG emissions.

### Goals for Climate Change

Over the next six years, the Division has set a goal of reducing GHG emissions by 10% from 2008 levels. This will be accomplished by maintaining and expanding current

programs, as well as by establishing new programs and partnerships throughout the county.

Goals and policies that are specific to climate change include:

- Goal 1: Support actions to reduce climate change and promote sustainability.
- Policy 1-1, Climate Change: Support efforts and actions by County and other agencies to reduce GHG emissions and to lessen and prepare for the impacts of climate change.
- Related policies from other technical memorandums:
    - Policy 1-2, Energy-from-Waste: Continue to monitor new and existing technologies for potential benefits to produce energy, fuel, or other useful byproducts.
    - Policy 1-3, Product Stewardship: Continue to be a leader in product stewardship initiatives and legislation.
    - Policy 1-4, Waste Prevention: Continue to offer and develop programs that encourage waste prevention.
    - Policy 2-1, Recycling: Continue to offer and develop programs that encourage recycling.

## EXISTING PROGRAMS AND ACTIVITIES

The Division continues to develop and offer programs that encourage the reuse and recycling of materials by its citizens and businesses, to help reduce the use of non-renewable virgin materials. In addition, the Division continually reviews its own operations, programs, and facilities to ensure that its actions promote sustainability and help to reduce climate change.

The Division is also involved with regional and national organizations to better measure and address GHG emissions and options related to material management. For example, County staff has participated in development of a GHG inventory protocol developed by the International Council for Local Environmental Initiatives (ICLEI), founded in 1990. Now called 'ICLEI - Local Governments for Sustainability', this international association is comprised of local, regional, and national governments that have made a commitment to sustainable development. Their GHG protocol consists of the general principles and philosophy that local governments should use when inventorying GHGs from government operations and the community as a whole.

County staff has also been involved with EPA's West Coast Forum, a working group focused on climate protection and materials management. The work group has

produced a toolkit titled “Materials Management Approaches for State and Local Climate Protection.”

### County Biodiesel Initiative

Snohomish County adopted an initial goal of reducing community GHG emissions by 20% below 2000 levels by the year 2020. In 2005, County Fleet Management committed to burning cleaner fuels in its diesel vehicles. The first step was to switch to biodiesel B-20 (20% from non-petroleum feedstock) in road maintenance and solid waste trucks and off-road vehicles. Since that time, the entire County diesel fleet has been converted to run on biodiesel. The blend of biodiesel varies with seasonal temperature fluctuations to prevent thickening (“gelling”) of the fuel.

### Alternatives to (Backyard) Burning

The goal of the alternatives to burning program is to develop infrastructure that is financially sustainable and that will provide alternatives to backyard burning of residential yard and woody debris in the Towns of Darrington, Sultan, and Gold Bar. The program is funded by a grant from the state of Washington Department of Ecology (Ecology) and managed by the Division. The program allows residents to bring their wood waste to a processing site in close proximity to the cities. The site is staffed and equipped with an on-site chipper to process the wood waste into “hog fuel”, which is sold as boiler fuel for industrial plants.

Burning a ton of woodwaste in a hog fuel boiler to make steam produces roughly the same amount of CO2 as backyard burning a ton of woodwaste. There is, however, a significant benefit in that the hog fuel replaces fossil fuel (e.g. oil or natural gas) that would otherwise have been burned to generate the steam. In turn, this avoids introducing ancient, fossil-source CO2 into the atmosphere. In addition, burning woodwaste at a central facility with an air pollution control permit will produce fewer other emissions than numerous small backyard burners without emission controls spread over a wide geographic area.

Grant funding contributing to the Alternatives to Burning Program expired in 2010, however. The program has been successfully transferred to the City of Darrington and a local nursery for residents in the Sultan and Monroe area for continuation in 2010 and beyond.

### Solid Waste Division Facilities

The Division owns and operates four transfer stations, three Neighborhood Recycling & Disposal Centers (NRDCs), one Moderate Risk Waste (MRW) Facility, and the vactor decant facility. These facilities provide an opportunity to share environmental information with the public and to demonstrate programs aimed at sustainability and GHG reduction.

In 2010, the Division began energy efficiency improvement upgrades to its leachate pretreatment facility at Cathcart, the Airport Way Recycling and Transfer Station (ARTS), and the Southwest Recycling and Transfer Station (SWRTS). These improvements include lighting upgrades to more efficient fluorescents as well as improving the energy efficiency of the aerators used to operate the lagoons. It is estimated these improvements will save approximately 800,000 kilowatt hours per year.

Solid waste facilities can also serve as a testing ground for new technologies in alternative energy and energy efficiency. The canola processing facility at the closed Cathcart Landfill is an example of how the Division can use its existing resources to provide alternative sources of energy while creating synergies within the county to promote sustainability. Storage silos and grain-handling equipment allow canola and other oil-seeds to be received and stored at the site. The canola seed is dried using methane gas produced by decomposing waste at the landfill, which is otherwise flared (burned without heat recovery). The dried seed can be crushed on-site to release canola oil, which is then hauled to a refinery to be converted into biodiesel. This contributes to the supply of biodiesel that the County fleet uses in its vehicles. GHG emissions are reduced by using biodiesel in the County fleet and by using landfill gas (which would have been flared anyway) to dry the seed, instead of propane or natural gas.

**Solid Waste Division Operations**

While facilities can have features that promote sustainability, so can selected operational practices. The items below highlight some of the more prominent activities the Division has undertaken.

- One of the Division's most significant sustainability practices is to have facility operators remove scrap metal and wood debris from unsorted loads that have been dumped onto the transfer station floor. These materials are separated for recycling or reuse. Since 2008, the Division has diverted more than 600 tons of scrap metal. This sustainable practice is visible to customers at the transfer stations and helps promote the concepts of sustainability and materials recovery.

- Snohomish County currently rail-hauls its MSW to the Roosevelt Regional Landfill near the town of Roosevelt in Klickitat County. Shipping waste by rail uses less fuel per ton-mile than trucking and emits fewer GHG per ton. In addition, the Regional Landfill collects the methane produced by the decomposing garbage and uses it to fuel engine-generators. Snohomish PUD purchases about half of the 10 MW of resulting electricity.

- The Division is planning to replace its fleet of drop box trucks to improve fuel efficiency and reduce GHG emissions. It now uses GPS on its long-haul trucks to ensure efficient routes and reduced idling.

- At the North County Recycling and Transfer Station, Waste Management and the County consolidate their recyclables prior to hauling them to the materials recovery facility in Woodinville, saving vehicle trips and reducing overall truck emissions.

## PLANNING ISSUES

### Near-Term Planning Issues

Current issues related to climate change include:

- Currently, solid waste haulers do not pick up materials from every house or commercial entity that they pass on their routes. If collection were mandatory, residents would no longer self-haul waste and recyclables to a transfer station. GHG emissions should theoretically be reduced, as a single garbage truck could replace about ten pickup trucks. Mandatory collection is addressed in more detail in the Waste Collection Technical Memo.

- While Snohomish County has a baseline inventory and forecast for greenhouse gas emissions, the baseline is not specific to the Solid Waste Division. The inventory and forecast do not include some sources of GHG for which the Division has already implemented programs for reduction. For example, methane recovery from landfills was considered only for the Roosevelt Regional Landfill. Such a baseline would not capture GHG reductions caused by using landfill gas in the canola dryer.

- Current and potential federal regulations related to GHG and climate change are complex and costly to implement and monitor. In an economic period where tipping fees barely cover the cost of collection, disposal, recycling, HHW and waste-related educational programs, the added requirement of complying with GHG regulations is daunting.

- An increase in the amount of material recycled, or more efficient methods of collecting that material, could reduce GHG emissions. This includes optimizing existing programs and find more effective means of collecting recyclables. The Product Stewardship Technical memorandum discusses some options for achieving this.

- The US EPA has developed a Waste Reduction Model (WARM) to help solid waste planners estimate the potential reductions in GHG that could result from different waste management practices. The WARM model shows that increased recycling creates very substantial benefits in terms of reduced greenhouse gas emissions (see the Recycling Technical Memo for more details).

- Current Division facilities have room for improvement in regards to greenhouse gas emissions and sustainability. In the future, the Division will evaluate facility maintenance, upgrades and retrofits that stress sustainability and reduce GHG

emissions. This includes purchasing and/or incorporating recycled or sustainably produced construction materials into facility repairs or improvements consistent with other Division and Snohomish County environmentally preferable purchasing policies and practices.

### Long-Term Planning Issues

It is possible to have an effective solid waste management system that both meets GHG objectives and reduces the amount of waste requiring disposal. However, under the current economic model, the solid waste system earns its revenues based on the amount of waste handled and disposed. As waste reduction and recycling programs become more effective, the amount of waste disposed and the associated fees will decrease. Ironically, this reduces the money available to fund the reduction and recycling programs. Therefore, a new economic model (possibly one that includes both a disposal fee and a separate recycling fee) may be necessary for waste reduction and recycling programs to be sustainable over the long term. Funding mechanisms for other climate change programs may be equally challenging.

## ALTERNATIVES

### Alternative A – Document Annual Solid Waste Division GHG Emissions

Prepare an annual documentation of GHG emissions resulting from Division facilities and operational actions, and including countywide solid waste activities. Countywide data would likely rely on tonnages of materials reported by Ecology's annual recycling survey. Coordinate the methodology and information to be provided with the Snohomish County baseline GHG emissions inventory and updates. The documentation will provide information necessary to feed into the Snohomish County inventory and assessment of current emissions, anticipated emissions, and potential programs for emissions reduction. The information can also be used in education and outreach efforts to inform the public and stakeholders about the impacts of their efforts in recycling, for example.

### Alternative B – Identify Specific GHG/Climate Change Projects

There are numerous projects that the Division could evaluate for cost-effectiveness in reducing GHG emissions and climate change impacts. These include installing LED lighting systems at Division facilities to replace less efficient incandescent and fluorescent lights; installing solar panels on Division facilities to provide a portion of the energy needed for operations; and beneficial use of methane gas from landfills or waste digesters as an alternative energy source. The Division could also continue to look at ways to improve and enhance existing facilities to achieve its goals, before considering building new stand-alone facilities.

### Alternative C – Perform Energy Audits

Continue to perform an energy audit of all Division facilities and use it to create an action agenda for incorporating energy efficiency measures. This audit will establish a baseline that can be used to evaluate proposed improvements or enhancements to verify that they result in a significant reduction in energy use and possibly a reduction in GHG emissions.

### Alternative D – Evaluate Energy-Saving Opportunities

As new projects are developed, identify specific energy-saving opportunities and perform a cost-benefit analysis. Evaluate the trade-offs between energy-savings and other environmental or social costs.

### Alternative E – Increase Purchase of Environmentally Preferable Facility Repair and Maintenance Products

The Division will evaluate ongoing facility maintenance and new upgrades and retrofits that stress sustainability and reduce GHG emissions by purchasing environmentally preferable goods, equipment and services consistent with other Division and Snohomish County environmentally preferable purchasing policies and practices. For example, this will include purchasing and/or incorporating recycled or sustainably produced construction materials into facility repairs or improvements procured by the Division.

## Evaluation of Alternatives

The alternatives are compared with respect to the evaluation criteria below. The evaluation of alternatives is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives**: Alternatives A and D are the most consistent with the County's solid waste planning objectives. Alternatives B, C, and E may be less consistent, depending on the actual activities or materials identified by these programs.

**Consistency with Other Regional Plans**: Alternatives A and D are the most consistent with other regional plans. Alternatives B, C, and E are somewhat less consistent in that these primarily address internal operations for the Division.

**Cost Effectiveness**: Alternative A has a medium cost effectiveness because without an emissions baseline and annual updates, it would be difficult to measure future improvements from emissions reduction programs. Alternative D can be cost effective

because it allows a cost-benefit analysis to be performed on a specific project. Alternatives B, C and E have a somewhat lower level of cost effectiveness.

**Rating of Alternatives**

The alternatives are compared with respect to the evaluation criteria in the table on the following page.

**Table 1**
**Summary Rating of the Climate Change Alternatives**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Document annual Solid Waste Division GHG emissions | H | H | M | H |
| B | Identify specific GHG/ climate change projects | H | M | M | M |
| C | Perform energy audits | H | M | M | M |
| D | Evaluate energy-saving opportunities | H | M | H | H |
| E | Increase purchase of environmentally preferable facility repair and maintenance products | M | L | M | M |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendations are being made for climate change programs:

### High-Priority Recommendations

CC1) Document annual Solid Waste Division GHG emissions.

CC2) Evaluate energy-saving opportunities for new projects and conduct cost-benefit analysis for energy conservation measures.

### Medium-Priority Recommendations

CC3) Evaluate energy-saving opportunities for existing buildings and projects, and conduct cost-benefit analysis for energy conservation measures.

CC4) Continue to conduct energy audits of Division facilities.

CC5) Increase purchase of environmentally preferable facility repair and maintenance products procured by the Division.

Snohomish County Solid Waste Division would be the lead agency for all of these recommendations, since these are largely directed at internal operations, but other county departments and other public and private entities should also be encouraged to take similar steps.

The above recommendations do not require a significant amount of funding to implement, although a few will require a substantial amount of staff time. All of these recommendations can be implemented beginning immediately or in the next few years.

## REFERENCES

Snohomish County 2008. *Snohomish County Sustainable Climate & Energy Initiative – Greenhouse Gas Emissions Inventory and Forecast*. Prepared by Snohomish County Climate Change Committee, Washington. April 2008.

# ENERGY FROM WASTE (EfW)

## SUMMARY

This technical memorandum discusses some of the current options for deriving energy from waste (EfW). Historically, EfW was generally limited to combustion techniques, but today a wide variety of other technologies are currently being explored. These technologies utilize thermal, biological, and/or chemical processes. While many show promise and could provide a variety of significant advantages, most of these are still unproven on a large scale in the United States.

This technical memorandum provides a brief overview of current technologies for producing energy from waste. It is not intended to provide detailed information for selection of a technology that would be appropriate for Snohomish County.

The recommendation made in this technical memorandum addresses the need to monitor the progress of these technologies and identify successful applications in comparable communities across the United States.

## BACKGROUND

### Goals and Policies for Energy from Waste

Goals and policies specific to energy from waste include:

- Goal: Support actions to reduce climate change and promote sustainability.
- Policy 1-2, Energy from Waste: Continue to monitor new and existing technologies for potential benefits to produce energy, fuel, or other useful byproducts.
- Related policies from other technical memorandums include:
  - Policy 1-2, Climate Change: Support efforts and actions by County and other agencies to reduce GHG emissions and to lessen and prepare for the impacts of climate change.

### Introduction

For most of their history, humans have burned their garbage to minimize its odors, deter pests, and reduce its volume. In the 1980s, there was significant interest in the United States for 1) cleaning up the air emissions from solid waste incinerators, and 2) recovering energy from incinerators in the form of steam and electricity. Most U.S. waste-to-energy (WTE) facilities were constructed during the 1980s and 1990s. The two main types of facilities differ in the type and degree of waste pre-processing required. “Mass burn” facilities burn waste in the “as received” condition, without further

preparation other than the removal of some undesirable objects such as major appliances and propane bottles. A few facilities use refuse-derived fuel, or waste that had been shredded and sorted to produce a higher quality, cleaner-burning fuel.

### Mass Burn

Incineration involves burning solid waste in a furnace under aerobic conditions and recovering the heat as steam, which drives a steam turbine and electrical generator. The waste is burned on a reciprocating grate, a technology generally licensed from one of several European companies who have proprietary equipment systems. Incineration plants larger than about 400 tons/day capacity utilize a “waterwall” boiler; that is, the furnace walls are actually water-filled tubes; the water is heated and turns to steam.

Americans also developed their own technology for burning relatively small (under about 400 tons/day) amounts of waste. This technology used multiple small incineration units; hence the name, modular incinerators.

### Refuse-Derived Fuel (RDF)

Shredding solid waste and removing glass and metals creates refuse-derived fuel. Removing these non-combustible materials increases the heating value of the fuel and reduces the amount of material that is either abrasive or deleterious to the grates. The shredded RDF is more uniform in size and burns more evenly than unprepared waste. The added capital and operating costs of processing solid waste into RDF, however, has made it less popular than mass burn and relatively few U.S. plants burn RDF.

### Conversion Technologies

By the mid-1990s, interest in WTE in the U.S. had declined precipitously due to the public’s concerns about toxic air emissions, in particular, dioxins and furans, which are known carcinogens. Despite greatly improved air emissions control equipment, no new large (more than 500 tons/day) WTE plants have been brought on-line in the U.S. after 1996. In European cities, however, WTE has continued to enjoy public support and widespread use to generate electricity and steam for heating buildings.

In the last few years, interest in WTE has begun to grow again in the U.S. One primary driver is a concern about greenhouse gases (GHG) from burning fossil fuels to generate electricity. Escalating fossil fuel prices also created an interest in renewable fuels that could be used to meet the increasing demand for electricity. However, there is currently no consensus if solid waste should be considered a renewable fuel.

Snohomish County already has a reliable and cost-effective solid waste disposal system that rail-hauls waste to a privately owned landfill in eastern Washington for disposal. In the future, the County may wish to consider additional methods of managing its solid waste. The motivation may be related to a variety of factors including disposal costs, climate change, energy prices, materials markets, and environmental concerns.

The recovery of energy from solid waste is likely to be a primary consideration. For this report, the term energy from waste (**EfW**) is used to avoid the pollution-related stigma attached to the term waste-to-energy (WTE), and to include a broader group of technologies known as conversion technologies. In addition, the term **conversion technology** refers to a process that converts the carbon-based portion of solid waste into a useful form of energy and/or a useful byproduct. Conversion technologies typically involve four major process steps:

1. Pre-processing: removal of undesirable materials and/or recyclables to create a suitable feedstock.

2. Conversion: use of thermal, biological, chemical, and/or physical processes to produce energy and/or a byproduct from a feedstock.

3. Post-processing: clean-up of solid, liquid, or air emissions.

4. Production: generation and clean-up of energy and byproducts.

Conversion technologies can be grouped into two major categories: thermal technologies and biological/chemical technologies. A brief summary of these technologies follows.

## THERMAL TECHNOLOGIES

Thermal technologies typically operate in a range of about 700-10,000 $^{o}$F. They have higher reaction rates than biological/chemical technologies. Most thermal technologies produce electricity as their primary energy product. The major types of thermal technologies include:

- Advanced thermal recycling
- Pyrolysis
- Gasification
- Plasma arc
- Densification/pelletization
- Catalytic cracking

### Advanced Thermal Recycling

Advanced thermal recycling is a second-generation mass burn technology that combusts carbon-based materials in an oxygen-rich environment at temperatures of 1,300 to 2,500 $^{o}$F. The grate, steam turbine, and generator are similar to those used in mass burn plants. The advanced air pollution control system captures and removes components from the flue gas stream and converts them to potentially saleable byproducts such as gypsum (calcium sulfate) and hydrochloric acid. Metals in the

bottom ash from the grate are recycled and the ash can be used for road construction as is currently done in Germany.

### Pyrolysis

Pyrolysis is the thermal degradation of organic materials in the absence of oxygen, using an indirect heat source at about 750-1,650 °F. The byproducts are a synthetic gas (syngas), tars, and unburned carbon char. The syngas consists largely of carbon monoxide and can be burned to generate steam or electricity. Although the char theoretically has industrial and consumer uses, the markets for such products have proven to be limited.

### Gasification

Gasification is the thermal degradation of organic materials in the presence of a limited amount of oxygen, less than that required to completely combust the materials. Gasification uses direct or indirect heating at about 1,400-2,500 °F to produce either fuel gas (methane and lighter hydrocarbons) or syngas (carbon monoxide and hydrogen). These can be burned to generate steam or electricity.

### Plasma Arc

Plasma is an electrically conducting gas produced by passing AC and/or DC electricity through graphite electrodes. Operating at temperatures over 7,000 °F, the plasma can decompose organic materials into a syngas composed primarily of carbon monoxide and hydrogen. Gaseous chemical compounds are broken down into their constituent elements. Inorganic materials solidify into a vitreous (glass-like) slag. Plasma arc is essentially a gasification technology, although in Japan, a primary use of plasma arc equipment is to reduce incinerator ash to an inert slag that does not leach hazardous compounds into the groundwater.

### Densification/Pelletization

Solid waste can be compressed and extruded through a machine to make fuel pellets. As with RDF, the cost of processing waste into pellets has prevented this technology from becoming more widespread. In the U.S., pelletization is used mainly on small and relatively homogenous waste streams such as those produced by industrial plants, rather than heterogeneous municipal solid waste (MSW).

### Catalytic Cracking

Catalytic cracking is a thermochemical process that uses catalysts to accelerate the process of breaking down polymers (e.g. plastics) into their basic building blocks, called monomers. Standard oil refinery techniques can then be used to process the monomers into traditional fuels such as diesel and gasoline. This technology would

apply mainly to the plastics in MSW, which comprise about 13 percent of total MSW by weight.

## BIOLOGICAL/CHEMICAL TECHNOLOGIES

Biological/chemical technologies operate at lower temperatures and have slower reaction rates than thermal technologies. They can accept feedstocks with high moisture content, but require material that is biodegradable. This means that materials such as metals, glass, and most plastics must be removed prior to beginning the biological/chemical reactions. Useful byproducts can include fuel gases, electricity, compost, and chemicals. The following are typical biological/chemical technologies:

- Anaerobic digestion
- Aerobic digestion/MSW composting
- Ethanol fermentation
- Thermal depolymerization

### Anaerobic Digestion

This technology uses a series of bacteria to decompose biodegradable material in the absence of oxygen, producing a medium-Btu (British thermal units) gas containing 50% to 70% methane and 30% to 50% carbon dioxide. This gas can be burned in an internal combustion engine or a gas turbine, which in turn would drive an electrical generator. Anaerobic digestion also produces a residue that is suitable for composting.

### Aerobic Digestion/MSW Composting

Aerobic composting of yard waste is widespread in the U.S., and the composting of food waste (often mixed with yard waste) is becoming popular in urban areas. Composting of MSW would require removal of non-biodegradable materials such as glass, metals, and plastic before the remaining organic, biodegradable portion can be composted. The difficulty of marketing compost “made from garbage” remains a barrier to widespread use of this technology.

### Ethanol Fermentation

A series of chemical reactions is required to produce ethanol (a type of alcohol) from waste materials. The first reaction is hydrolysis, which converts organic materials to sugars. The sugars are then fermented to make dilute ethanol, which is then further distilled to produce a fuel-grade ethanol. The hydrolysis process for MSW is still under development.

### Thermal Depolymerization

This process reduces complex organic materials into a crude oil-like substance. Currently, agricultural and animal wastes are ground, mixed with water, then subjected to heat and pressure. The resulting hydrocarbons are further processed and distilled to produce a crude oil. Considerable development is required before this technology can be applied to MSW.

### Landfill Gas

The decomposition of garbage in a landfill produces a methane-carbon dioxide mixture known as landfill gas (LFG). Because methane is potentially explosive, it is a long-standing industry practice (and an EPA requirement for large landfills) to collect the LFG and burn it in a flare to eliminate the explosion hazard. The fact that methane is also a potent greenhouse gas is added motivation to capture LFG, which can be used in an internal combustion engine, gas turbine, steam boiler or fuel cell to produce electricity. LFG-to-energy is not typically included as part of EfW. For this solid waste planning effort, LFG-to-energy is discussed in the Disposal Technical Memorandum.

## WHY CONSIDER CONVERSION TECHNOLOGY?

In the U.S., conversion technologies were first considered as a response to either declining landfill capacity or the increasing cost of landfilling. Landfill capacity is not a problem in the Pacific Northwest, where numerous cities and counties dispose of their MSW at remote regional mega-landfills. However, conversion technologies could still be considered for inclusion in an integrated solid waste management system. Potential benefits of a conversion technology include:

- **Waste diversion**: Conversion technologies are another potential technique for diverting waste from landfills, to supplement traditional programs such as curbside recycling and yard waste composting.

- **Increased recycling**: MSW sent to disposal has already been subjected to some degree of source separation of recyclables as part of either a residential curbside recyclables collection program or recycling efforts by businesses and institutions. Many conversion technologies involve a pre-processing step to remove materials such as glass and metals that are non-degradable or non-combustible, hence deleterious to the conversion process. This pre-processing provides an opportunity to recover additional recyclables from discarded MSW. Rather than compete with recycling, conversion technology can complement existing recycling programs.

- **Energy recovery**: The ability to generate energy such as steam or electricity, or a fuel that can be burned to generate steam or electricity, is an added economic benefit in a time of high fuel prices.

- **Displacement of fossil fuels**: The use of "renewable" solid waste can reduce the amount of fossil fuel used to generate electricity in a region, contributing to U.S. energy independence.

- **Reduced air emissions**: The use of some conversion technologies could potentially reduce the emissions of $NO_x$, $SO_x$, and particulates compared with some EfW technologies or traditional coal or petroleum-fired power plants.

- **Reduced carbon emissions**: Carbon emissions ($CO_2$) from fossil fuel-fired and methane ($CH_4$) emissions from landfills are greenhouse gases. Methane has a global warming potential of about 21 times that of $CO_2$. The use of a conversion technology could reduce carbon emissions through increased recycling, diversion of organics from landfills, and displacement of fossil fuels.

- **Local control**: Conversion technologies provide an opportunity to manage MSW locally instead of long-hauling it to a distant landfill.

- **Reduced transportation costs**: Sending MSW to a local conversion technology facility reduces the cost and other impacts of transporting MSW to a regional disposal site.

- **Preservation of landfill capacity:** Landfill capacity not used for "convertible" MSW can be saved for future disposal of materials that truly cannot be recycled or converted into energy or useful byproducts. In addition, conversion technologies typically generate relatively small amounts of non-recyclable residuals, and these are more likely to be inert than unprocessed MSW.

- **Support for technology innovation**: To date, few facilities using conversion technology have been sited and constructed in the U.S. As such, technology vendors are searching for locations where they can construct and operate a facility so that they can gain operational experience at a commercial scale. Having a successful reference facility where potential clients and engineers can see the technology in operation is an important marketing tool. Because of this, some vendors may be willing to finance some or all of the cost of developing a commercial facility. For a county such as Snohomish, which already has a reliable MSW disposal method, the risk of hosting a semi-experimental facility could be relatively low. Furthermore, hosting a conversion facility may be in concert with the County's goal of being a regional leader in solid waste management and innovation. Finally, creation of jobs at a local conversion facility instead of at an out-of-county regional landfill may be a local economic benefit.

- **System reliability and diversity**: Use of a conversion technology could allow the recovery of energy from MSW in a manner not currently practiced by Snohomish County's solid waste system. It would provide some diversity in terms of disposal capability. If multiple facilities were built in different parts of the County, they could reduce overall waste transportation costs and provide

distributed generation of electricity. This could in turn contribute to the redundancy and robustness of both the solid waste system and the electric power system.

## ALTERNATIVES

### Alternative A – Monitor Progress of Conversion Technologies

Although conversion technologies have a limited track record in the U.S., vendors continue to develop their equipment and processes at pilot-scale and small commercial plants. Because of the many potential advantages and benefits noted above, it would be worthwhile for Snohomish County to monitor the progress and success of these efforts. In the future, it may be beneficial to conduct a detailed technical and economic feasibility study of one or more conversion technologies to determine its/their suitability to handle a portion of the County's MSW and produce energy, fuel, or other useful byproducts.

### Evaluation of Alternatives

The alternatives are compared with respect to the evaluation criteria below.

**Consistency with Solid Waste Planning Objectives:** Alternative A is consistent with the solid waste planning objectives and would allow the County to keep current with technological advances in waste management.

**Consistency with Other Regional Plans:** Alternative A is consistent with other regional plans, although the eventual development of a conversion technology facility might compete with or complement, other regional plans.

**Cost Effectiveness:** Alternative A is low cost, requiring minimal staff time. However, if a new technology looks promising, the costs of a feasibility study would not be insignificant, and the capital and operating costs for these types of technologies are expensive. Consideration of conversion technologies would require a comprehensive cost-benefit analysis (CBA) including capital/operating costs, system-wide impacts, environmental/GHG calculations and pollution impacts in comparison with existing solid waste system components including prevention, reuse, recycling, transfer and landfill disposal.

### Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in the following table. The evaluation of alternatives is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Table 1**
**Summary Rating of the Energy from Waste Alternatives**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Monitor Progress of Waste Conversion Technologies | H | M | M | M |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendation is being made with regard to energy from waste:

### Medium-Priority Recommendation

E1) The County should continue to monitor developments and progress in EfW including new technologies, pilot plants, facility procurements, and facility operating track records. If results appear promising, the County may at some point in the future wish to explore EfW in more depth, perhaps in the next solid waste planning period. Should the Division choose a new technology it must be one with years of proven efficient operation and adequate staff resources and budget would need to be approved to conduct a comprehensive feasibility study and cost-benefit analysis.

Snohomish County would be the lead agency for this recommendation, which can be implemented immediately. E1 would require a minimal amount of additional Solid Waste Division staff time, since Division personnel are already routinely exposed to information about new developments and practices in the solid waste industry.

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# PRODUCT STEWARDSHIP

## SUMMARY

Product stewardship, also known as “producer responsibility” or “extended producer responsibility” (EPR), is a strategy designed to address the environmental impacts of products through their entire lifecycle, including end-of-life management (waste prevention, reuse, recycling and disposal). Under product stewardship, the entity that designs, produces, sells, or uses a product takes responsibility for minimizing the product’s environmental impact throughout all stages of the product’s life cycle. The greatest responsibility lies with those who have the most ability to affect the life cycle environmental impacts of the product. This is often the producer of the product. While a relatively new approach, product stewardship programs are rapidly being put in place to address solid waste and recycling issues. The first significant program in Washington State, providing for recycling of computer, televisions and monitors, has been highly successful in Snohomish County.

This technical memo recommends that more product stewardship programs be implemented. Other recommendations include involving retailers more, investigating how product stewardship could be used to help fund recycling programs, and encouraging the development of processing facilities in Snohomish County for e-wastes and other materials. Finally, a pilot program is recommended for testing a multi-material drop-off program for product stewardship materials.

## BACKGROUND

### What Is Product Stewardship?

Product stewardship (or EPR) originated in Germany in the early 1990s and has spread throughout Europe, Canada, Japan and other parts of Asia. Product stewardship is a strategy whereby environmental protection is centered on the product itself and those directly involved in the lifecycle of the product. Whoever designs, produces, sells, and uses a product takes responsibility for minimizing the product's environmental impact throughout all stages of the product’s life cycle, including its end-of-life management. For manufacturers (producers), this includes planning and paying for the recycling or disposal of the product at the end of its useful life. Environmental impacts and costs may be reduced in part by redesigning products to use fewer harmful substances, to be more durable, reusable and recyclable, and by making products from recycled materials (thus providing a market for materials from collected products). It may also mean investing in new processing technologies and facilities. For retailers and consumers, this means taking an active role in ensuring the proper disposal or recycling of an end-of-life product.

Product stewardship is a powerful tool that could potentially:

- Reduce overall end-of-life management costs through more cost-effective and efficient services and attaining economies of scale.
- Shift end-of-life management costs from local governments, ratepayers and taxpayers to producers and consumers of their products, keeping the environmental management costs within the product price and within the chain of commerce.
- Provide sustainable financing for existing collection and recycling programs, both in the public and private sector.
- Accomplish waste and pollution prevention (such as toxics reduction for mass-marketed consumables) that are impossible for local governments to achieve.
- Motivate research and investment in new product design, new processing technology, and infrastructure.
- Provide extended life and promote reuse of products.
- Stimulate the creation of new jobs and new businesses and services.
- Establish more convenient collection services for toxic or hard-to-handle products than what government can provide.
- Achieve higher levels of recovery.
- Achieve higher environmental standards that are more verifiable.
- Drive more packaging into recycling systems and provide related financing.
- Establish alternative collection programs for hard-to-handle and toxic products that are incompatible with curbside collection systems and disposal.
- Help achieve other greenhouse gas reduction, sustainability and zero waste goals.

Product stewardship shifts environmental responsibilities and costs in such a way that it creates a feedback loop to those who can reduce the impacts and costs through optimal product design and material use. It also can create a sustainable funding mechanism for the collection of products and packaging.

**Goals and Policies for Product Stewardship**

- Goal 1: Support actions to reduce climate change and promote sustainability.

- Policy 1-3, Product Stewardship: Continue to be a leader in product stewardship initiatives and legislation.

- Related policies from other technical memorandums include:

- Policy 1-1, Climate Change: Support efforts and actions by County and other agencies to reduce GHG emissions and to lessen and prepare for the impacts of climate change.
- Policy 1-4, Waste Prevention: Continue to offer and develop programs that encourage waste prevention.
- Policy 2-1, Recycling: Continue to offer and develop programs that encourage recycling.
- Policy 2-3, Waste Collection: Provide a variety of equitable and efficient collection services to County residences and businesses that are in line with the Division's other goals and policies.
- Policy 2-6, Outreach and Education: Meet required educational components mandated by the State of Washington.
- Policy 2-7, Administration and Regulation: Ensure that administrative services and regulatory activities provide adequate support for policies and programs undertaken by the Division.
- Policy 2-8, Moderate Risk Waste: Continue efforts to reduce the generation and toxicity of moderate risk waste, and to ensure that convenient, cost effective and sustainable options for its safe management are available.

**Regulations for Product Stewardship in Washington**

Product stewardship regulations are relatively new to Washington State and only two state laws are currently in place, related to electronics and mercury-containing lights. However, legislation has been recently proposed and more is anticipated during the planning period, potentially including legislation related to additional electronics, agricultural pesticide containers, batteries, carpet, mercury-containing devices such as thermostats, paint, pharmaceuticals, phonebooks, plastic and other packaging, and tires. An overall legislative framework approach has also been proposed through the State's Climate Action Team and work of the Northwest Product Stewardship Council that would establish a process for bringing additional product categories under product stewardship regulation over time. For additional detail on programs for electronics and product stewardship framework see Attachment A (Electronic Products Recycling) and Attachment C (Framework).

**Waste Reduction, Toxics Reduction and Pollution Prevention**

Reduction of waste and toxics, pollution prevention and reuse make up the highest tier of the solid waste hierarchy, yet are very difficult to attain at a local level. Product stewardship can provide economic incentive to producers who sell into the state and the county, wherever they are located, to reduce materials used in products and packaging and to make those used more recyclable. There can also be incentive to minimize toxics within the products and packaging and to make it easier and quicker to remove toxic components that are unavoidable, thus reducing the cost of recycling.

The economic feedback loop of EPR is simple: if a producer or packaging designer wants to reduce the costs and toxics associated with their product, and the ability to use non-recyclable materials is expensive, then the producer/packager will be motivated to reduce the quantity of materials used and reduce or eliminate the toxics used. Snohomish County and its residents have little if any influence on these decisions by producers and packagers, especially as most of them are not local.

**Reuse**

Depending on the product and whether or not it can safely be reused, EPR systems can be designed and legislated to encourage or maximize reuse options. Collected products such as pharmaceuticals and banned pesticides are two examples that would be unsuitable for reuse. Some paints and many electronics are examples of products well suited for reuse. EPR does not guarantee reuse, however. Brand owners may have an interest in recycling collected products rather than allowing them to be recirculated for reuse; this could be for a variety of reasons, including the belief that a product reused displaces the sale of a new product. On the other hand, producers may find economic benefit to themselves by capturing the resale value of a reused product, and in the case of electronics, helping close the digital divide (and having their brand utilized) for those who otherwise might not be able to own a computer.

Much more work is needed to understand how to maximize reuse in EPR systems.

**Recycling Collection Systems**

Product stewardship programs can be an important supplement to existing collection programs. In a three-stream curbside-based collection system whereby recyclables, organics, and residuals for disposal are collected separately, product stewardship can play the following important roles:

- Removing toxic and hard-to-handle materials that could contaminate the three curbside collection streams by providing alternative effective collection options such as drop-off or mail-back. This should increase the efficiency of the curbside systems, increase the quality of the curbside collected materials, and decrease human health and environmental risk. For instance, the industry financed and organized E-Cycle Washington system has effectively removed hazardous and hard to handle televisions from curbside collection by providing widespread no-charge drop-off locations, of which there were 240 across the state and 18 in Snohomish County (as of late 2010).
- Moving additional materials into the curbside recycling and organics collection systems by providing motivation for manufacturers to make products, and packaging, that are recyclable or compostable in local systems, and providing financing for the curbside collection of additional (and perhaps existing) products and packaging that could be safely collected curbside. For instance, in Ontario, Canada, 50% of the costs of curbside collection have been paid by those whose products and packaging are collected in the system; it is now increasing to 100%.

Many packaging producers are anxious to have their packaging collected through curbside systems, motivating them to change their packaging or to provide additional assistance to collectors/processors to ensure their packaging can be collected.

- In addition, product stewardship programs can provide financing for existing public and private sector drop-off locations and programs, and provide more widespread, convenient and effective drop-off locations than the public sector can provide. This can be accomplished through business relationships, such as working with retailers to provide collection locations. Retailers may be provided financial or other incentives for participation and benefit from increased foot traffic and community goodwill. For example, the voluntary battery industry provided and financed Call2Recycle program had over 55 drop-off locations in 2010 for rechargeable batteries in Snohomish County, mostly at retail locations.

**Processing**

Product stewardship approaches can have many implications related to processing. At a minimum, product stewardship systems may pay the processing costs for covered products. In Washington, there are now eight processors for electronics, and at least two of them located in the state due to the producer responsibility system. Other existing businesses expanded and improved their operations to qualify as processors for the producers. There are two small-scale processors located in Snohomish County.

Because of higher environmental standards typically applied to product stewardship programs such as down-stream tracking of materials, third party verification, transparency, and audits, as well as brand-owners' interests in protecting their brand name and liability, these systems will tend to improve and exceed processor compliance with environmental regulations and do so with reduced costs to government regulatory agencies.

Producers who are paying for the costs of processing may be motivated to:

- Make design changes to reduce processing costs.
- Own and manage their own processing facilities, as has been the case with Hewlett-Packard (HP) for electronics in the U.S. and is typical in Japan.
- Partner with other businesses to establish processing services with them.
- Invest in research and development of new processing technologies to make processing more effective and lower costs.
- Develop instructions and training programs on how to dismantle specific products, as has been done by HP and other electronics producers.
- Exchange information between processors and product designers to inform design decisions to make products easier to recycle by processors, as is being done in Oregon.

Because of the scale of producer responsibility programs, producers can also attain economies of scale and achieve lower processing costs. However, the motivation to reduce costs could potentially result in producers negotiating payments for processing services that are not sustainable for some processors in the long run. This may seem to be to the producers' advantage in the short term, but lack of diverse and sustainable processing infrastructure would be very expensive and harmful to them in the long term, so this potential problem should correct itself.

**Disposal**

Not all products that can be addressed in product stewardship systems are suitable for recycling. Some products require special handling for disposal. For example, pharmaceuticals and pesticides require special handling for disposal as hazardous waste, not recycling. In the long term, product stewardship systems could contribute funds that reduce the cost paid by ratepayers and government for disposal of some products and packaging that cannot be recycled.

**Financing**

A fundamental part of EPR is the responsibility of producers to finance and reduce the cost of the end-of-life management of their products, typically by incorporating the end-of-life management costs into product prices. This internalizes end-of-life costs into the product price, just as materials, labor, environmental compliance, transportation, and administration and overhead are internalized.

By covering the costs of a product stewardship system for their products and packaging, producers remove these costs from local governments and their taxpayers and ratepayers. In some cases, the product stewardship system will provide funding for existing local government programs, or remove costs that have previously been incurred. In other cases it will provide funding for private services and at many more locations than what could have been established by government entities, such as the extensive retailer collection system established by the Rechargeable Battery Recycling Corporation (RCBC) for batteries and cell phones.

As a component of implementing the Beyond Waste Plan, the Finance Subcommittee of the Waste 2 Resources Advisory Committee (what was previously known as the State Solid Waste Advisory Committee) is looking at product stewardship systems as a financing mechanism.

**Addressing Climate Change**

The State's Climate Action Team identified product stewardship as a key tool to address greenhouse gases related to waste and material management and to provide responsible management of energy efficient products, such as compact fluorescent lights, the use of which provides significant greenhouse gas reductions. The West

Coast Forum on Climate Change and Materials Management, convened as an on-going workgroup by EPA Regions 9 and 10, has identified EPR as a key approach.

**Support for Product Stewardship**

There is rapid recognition of product stewardship as a key tool to address solid and hazardous waste and recycling issues, and as a component of sustainability and climate change efforts. A few examples are listed below:

- The National Association of Counties has adopted multiple EPR resolutions in 2009, addressing framework legislation, paint, pharmaceuticals, electronics and mercury lighting.

- The National League of Cities adopted a resolution supporting extended responsibility principles and policies on November 19, 2009, see http://www.productpolicy.org/ppi/attachments/NLC_PS_reso_11-2009.pdf for more information.

- The National Council of Mayors adopted a resolution supporting extended responsibility for products on June 14, 2010, see http://www.productpolicy.org/content/mayors-resolution for more information.

- Over seventy local governments and associations in California have adopted local resolutions in support of EPR (see http://www.calpsc.org/policies/local/index.html for more information).

## EXISTING PROGRAMS AND ACTIVITIES

Snohomish County Solid Waste Division's activities include coordination, stakeholder engagement in processes, research, pilots, policy development and proposals and advocacy. The specific activities vary over time and for each product area and often take advantage of a particular opportunity provided by external factors to address a specific issue.

The topics being addressed currently by the Division include:

- E-Cycle Washington and e-waste
- Agricultural chemical and pesticide containers
- Automobiles
- Batteries and cell phones
- Carpet
- Gas cylinders
- Packaging
- Paint
- Pharmaceuticals

- Phone books
- Medical sharps
- Mercury lighting
- Mercury thermostats
- Framework legislation

Additional information regarding each product area are included in Attachments A and B of this memorandum.

## PLANNING ISSUES

### Short-Term Planning Issues

Current planning issues related to product stewardship include:

- The Division is currently involved in implementation, pilots, stakeholder processes, and/or planning activities for the following product areas as well as overall framework approaches: agricultural and pesticide containers, automobiles, batteries, carpet, electronics covered in existing law and additional electronics, gas cylinders, medical sharps, mercury-containing devices including lighting, packaging, paint, pharmaceuticals, and phone books.
- Identifying additional product categories that might be effectively addressed through product stewardship.
- Analyzing near-term and long-term costs to the Division and ratepayers for products and packaging and how those costs could be reduced or eliminated through product stewardship.
- The role of the Division as each new product stewardship initiative begins, such as participation in stakeholder processes, pilot programs, etc.
- The role of Division-provided services as each new product stewardship system is established. For example, will the Division participate in providing collection, or discontinue its collection of the specific products covered in each new system?
- Effective communication to the public regarding the availability of product stewardship programs and how to use them.
- Providing local assistance and oversight to existing programs.

### Long-Term Planning Issues

Emerging long-term issues related to product stewardship include:

- The role that the Division will play as new product stewardship initiatives begin, such as participation in stakeholder processes, pilot programs, etc.

- The role of Division-provided services as each new product stewardship system is established, i.e., will the Division participate in providing collection or discontinue its collection of the specific products covered in each new system?
- The need for measurement of the local results of each new product stewardship system that is established.
- How producer responsibility can be most effectively used to increase the use of curbside recycling collection of products and packaging that are well suited to curbside collection.
- How producer responsibility can be applied to products that are not designed for recycling and are managed as a non-recyclable residual, i.e., garbage.
- How producer responsibility can be most effectively used to increase appropriate reuse.
- How to maximize local green job creation related to product stewardship systems, such as through economic development activities leading to new businesses and processing facilities within Snohomish County.

## ALTERNATIVES

### Alternative A – Continue Coordinated Activities to Establish Product Stewardship Programs

This alternative is based on the Division continuing to pursue establishment of product stewardship programs such as E-Cycle Washington in coordination with other local, state and federal government agencies. The Division is currently involved in implementation, pilots, stakeholder processes, and/or planning activities for a variety of product areas as well as overall framework approaches, as previously mentioned. These activities are done in coordination with other governments through the state of Washington Department of Ecology, U.S. EPA, the Product Stewardship Institute, the Product Policy Institute, Northwest Product Stewardship Council, and often include discussions with local trade organizations such as the Washington Retail Association, Washington Refuse and Recycling Association and Washington State Recycling Association. Because product stewardship systems are not typically established at just a local level, but must be done at the state, regional or national level, participation in state, regional and national activities is necessary and coordination with other governments is essential to ensure the work and information is shared. Activities vary but include stakeholder outreach and discussions, particularly with producers and retailers, participating in regional and national meetings, stakeholder processes and formal dialogues, working with stakeholders to develop pilots and conduct research, developing policy and legislative proposals, and providing comments to programs and rules under development. In some cases, the Division has a lead or major role, in others it simply participates as an interested party in a meeting convened by another government, in order to lend its expertise and learn from the other stakeholders.

**Alternative B – Expand Retailer Related Product Stewardship Activities**

At least half of household waste from residents comes through retailers. Currently few retailers take back any products or packaging for recycling, and those that do typically take few items. Some retailers have developed requirements or guidelines that their suppliers must adhere to regarding various product and packaging sustainability factors. Most of the Division's work in the past has involved working with them to develop collection pilots, typically in relationship to eventual development of a producer responsibility system. This alternative would involve developing a comprehensive program to work with retailers to expand their product stewardship activities, including take-back, supplier guidelines, sale of products with environmental certification labels.

**Alternative C – Model and Test Canadian-Style Multi-Product Take-Back Depot**

As additional product stewardship programs are legislated or voluntarily initiated, collection depots, which are widely used to collect covered products in British Columbia and other Canadian provinces, might be economically viable and create new businesses and jobs. These can be in conjunction with a retailer or other business location, part of a recycling buy-back center, or a stand-alone operation. In upcoming years, it is possible to imagine a city-center based depot collecting a range of products, including many electronics, paint, cell phones, batteries, and lighting. Some depots in Canada also have brand owner sponsors, who pay to have their particular brand of product or its packaging collected at the depot. To test the viability of a depot based collection program, the Division could partner with private sector entities to establish a collection depot or depots and assist with partner relations and promotions.

**Alternative D – Encourage Processing Facilities for "Stewarded" Products to Locate in Snohomish County**

When product stewardship programs are established, significant increases in the amount of materials collected are likely and these materials will need to be processed for recycling. Depending on the product and scale of operations, these facilities can be rather simple or quite large and complex. For electronics, two local Snohomish County businesses were able to expand and qualify to be processors for the E-Cycle Washington program. As additional products are managed through stewardship programs, a more coordinated effort could be made to encourage the private sector to locate processing facilities in Snohomish County. This alternative involves the Division working with economic development agencies and others to attract processing facilities used by product stewards to locate in Snohomish County.

**Alternative E – Research Options for Product Stewardship Approaches to Finance Existing and Expanded Curbside Collection Programs and Provide Ratepayer Rate Relief**

Alternative E involves research and not the actual implementation of product stewardship options. Most curbside recycling programs in Snohomish County are paid

for directly by the resident through a rate. If the approximately 150,000 curbside recycling users pay $5 per month for the service, then they are collectively paying $750,000 per month or $9 million per year for curbside recycling service. When the ratepayer pays for the recycling service, there is no upstream driver to motivate producers and packagers to make their packing easier and cheaper to recycle. Processors are hesitant to include harder-to-recycle items because of the potential rate increase their customers might endure. There is also no incentive for waste reduction for the recyclable items that are collected. In some other countries, producers and packagers, rather than residents, pay for the curbside collection program. In Ontario, for instance, producers of the materials collected (the "stewards") have paid 50% of the cost of local curbside recycling programs, and this will soon be increased to 100%. While this issue is generally addressed in other product stewardship activities, this alternative involves the Division working directly with local haulers and municipal collection services and other stakeholders to research how a similar program could be established in Washington and how it would decrease ratepayer and local government costs while maintaining and expanding existing curbside collection programs and the materials collected within them.

**Alternative F – Work to Establish a Product Stewardship Reuse and Refurbishment Center for Goodwill-Collected E-Wastes**

The computers currently collected by Goodwill are not being refurbished and resold due to lack of facilities, worker skills, and confidence regarding security. Dell has worked with Goodwill in Texas to establish such a facility, train workers, and ensure that personal data is properly destroyed. This alternative involves the Division taking a lead role in pursuing establishment of such reuse and job skills center by working with Goodwill, Dell, the Washington Materials Management and Financing Authority and other parties to attempt to establish a similar facility in Washington, preferably in Snohomish County.

**Evaluation of Alternatives**

The six alternatives are compared with respect to the evaluation criteria below. The evaluation of alternatives is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives:** All of the alternatives are consistent with solid waste planning objectives, although A and B have the strongest correlation with Division planning objectives.

**Consistency with Other Regional Plans:** None of the alternatives are inconsistent with other regional plans.

**Cost Effectiveness:** Overall goals of EPR specifically include driving cost effective actions by expanding and optimizing collection and recycling, reducing toxics in

products and thereby reducing end-of-life management costs, and shifting costs from government agencies. Several of the six alternatives would require some degree of grant funding. For all alternatives, calculations of the additional cost of County staff as well as any projected cost increases or decreases anticipated in the handling of targeted materials in the County's waste collection programs and/or at the County's waste facilities will be needed.

Alternative A is the most cost-effective option for the Division as it is most likely to shift costs from the Division or reduce existing costs. Alternative A requires less staff time to coordinate with other agencies than it would take staff to create unique programs for the Division to execute. Furthermore, programs created and executed by the Division would be paid for by the Division, rather than by product manufacturers. Alternative B describes activities already undertaken by several major retailers and work related to implementation of programs resulting from Alternative A activities. Broadening the scope of these activities to include supplier guidelines and certified labeling could take expanded staff resources and would require grant funding. Alternatives C and F are worthwhile alternatives, but would require grant funds to provide adequate resources. Alternative D can benefit from and expand work undertaken in Alternative A. Alternative E is currently underway through the Division's participation in the national EPA dialogue on Sustainable Financing for Municipal Recycling of Packaging Materials, and through revenue sharing agreement activities, and therefore has little additional cost to the Division.

**Rating of Alternatives**

Table 1 summarizes the ratings of each alternative with respect to the evaluation criteria.

**Table 1**
**Summary Rating of the Product Stewardship Strategies**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Continue coordinated PS activities | H | H | H | H |
| B | Expand retailer PS activities | H | M | M | M |
| C | Create a model multi-product take-back depot | M | L | L | L |
| D | Encourage processing facilities for stewarded products to locate in the County | M | M | L | M |

| | | | | | |
|---|---|---|---|---|---|
| E | Research PS financing of curbside | H | M | H | H |
| F | Establish e-waste reuse and refurbishment center | M | M | M | M |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendations are being made for product stewardship programs:

**High-Priority Recommendations**

PS1) Continue to pursue and develop product stewardship programs, in coordination with other public and private entities.

PS2) Conduct research into how product stewardship programs could help finance curbside and other recycling/reuse collection services.

**Medium-Priority Recommendations**

PS3) Develop a program to encourage retailers to expand product stewardship activities.

PS4) Efforts will be made to encourage siting of processing facilities for product stewardship materials in Snohomish County.

PS5) Explore the possibility of creating a facility in Snohomish County to process e-wastes for reuse.

**Low-Priority Recommendations**

PS6) The concept of a multi-material collection depot should be tested through a pilot program.

Snohomish County will be the lead agency for these recommendations, although several of the recommendations involve other agencies and/or the private sector. These recommendations do not require a significant amount of budget to implement, but will require additional staff time. If successful, several of the recommendations will, however, require substantial capital outlays and other investments by other entities (primarily the private sector).

All of these recommendations can be implemented beginning immediately or in the next few years, or are ongoing activities (such as is the case with Recommendation PS1).

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# ATTACHMENT A

# ELECTRONIC PRODUCTS RECYCLING

## Regulations

The Electronic Product Recycling Law, RCW 70.95.N and its related rule, Chapter 173-900 WAC requires producers of televisions, computers, laptops and monitors to provide no-charge recycling to residents, small businesses, small governments, and schools throughout the state. Local governments acting as collectors must meet requirements established in the law for collectors. Otherwise, Snohomish County and other local governments have few specific roles or requirements resulting from the legislation, and those are outlined below.

> RCW 70.95N.120 (3): Promotion of covered product recycling: states that local governments shall promote covered electronic product recycling, including listings of local collection sites and services, through existing educational methods typically used by each local government.
>
> RCW 70.95N.120 (5): Promotion of covered product recycling: states that manufacturers, state government, local governments, retailers, and collection sites and services shall collaborate in the development and implementation of the public information campaign.
>
> RCW 70.95N.230 (3): Rules-Fees-Reports: states that the department shall establish an annual process for local governments and local communities to report their satisfaction with the services provided by plans under this chapter. This information must be used by the department in reviewing plan updates and revisions.

The EPR system for electronics in Washington State encourages reuse in the following ways:

- Units that otherwise would have been stored over time are flushing into the collection system, making more units available for both reuse and recycling.
- Collectors are allowed to resale whole units, making repairs if necessary.
- Producer plans that utilize non-profit reuse organizations receive a 5% bonus credit for the tonnage of product collected through these organizations.
- Reuse organizations and businesses make up 142 of the 240 collection sites established in Washington (as of late 2010), amounting to 59% of the collectors.
- Finally, the reporting requirements and processing standards work to reduce the likelihood of illegitimate and harmful activities in the name of reuse, such as the export of whole untested units to underdeveloped countries.

The product stewardship program for electronics collected 5,495,051 pounds of televisions, computers and monitors from within Snohomish County in 2009. If local government, ratepayers, and those recycling had otherwise paid for the recycling of this quantity of electronics, the estimated cost would have been approximately $1.6 million in 2009.

**Case Study – E-Cycle Washington and E-Waste**

The Division is most noted for the leadership it has provided in addressing electronic product waste and the work undertaken serves as a good example of range of activities the Division engages in to develop product stewardship programs. Rarely will the Division's efforts be as extensive as those regarding electronic waste, especially as product stewardship is more established in the U.S. and many other governments and stakeholders contribute to the work effort. Regardless of the specific role of Snohomish County, some combination of research, pilots, stakeholder engagement and negotiation, partnerships, policy development and advocacy will be needed.

E-Cycle Washington was launched in January 2009, and is the result of landmark legislation passed in 2006 that requires producers of computers, monitors and televisions sold in Washington to provide recycling services free of charge to Washington residents, schools, small businesses, small governments and charities.

The program has been extremely successful across Washington and in Snohomish County. In Snohomish County:

- The program collected 5,495,051 pounds of televisions, computers and monitors in 2009, compared to 2,951,760 pounds of all electronics collected in 2008, before the producer responsibility program began.
- In 2010, 18 collection sites served as E-Cycle Collection sites. They:
  - receive payments for providing collection service.
  - do not incur costs for transport and processing, this is arranged and paid for by the producers.
  - have a streamlined, environmentally sound system to turn in collected equipment.
  - benefit from promotional efforts by producers and others.
- 2 local businesses qualify as processors and are paid to provide environmentally sound processing for the producers.
- Existing businesses in Snohomish County expanded to provide services, creating new jobs.
- 18 of the county's 19 cities are able to use the program for their own institutional e-waste.

- All schools and school districts are eligible for free electronics recycling, as are all public service districts such as libraries, ports, and water and fire districts.
- Reuse businesses and charities are able to test, and repair if necessary, collected units for resale and reuse.

In addition, the Solid Waste Division participated as a collector for the new system from January to July 2009, at its three transfer stations, which had provided fee-based e-waste collection for a number of years. During this six-month period the Division was paid $0.09 for each pound of e-waste it collected and submitted to the program, and had all costs it previously incurred for transportation and processing eliminated. This amounted to a payment of approximately $170,000 and cost avoidance of about $336,000 during this period. Despite these financial benefits, the e-waste program was never a good fit with the Division's stations for a variety of reasons. When the downturn in the economy required the Division to downsize staffing and services, the E-Cycle Washington program enabled the Division to discontinue collection, confident that 18 other sites had funding and coordination to provide convenient collection options.

The Division was involved in many activities and played a significant role leading up to and beyond the passage of legislation in 2006. Some of the key highlights include:

- Northwest Product Stewardship Council (NWPSC) identifies electronic waste as key area of concern needing early and proactive attention in 1998-99.
- King County and Seattle launch computer monitor take back pilot, inviting the Division to participate and learn from the pilot.
- The Division participates in a regional multi-stakeholder process on electronics referred to as the Western Electronics Product Stewardship Initiative.
- EPA begins work to launch national dialogue with participation by Product Stewardship Institute (PSI) in 2000. On NWPSC's recommendation, PSI recommends that Snohomish County hold one of two seats in the national negotiation reserved for local governments, with Metro Oregon serving as the official alternate. There were 45 official positions, 15 held by government representatives.
- National Electronic Product Stewardship Initiative (NEPSI) begins in 2001, with goal of an agreement after 8 meetings over a two-year process. Snohomish County coordinates throughout with NWPSC and works in step with Metro Oregon.
- In response to information gained through NEPSI, Snohomish County stops accepting televisions, monitors and computers as waste in 2002, and works with King County and Seattle to develop the Take it Back Network. The Take it Back Network was established as an interim program to a producer responsibility system, and was in part in response to industry's comments on what should be done for a location or state to qualify for manufacturer assistance.
- Through NEPSI and with the assistance of PSI and other stakeholders, the Division advocated that collectors in a product stewardship system, whether a government or

private collector, should not be expected to collect for free, but would need to be compensated for their collection costs. This position ultimately prevails in the NEPSI process.

- King County, Snohomish County and Seattle work to develop pilots with Good Guys, Office Depot and Staples to demonstrate in-store big box retailer collection of electronics. The Good Guys pilot is the first extended in-store collection of televisions in the U.S; the Office Depot pilot evolves into a nationwide extended program with HP, and the Staples pilot eventually becomes an ongoing collection program at all Staples stores nationally.
- EPA asks the Division to advise on a new voluntary incentive program that becomes the Plug into E-cycling Program.
- Through NEPSI the Division partners with the New Jersey Institute of Technology to research and model potential local collection systems.
- EPA recruits electronic manufacturers to participate in a Plug into Ecycling project sponsored by NWPSC and Ecology to develop a plan for establishing a third party organization to provide electronics recycling services in Washington and Oregon. Most major brand owners participate.
- The Division works with individual manufacturers on policy concepts.
- The Division assists in development of proposed producer responsibility legislation that is run in 2004.
- Legislation is run in 2005 and results in a study bill.
- The Division participates in the stakeholder process required by study bill. Ecology recommends a producer responsibility system and legislation.
- The Division continues to work with other stakeholders to refine proposed legislation, which passes in 2006.
- The Division participates in two rule making processes related to implementation of the legislation and local and state promotion of the program, which launches January 1, 2009.

### Additional Electronics

Washington's electronic product recycling law currently only addresses televisions, monitors, computers and laptops. This is a relatively limited list of electronics for which there is concern regarding disposal and benefit from and demand for recycling.

The law currently does not cover small peripherals that the user typically considers part of a computer, such as the keyboard, mouse, speakers, cables and transformer. Nor does it include larger computer peripherals, such as printers or all-in-one devices.

Regarding home entertainment consumer electronics, it does not cover video and DVD players, gaming devices, home music players and a host of new products being unveiled almost every year by this rapidly evolving industry.

It is probable that the current regulations will be amended in the near and long term to address these additional consumer electronics and provide widespread, convenient and no charge recycling through producer responsibility.

There are many other electrical and electronics products that are being covered in producer responsibility systems in other countries. In the European Union, the Waste Electrical and Electronic Directive has resulted in the collection and processing of most electrical products throughout Europe. Regulation in Canadian provinces is also expanding to cover a much wider range of electrical and electronic products.

# ATTACHMENT B

# EXISTING PROGRAMS

## Agricultural Chemical and Pesticide Containers

The Agricultural Container Recycling Council (ACRC) provides periodic collection events and services to farmers for the collection and recycling of HDPE rigid plastic containers. ACRC is a non-profit organization fully funded by member companies and affiliates that formulate, produce, package, and distribute crop protection and other pesticide products.

When these events are provided in the area, the Department of Agriculture, WSU and others promote the opportunity to local agricultural interests.

## Automobiles

EPA Region 10 and EPA Headquarters have begun work to address product stewardship for automobiles focused on the materials of an automobile, not fuel efficiency, which is already addressed in numerous ways. The Division has been participating in an advisory role in the development of this initiative in conjunction with NWPSC and Washington Department of Ecology.

## Batteries and Cell Phones

Batteries pose a risk to the environment when not properly managed, and they are not accepted in the garbage in Snohomish County. Cell phones are one example of a product with an embedded rechargeable battery and cell phones, and other products containing rechargeable batteries are not accepted for disposal.

The Rechargeable Battery Recycling Corporation (RBRC) is an industry organized stewardship organization that provides a vast network of collection sites for the collection of rechargeable batteries, cell phones and other very small devices with embedded rechargeable batteries. RBRC's Call2Recycle program has over 55 drop-off locations for rechargeable batteries within Snohomish County, mostly at retail locations.

The Division has addressed rechargeable batteries and cell phones by:

- Participating in EPA convened stakeholder meetings regarding cell phone recycling.
- Participating in the RBRC program as a collector, submitting collected rechargeable batteries to RBRC, thus reducing costs to the Division.
- Promoting RBRC and other collection sites.
- Advising RBRC on program expansion needs.

- Conferring with RBRC on potential legislation.

Single use (such as alkaline) batteries are also considered hazardous and product stewardship programs for these batteries are needed. RBRC will begin collecting single use batteries in Ontario in 2010, to provide a compliance scheme for all batteries as required by new provincial rules. Radio Shack is piloting collection of all batteries at a limited number of locations. The Division is periodically involved in discussions regarding establishment of product stewardship programs for single use batteries.

**Carpet**

Next to aluminum, the EPA's Waste Reduction Model (WARM) shows that recycling carpet has the greatest greenhouse gas reduction benefits compared to other materials. The West Coast Forum on Climate Change and Materials Management has prioritized work on carpet, and carpet has been identified as a priority material through a number of state climate action plan processes, including recommendations from the State's Climate Action Team. Even before greenhouse gas emission concerns were widely understood, carpet was an early candidate for product stewardship because it is a bulky item that represents a cost to generators for handling and disposal and because certain carpet manufacturers adopted product stewardship as an operating principle, offering early take-back programs and recycled content products. In January 2002, a Memorandum of Understanding was signed by representatives of government agencies, carpet manufacturers, recyclers, and other key participants to increase the amount of reuse and recycling of post-consumer carpet and reduce the amount of waste carpet going to landfills. This resulted in formation of the industry stewardship organization, the Carpet America Recovery Effort (CARE). Unfortunately, the goals of the MOU have been unmet and most carpet continues to be disposed. Lack of industry financing, local processing and policy to set a level playing field among manufacturers has stymied widespread carpet recycling in Washington.

The Division is currently participating in a Northwest Carpet Recycling stakeholder process convened by City of Seattle and King County that includes significant participation by the major carpet manufacturers and local and national recyclers. A Northwest Carpet Recycling Strategy is being developed as part of the process.

The existing Carpet Memorandum of Understanding expires in 2012 and CARE is convening a process to develop a new MOU to cover the next ten-year period. The Division is participating in this process directly or indirectly through the Northwest Product Stewardship Council and coordinating with representatives from the City of Seattle and Department of Ecology.

**Gas Cylinders**

Gas cylinders are not accepted for garbage disposal in Snohomish County and only propane tanks are accepted at SWD facilities for recycling. Many households have refillable propane gas tanks for use with barbecue grills and other appliances. Many

others use non-refillable one-pound gas cylinders (which can contain a variety of gases) for camping, and still others use larger propane tanks for their RV's, heating, or mechanical purposes. Disposing of cylinders (no matter the size) requires caution, as leftover gas is likely to combust if cylinders are punctured and/or ignited. Accidentally shredding some kinds of gas cylinders can result in explosions powerful enough to damage equipment and buildings, and place waste workers at risk of serious injury.

In 2009, the Division participated in several stakeholder calls and a day-long stakeholder meeting convened by PSI with industry leaders to seek product stewardship solutions. Participating stakeholders included representatives from tank manufacturers, tank refurbishers, tank exchange operations, retailers, state and local government, industry associations, and others.

**Packaging**

Packaging comprises 22-25% of the waste stream in Washington State and beverage containers represent 25% of the packaging stream. Beverage containers also comprise a large percent of the litter stream, 14-31%. Statewide recycling rates for aluminum cans and plastic beverage containers remain strikingly low, at 33% and 32%, respectively. Plastic packaging is a contaminant for organics processing facilities and contributes considerably to marine debris.

Packaging increasingly is a concern of the public and elected officials. Concerns include the amount and waste of non-recyclable packaging, low recovery rates for beverage containers and other recyclable packaging materials, contribution to litter and marine debris, contribution to greenhouse gas emissions, and increasingly, the toxicity of packaging, including packaging materials, inks and adhesives.

The NWPSC, in partnership with EPA and other parties, convened a process with industry stakeholders to determine possible pilot programs to assess incentives other than deposits to increase recovery of used beverage containers. For a variety of reasons, this effort was unsuccessful.

The Division and NWPSC have participated in discussions and meetings of the Sustainable Packaging Coalition (SPC), predominately made up of major product and packaging producers and retailers. In 2009, the NWPSC and SPC, in conjunction with EPA, provided a sustainable packaging training for Washington and other stakeholders in Seattle.

EPA has launched a national multi-stakeholder dialogue process on Sustainable Financing for Municipal Recycling of Packaging Materials, which is addressing product stewardship approaches. The Division is participating in the process in partnership with the City of Tacoma and Chittenden County, VT, and is coordinating this effort with NWPSC and the Department of Ecology.

## Paint

Paint includes non-toxic products such as latex-based paint, which cannot be disposed as a liquid and represents a valuable resource that can be reused and recycled, and oil-based paints and coatings that are highly toxic or flammable and must be managed as a hazardous waste if disposed. In the past, paint has been the greatest quantity of material handled at Snohomish County's Moderate Risk Waste (MRW) Facility. In 2008, vendor costs alone for transporting and processing paint collected at this facility cost the Division over $200,000. Staffing, supplies and additional supervision of corrections inmates to bulk collected paint were additional costs. To reduce these costs, the Division discontinued accepting latex paint at its MRW facility in mid 2009, and since other options don't currently exist, now recommends that residents dry out their unused paint and place the dried paint and containers in the garbage. Residents may be unwilling to do so, and will continue to stockpile paint, and if they do follow these instructions, the resources and energy embodied in the paint (and paint cans) are lost for reuse and recycling. Fortunately, an industry managed stewardship program is anticipated to be established in Washington in the next few years, in part as a result of the Division's activities.

Beginning in December 2003, PSI facilitated a national dialogue, referred to as the Paint Product Stewardship Initiative (PPSI), aimed at reducing the generation of leftover paint, while increasing reuse and recycling opportunities. The Division participated through the Northwest Product Stewardship Council and by coordinating with Ecology's representative and providing information and comments when requested. Due to the Division's experience with electronics negotiations, PSI requested the Division to become an active participant in the dialogue as negotiations began in earnest for a MOU, and the Division began active participation in early 2007. The PPSI efforts resulted in an historic agreement in October, 2007, among paint manufacturers, government agencies, paint recyclers, painting contractors, and other participants. The Memorandum of Understanding, of which Snohomish County is a signatory, calls for the establishment of an industry-funded Paint Stewardship Organization that will collect and manage leftover paint using a pass-through cost to consumers. The agreement also committed stakeholders to conduct a demonstration project in an initial state, with the full program to be rolled out to additional states following an evaluation period.

The paint industry selected Minnesota for the demonstration state and also determined that legislation was necessary to implement the program. Industry-drafted legislation was introduced and while it passed the legislature in Minnesota, it was vetoed by the governor. Similar legislation was introduced and passed in Oregon in 2009, making it the demonstration state for the paint collection program.

The Division continues to take a leadership role regarding implementing paint product stewardship by:

- Continuing to participate in the Paint Product Stewardship Initiative and coordinating with other stakeholders and NWPSC.

- Participating in advisory and evaluation activities on the roll-out of the Oregon program.
- Direct discussions with the paint industry and others on legislation to be introduced in 2012 legislative session.

**Pharmaceuticals**

Proper handling of pharmaceuticals is an exceedingly complicated and important challenge. In the past, pharmaceutical disposal was meant to be done through flushing and as a result, no regulations were developed for the collection and proper disposal of pharmaceuticals. As increased awareness and evidence regarding pharmaceuticals in surface water and drinking water has emerged, the Federal government, pharmaceutical companies, and all other parties agree that medicines can no longer be flushed, and naturally, many parties jumped to the conclusion that pharmaceuticals must instead be disposed in the garbage or taken to local government hazardous waste facilities. However, these disposal options are also unsuitable. Garbage disposal is of great concern to law enforcement due to diversion and crime potential; there are concerns regarding potential accidental poisonings by children and pets; and in those areas where garbage is landfilled and leachate is discharged to water treatment facilities, pharmaceutical residues will still enter water systems. There is also little evidence that residents are willing to dispose of pharmaceuticals in garbage, or will follow special preparation instructions, such as mixing it with kitty litter. As well, MRW facilities are unsuitable for a variety of reasons, including diversion potential, risk to staff, lack of convenience, and last but not least, collection of some “controlled substance medications” would be illegal. Along with these disposal issues, addressing proper disposal of unwanted pharmaceuticals in homes to get them “out of harm’s way” has become a local priority.

The Division has taken a lead role in addressing this issue in cooperation with many other parties. A partial list of key Division activities include:

- Worked with the NWPSC to research product stewardship collection programs worldwide and in British Columbia. Observed British Columbia Medication Return Program and conducted tours of program for elected officials and other interested stakeholders.
- Worked with other stakeholders to develop the Pharmaceuticals from Households: A Return Mechanism (PH:ARM) pilot to demonstrate in-pharmacy collection of unwanted drugs. A partial list of pilot team activities includes coordination with DEA and the Board of Pharmacy, developing prototype collection containers, developing collection protocols, arranging for disposal, and developing and distributing promotional materials. Through the pilot, Group Health Cooperative of Puget Sound and Bartell Drugs collected non-controlled drugs at 37 pharmacies throughout Washington, including five in Snohomish County. During the two-year pilot, 15,798 pounds of drugs and their packaging was collected. The Division succeeded in demonstrating how a pharmacy-based program could be established and showed

high demand and consumer satisfaction with such a program. At the conclusion of the pilot, Group Health and Bartell Drugs decided to continue the program in anticipation of manufacturer assistance, and have collected an additional 15,000 pounds.

- Sponsored a state-wide multi-stakeholder workshop on establishing a product stewardship program for medicines in April 2008, attended by over 100 participants.
- Assisted in the establishment of the www.medicinereturn.com website.
- Represented the NWPSC in the Oregon Pharmaceutical Disposal Stakeholder process to develop a plan and legislative proposal for Oregon.
- Actively participated in the PSI-convened national Product Stewardship Pharmaceuticals Initiative in 2008, and in committee work as it reconvened as workgroups working through conference calls in 2009 (due to economy).
- Participated in numerous meetings with manufacturers and other stakeholders to discuss policy options.
- Assisted with policy proposals resulting in introduced legislation in 2008, 2009 and 2010.
- Partnered with the Snohomish County Sheriff's Office, Snohomish Health District and Snohomish Regional Drug Task Force to establish law-enforcement based collection of prescription drugs, including controlled substances, at all police departments and sheriff's precincts in Snohomish County, for a total of 28 law enforcement locations. This not only provides collection options but also demonstrates how manufacturers could partner with law enforcement agencies to provide collection for controlled substance medications.

Roosevelt Landfill, where Snohomish County currently sends its waste for disposal, is a lined landfill that also recirculates the leachate produced, thus preventing any contamination of ground water.

### Phone Books

In recent years, the number of phone books delivered to households and businesses has increased, with two or more competing companies now publishing and distributing books in similar or overlapping geographic areas. Most residents and businesses lack a way to "opt out" of receiving those they don't want. In addition, phone book recycling presents challenges. Phone books are made from a low grade of paper, and are sometimes distributed with materials that become contaminants in the recycling process (e.g. magnets and plastics), which presents a problem for certain end-use applications. Source reduction is a key approach to addressing phone books, as not publishing a phone book reduces greenhouse gases by about three times as much as recycling.

At the request of King County, several states and the National Waste Prevention Coalition, PSI convened a series of stakeholder meetings that included the major trade

organizations and individual directory companies. The Division participated in these meetings and related processes.

The goal of the dialogue has been to develop a collaborative agreement to minimize the environmental impact of directory production and distribution. Following the second meeting, representatives from the two major industry trade associations issued Joint Environmental Guidelines that include a voluntary pledge by individual publishers to address the following key issues:

- Opt-out (subscribers can request NOT to get the phone book).
- Environmental production components (e.g. use of recycled content, soy inks).
- Best practices for recycling.

The process has not yet yielded a joint Memorandum of Understanding and PSI has concluded that states will continue to pursue legislation to address the issue. Such legislation has been introduced in Washington State in recent sessions.

**Medical Sharps**

Medical sharps are not accepted for disposal at Snohomish County facilities but continue to be a problem due, in part, to high costs and lack of options for the public for proper handling and disposal. Disposable needles, syringes and lancets (collectively called “medical sharps”) enter the waste stream primarily from those managing their own health care at home by self-injecting medication. Improper disposal includes discarding in garbage, placing in recycling bins (in plastic containers), and flushing down toilets.

These improper disposal methods create the potential for injury or the transmission of infectious diseases to residents and their families, sanitation workers, sewage treatment plant operators, and waste management personnel at transfer stations, recycling plants, and disposal facilities. They are also a hazard for hospitality workers at restaurants, hotels, airports, and other locations.

The Division participated as an observer in a national dialogue process on medical sharps convened by PSI with the Coalition for Safe Community Needle Disposal. Participating stakeholders included pharmaceutical and device manufacturers and companies, retailers, sharps collection services, medical associations, local, state and federal government agencies, and solid waste and recycling companies. PSI has concluded that the costs of a program should be borne by pharmaceutical manufacturers by internalizing costs into the cost of self-delivery devices and that legislation is necessary to bring about such a program.

## Mercury Lighting

There are great energy savings and greenhouse gas reductions to be attained by using fluorescent lights, such as CFLs, so incandescent lighting is being phased out and millions of CFLs are being sold in the market. However, these lights contain mercury, are not legal to dispose in garbage in Snohomish County and the current collection infrastructure is inadequate for capturing a high percentage of the mercury lights. Lack of adequate collection opportunities could create a disincentive for consumers to use these energy-saving products as they become aware that they contain mercury and require special handling. While the amount of mercury in each bulb is very small, mercury is a powerful neurotoxin and any exposure should be avoided. Bulbs and tubes improperly disposed in garbage will be broken long before reaching the landfill and can result in direct exposure by residents and their families, solid waste collection company employees, and Division facility employees and customers.

For these reasons, the Division has been long at work to address more effective means of collecting mercury lights for proper management. Activities have included:

- 1997-98 – Mercury lighting banned from disposal.
- 2005 – The Division participates in pilot project to test a return-to-retail recycling system for fluorescent bulbs and tubes. The project involved multiple utilities and local government agencies (including PSE, Seattle City Light, Snohomish, King, Thurston and Kitsap Counties). The project resulted in the formation of the Take it Back Network (TIBN) for fluorescent bulbs and tubes.
- 2006 – With King County as lead, TIBN for fluorescent bulbs and tubes launches in September and includes several Snohomish County locations.
- 2007-08 – Meetings held with utilities, local governments, Washington Retail Association, and NGOs to discuss product stewardship approaches to mercury lighting products.
- 2007 – Climate Advisory Team (CAT) recommendations include need for product stewardship system for mercury lighting, to responsibly attain GHG emission savings from use of mercury lighting.
- 2008 – PSI national lighting dialogue is convened and is cosponsored by Ecology. To ensure wide participation by Washington stakeholders, two of the national meetings are held in Washington.
- 2008 – Home Depot begins voluntary collection of bulbs at three stores in Snohomish County. PSI convenes call for HD to discuss its program with stakeholders.
- 2008 – CAT recommendations from Beyond Waste Implementation work group includes product stewardship legislation for mercury lighting. Draft text is included in CAT report.
- 2008-2009 – Snohomish PUD begins collection of CFLs at billing offices.

- December 2008 – Snohomish County SWD commissions research on fluorescent lamps markets and sales.
- 2009 session – With CAT draft legislation as basis, Division works with a team to formulate a bill that was introduced in 2009 session. Support for establishment of such a program was included in Snohomish County's 2009 legislative agenda.
- September 2009 – Attended stakeholder meeting to provide comments to Ecology on state program concepts.
- December 2009 – Ecology submits recommendations to Legislature recommending producer responsibility system for mercury lighting.
- 2010 session – The legislature passed ESSB 5543, the second producer responsibility law passed in the U.S. to finance collection of mercury lighting.

While the activities above, prior to passage of legislation, have in part increased the number of collection sites for CFLs (but not tubes) to a total of 20 voluntary retailer and utility locations beyond the Division's facilities, none of these sites can be considered to have sustainable funding for the number of bulbs that will require collection in the future. They can be cancelled at anytime and do not provide collection for the many tubes used by residents.

The Division will continue work toward implementing a sustainable system for collection of mercury lighting through participating in upcoming rule making processes and assisting with implementation of ESSB 5543.

**Mercury Thermostats**

A significant number of thermostats still in use contain mercury, a potent neurotoxin. The average thermostat contains four grams of mercury. Improper waste handling and disposal of mercury thermostats will result in mercury releases, and only a small fraction of mercury thermostats are being collected.

Thermostat manufacturers have voluntarily formed an industry-funded program run by the Thermostat Recycling Corporation, but the numbers of thermostats collected are low compared to the number estimated that need to be collected. There are three major factors identified for the poor recycling performance: lack of awareness of thermostat recycling programs, an inadequate number of convenient collection locations, and insufficient motivation.

The Division has and continues to address mercury thermostats by:

- Coordinating with the NWPSC and Ecology to provide comments to the PSI-convened national stakeholder meetings on mercury thermostats. This multi-stakeholder group reached agreement on multiple priority projects and initiatives intended to increase the recycling of mercury thermostats and ban the sales of new mercury thermostats. Agreements included efforts by Thermostat Recycling

Corporation (TRC) to expand the number of thermostat collection sites at heating and cooling contractor and wholesaler locations and to expand the TRC program to local household hazardous waste facilities nationwide. In response, the Division:

  - began submitting mercury thermostats at no charge to TRC, cutting costs to the Division for mercury recycling.
  - recruited, in conjunction with Snohomish Health District, additional HVAC wholesale collection locations to participate in the TRC program and provided collection containers.
  - conducts periodic mailings and outreach to HVAC and other contractors to inform them of mercury thermostat disposal ban and collection locations.

- Participating in PSI-convened discussions on developing and requiring performance measures to increase the collection and recycling rate.
- Direct communications with manufacturers on policy approaches.
- Assisting with the development of model legislation to address mercury thermostats.

As a result of these efforts, there are now eight HVAC wholesalers that provide collection within Snohomish County and 23 additional locations within 25 miles of Everett. The Division also participates in the program, as do several large HVAC contractors, as an individual company and not as a collection site.

# ATTACHMENT C

# FRAMEWORK

As product stewardship programs are established across Canada and in the U.S., it has become apparent that there are common characteristics between the programs even though they address different types of products. To propose a means to streamline the process for incorporating products, harmonize state legislation, provide guidelines for policy development, and to provide a general roadmap for industries involved in product stewardship systems, framework principles were developed by the Northwest Product Stewardship Council and the California Product Stewardship Councils. These principles have now been adopted by all stewardship councils in North America and are widely used by other stakeholders. The principles are meant to guide individual product policies so they are consistent, and to guide development of framework policies that can be applied to multiple products under one regulation.

The principles cover producer responsibility, the development of stewardship plans, shared responsibilities by other parties, governance and oversight, financing, and environmental protection.

One concept is that state framework legislation establishes requirements related to product categories that are selected for coverage by a product stewardship system, and then the legislature designates products to be included over time. Another concept is that requirements are established in legislation, and the state's environmental agency designates products to be covered through rule making.

A framework policy was called for in the State's Climate Action Team (CAT) process in 2007, and was drafted as a model by the CAT's Beyond Waste Implementation Work Group in 2008. This was passed forward as a legislative proposal in the CAT's final report.

Framework proposals are currently under development in California, Maine, Minnesota, Oregon and Washington, and the Division is participating in efforts to seek stakeholder input and harmonize the various state proposals.

# WASTE PREVENTION

## SUMMARY

Waste prevention is an important aspect of resource management because it preserves the intrinsic value of manufactured and natural products, avoids the need for collection and processing of materials that would otherwise be treated as recyclables or wastes, and is the highest priority activity in the waste management hierarchy.

The recommendations made in this technical memo address the need to conduct more promotion and public information for specific activities (backyard composting, smart shopping techniques, waste prevention measures by businesses, waste exchanges and lifespan labeling). Other recommendations address the need for the county and cities to show leadership with procurement policies, the need to target specific products for waste reduction, the need for more options for volume-based garbage collection fees, and the need to monitor the results of waste prevention efforts.

## BACKGROUND

A clear definition for waste prevention has not yet been adopted in Washington State. There is a definition for "waste reduction," which is defined to include activities and programs that reduce the amount of waste generated (including reuse) and also activities and programs that reduce the toxicity of wastes that are generated. The term "waste prevention" is used here to allow a focus on solid wastes, and programs addressing toxic wastes are addressed in the Moderate Risk Waste plan.

Waste prevention is considered by many to be one of the most important waste management methods, although it's also typically one of the more difficult to accomplish or to measure. Since waste prevention methods avoid the generation of wastes in the first place, it generally requires less energy and costs than even recycling and composting because it avoids the need to provide collection services.

### Goals and Policies for Waste Prevention

Goals and policies specific to waste prevention include:

- Goal 1: Support actions to reduce climate change and promote sustainability.
- Policy 1-4: Continue to offer and develop programs that encourage waste prevention.

- Related policies from other technical memorandums include:
  - Policy 1-1, Climate Change: Support efforts and actions by County and other agencies to reduce GHG emissions and to lessen and prepare for the impacts of climate change.
  - Policy 1-3, Product Stewardship: Continue to be a leader in product stewardship initiatives and legislation.
  - Policy 2-8, Moderate Risk Waste: Continue efforts to reduce the generation and toxicity of moderate risk waste and to ensure that convenient, cost effective and sustainable options for its safe management are available.

### Regulations for Waste Prevention

Washington State's goal of 50% recycling, composting and waste reduction must be addressed in solid waste plans, but each county is expected to set their own goal based on local conditions and constraints.

Waste reduction has the highest priority according to the waste management hierarchy established by State law (RCW 70.95.010 (8)).

## EXISTING PROGRAMS AND ACTIVITIES

### Waste Prevention Methods Used in Snohomish County

The basic methods for waste prevention are:

1) reuse products for their original or compatible purposes.
2) reduce consumption by using alternatives (product substitution) that generate less waste, or reduce consumption of non-sustainable materials and products.
3) handle resources on-site, so that the product or material never becomes a waste.
4) change manufacturing practices to decrease the amount of material used to produce or package products, and to increase the durability or lifetime of products.
5) conduct support programs, such as public education and financial incentives.

**Reuse:** There is a huge amount of activity in the area of reusing products. This occurs through non-monetary methods (gifts, donations, "hand-me-downs," etc.), a wide variety of personal and commercial retail activities, and also through services that clean, repair or rent various products. The following list hints at the magnitude of activity in this area:

- linen and diaper cleaning services
- tire retreaders
- repair services
- refilling services (such as printer cartridges)

- rental shops
- secondhand stores, bookstores and consignment shops
- person-to-person transfers (sales or gifts)
- internet auction websites (e-Bay and others)
- garage sales, want ads and swap meets
- antique stores
- pawn shops
- charity and thrift stores
- clothing and food banks
- material exchanges
- used car, truck and boat dealers, including auto wrecking and parts dealers
- precious metals and coin dealers
- mail services that reuse Styrofoam “peanuts” and “bubble wrap”

More specific examples of how these are occurring in Snohomish County include:

**Reuse of Polystyrene Packing “Peanuts” and Boxes**: Most pack-and-ship stores such as Mailboxes Etc. and UPS will accept clean Styrofoam peanuts for reuse in customer shipments. The Plastic Loose Fill Council's "Peanut Hotline" provides information about local companies that will take unwanted packing peanuts.

**Computer Reuse**: Working computer equipment can often be reused. This is even better for the environment and provides many social benefits. Reused computers help close the "digital divide" by making equipment available at lower cost or free to those with lower incomes, youth, non-profit organizations and aide programs. A number of E-cycle Washington and Take it Back Network collectors are engaged in legitimate computer reuse activities. An especially unique non-profit reuse organization is InterConnection. More information on the E-cycle Washington program is discussed in the Product Stewardship technical memo.

**Redistribution of Food**: Volunteers of America, United Way, Salt of the Earth, and Food Lifeline are a few of the agencies that distribute food throughout Snohomish County. Food banks distribute food in the following cities: Arlington, Darrington, Edmonds, Everett, Granite Falls, Lake Stevens, Lynnwood, Maltby, Marysville, Monroe (Sky Valley), Mountlake Terrace, Mukilteo, Snohomish, Stanwood/Camano Island, Stillaguamish Seniors, and Sultan. Food banks distribute more than 24 million pounds of food each year to nearly 300 community agencies such as local shelters, neighborhood food banks, and meal programs. Food banks typically handle all the intermediate steps of transportation, storage, repackaging and distribution of food to these agencies so that they can concentrate on getting food to the hungry people who need it the most.

**Office Reuse Activities**: In both the public and private sectors, reuse activities include reusing blank sides of paper for drafts or converting one-sided copies into

notepads, increasing use of electronic communications (email), increased double-sided copying, increased use of recycled paper, avoiding non-recyclable packaging, and reuse of office equipment. A related example is Verizon's facility in Arlington that reclaims small parts from activities throughout the state (small parts such as nuts and bolts are sorted, re-packaged and sent back out to regional operation centers).

**Product Substitution:** One example of a product that creates less waste is the increasing usage of durable grocery bags. Edmonds recently became the first city in the state to ban plastic grocery bags at retail stores. The ban won't affect plastic bags for produce and bulk food, which will continue to be available to shoppers. Stores can still offer free paper bags. In approving the ban, Edmonds joins cities and countries around the world that have banned or discouraged disposable plastic bags, including France, Germany, India and China. San Francisco banned them in 2007, and a similar ban goes into effect in Los Angeles next year.

**On-Site Resource Management:** This includes backyard composting (the composting of yard debris on the property where it was generated), which is typically defined as a waste prevention measure because it avoids treating yard debris as a waste. The County provides educational materials for on-site composting, has distributed composting bins, and works with several groups (Master Gardeners, Master Composters) to encourage these types of practices.

In an industrial setting, raw materials or products are often reclaimed from floor sweepings or other activities. Again, this avoids treating materials as a waste. Another example in the industrial sector is the use of solvent stills that reclaim solvents.

Several examples of on-site management exist in the construction industry, one of the largest activities being on-site grinding and reuse of concrete and asphalt on that site.

**Manufacturing and Packaging:** "Lightweighting" of plastic and glass bottles and aluminum cans has been going on for years. Likewise, the products themselves are being made lighter through the use of composite materials (for products such as planes and cars) and other processes. Product stewardship approaches (as well as economic and corporate green initiatives) can drive waste prevention activities, including eliminating unneeded packaging, toxics and materials; uniformity of standard parts (such as recharging apparatus for cell phones); and education by manufacturers on refining purchasing to reduce waste (as the paint industry is doing where product stewardship programs have been legislated).

**Support Programs:** Activities that support waste prevention include public education and financial incentives.

**Public Education**: Public education activities are often directed at waste prevention practices, and are an important tool for promoting waste prevention. Waste prevention is often accomplished by changing behavior (consumption

patterns) so that new habits or practices are developed that generate less waste. These changes often require education and promotion of new ideas or methods.

Three schools within Snohomish County have signed up to participate in the Washington Green Schools program. This is a web-based, five-level program to provide resources for schools to become certified as a Washington Green School. The program assists schools in assessing and taking actions regarding energy efficiency, recycling and waste reduction, toxics reduction and indoor air quality and water quality and conservation. This is a non-profit, all volunteer program initially funded through the Department of Ecology. There are many opportunities for cities to partner in this program, utilizing their own outreach efforts to achieve the same messages/goals as those in the program.

In 2008, the City of Everett used a $107,813 grant for a commercial waste reduction and recycling project and a public waste reduction and recycling project. These projects will provide education and assistance and result in expansion of waste reduction and recycling practices at 25 businesses, 50 multifamily properties, and 10 schools. The City of Arlington used a $16,455 grant for a commercial waste reduction and recycling project and a public waste reduction and recycling project. These projects provided education and assistance and resulted in expansion of waste reduction and recycling practices at seven businesses and ten schools.

**Financial Incentives**: There is often a financial incentive to reduce waste in terms of reducing the cost to the consumer (for activities such as buying in bulk, buying used goods, or renting instead of purchasing an item), but within the solid waste field a financial incentive can also be created through the use of volume-based or "variable rate" disposal fees.

"Variable rates" or "volume-based rates" are where households are charged significantly 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. Avid recyclers or households that minimize waste can also choose a "mini-can" rate (20-gallon can emptied once per week) in the areas served by Waste Management, Rubatino or Allied Waste.

**Waste Prevention Activities by State, Federal and International Agencies**

**Paint Reuse:** Paint reuse is being promoted nationally and can be accomplished by paint exchanges ("drop and swap" programs), paint donations and resale and paint consolidation. Additional details about these and other activities can be found in a report by the Product Stewardship Council and funded by the National Paint and Coating Association, which is available at http://www.paint.org/pubs/paint_reuse.pdf.

**Packaging Reuse:** The Food Standards Industry in England conducts rigorous tests on the reuse of food packaging. They recommend that consumers re-use containers

and packaging on a like-for-like basis. For example, if a container was used for cold food when purchased, it shouldn't be re-used for hot food. Their extensive website is frequently updated and can be found at http://www.food.gov.uk/.

**Washington Governor's Climate Action Plan, 2009:** The Beyond Waste Plan recommends collaboration with retailers to achieve consumer waste reduction. The Beyond Waste Plan states that at least 50% of household wastes come through retailers, and hence retailers could be asked to help meet a 15% reduction goal. By working with retailers, greenhouse gas reduction goals could be achieved through packaging and product reduction strategies. Two specific areas for waste reduction are packaging and food waste.

**Packaging Reduction**: An example of collaboration with retailers is the "Glassrite Bottle Initiative" in the United Kingdom. Retailers worked with wine producers to design lightweight wine bottles. For products that were imported, wine was shipped in bulk and then bottled in the UK. The result was reduced materials and energy use equating to 788,229 metric tons of CO2 equivalent reduction per year. Pursuing a strategy like this could expand to other products and packages as well as pallet and other shipping materials reduction strategies. It could also include working with retailers to donate returned products to reuse organizations instead of disposing of them, and other waste reduction and education measures. Also, Washington could work with California and Oregon on regional efforts.

**Sustainable Consumption**: The Environmental Protection Agency has been meeting with waste prevention leaders across the nation to define "Sustainable Consumption." This is the level of flow and degradation of materials through our economy that maintains or restores the environment, economic vitality and quality of life for current and future generations.

The group is now discussing the question of adding a second part to the sustainable consumption definition: "Efficiency gains and technological advances alone will not be sufficient to bring global consumption to a sustainable level; changes will also be required to consumer lifestyles, including the ways in which consumers choose and use products and services. To achieve sustainable consumption, we will need to focus on three areas:

- Eliminating unnecessary consumption;
- Greening the remaining consumption;
- Shifting to less consumption in general."

More information is available on the EPA website at http://www.epa.gov/sustainability/basicinfo.htm.

### Private Sector Waste Prevention Activities

**Seattle Yellow Book**: An opt out list for phone books allows residents and businesses to stop delivery of unwanted yellow pages phone books. Yellow pages publishers pay the cost of operating the registry.

**Wal-Mart**: Wal-Mart announced a five percent reduction in total packaging over a five year period beginning in 2008, indicating that the company has heard the message that it must define clearly to the public its goals and timetables. Wal-Mart is keeping their promise to be an environmentally responsible was in the stores, products and their supply chain.

Beginning in February 2008, Wal-Mart announced it will begin grading suppliers on their environmental performance, and adjusting business conducted with them accordingly. The grading began one year after the retailer introduced its green score card and distributed it to its suppliers, allowing them to familiarize themselves with new packaging and gas-usage guidelines. The guidelines could change an entire company's packaging practices because suppliers will not want to package products in two different ways. For more information see http://walmartstores.com/sustainability.

**Food Manufacturing Packaging Reduction**: Private efforts in food packaging reduction were noted in a recent survey of food manufacturing companies. The survey found that 53 percent of the companies have altered the packaging of their individual products in the past two years in order to facilitate a more sustainable design. 67 percent of the same surveyed companies have also altered the packaging used when shipping products in the last two years. The driving factor behind packaging waste reduction is motivated by the desire to save money on packaging materials (54 percent). Companies also made waste reductions for varying other reasons, including to reduce the quantity of waste in the plant, to support eco-friendly marketing campaigns, and to increase shipping efficiency.

## PLANNING ISSUES

### Near-Term Planning Issues

Current issues related to waste prevention include:

- Despite its high priority, waste prevention is a difficult topic for municipalities to address because it often requires either additional public education efforts (or mandatory requirements (which are usually unpopular). Some activities may also be interpreted as anti-business (for programs targeting a reduction in use of a specific product).
- How to encourage and support retailer/manufacturer waste reduction efforts through supply chain certification and re-design of products and packaging.

### Long-Term Planning Issues

Emerging long-term issues related to waste prevention include:

- Measuring the results of waste prevention programs is very difficult, and hence it is difficult to demonstrate the cost-effectiveness or productivity of specific waste prevention techniques.
- Product stewardship can lead to waste prevention by spurring manufacturers to take an increasing interest in ease of disassembly, recyclability and related issues.
- The current economic problems have created a situation where people and businesses are purchasing fewer products and hence are creating less waste. It is uncertain at this time whether this change is temporary or permanent.

## ALTERNATIVES

### Alternative A – Promote Smart Shopping

The County (and cities) could conduct more promotion on the subject of smart shopping, such as using durable grocery bags, buying in bulk, etc. Businesses could be encouraged to promote the use of durable grocery bags and to offer durable bags for customer use (as many grocery stores are already doing). The city or county could conduct a campaign that offers reminders to citizens to use their reusable shopping bag and coffee mugs, and to purchase items in bulk while being mindful that “buying in bulk” can often result in waste (products expire if stored too long and perishables rot if not used in time, for example).

It is important that the businesses buy into and promote the use of durable bags and buying in bulk. A pilot study or survey could be used to determine the motivations and barriers for businesses to participate more fully in this program.

If the promotions do not make a difference, the County or cities could exercise a ban on plastic bags, such as the plastic bag ban in the City of Edmonds, or charge a fee for plastic bags, as being considered by the City of Seattle.

### Alternative B – Volume-Based Collection Fees

It has been well demonstrated that if residents pay more for garbage collection, or pay on the basis of the volume of garbage disposed, an incentive is provided to reduce the amount of waste going into the garbage can. In most of the areas of Snohomish County, volume-based disposal fees are already available, and residents can typically go as low as a 20-gallon can for weekly garbage collection. Further options to improve the waste reduction rate could include:

- Offering a 10-gallon can every week. While customers find containers without wheels to be more difficult to use, these cans are also smaller and easier to carry. Some residents may want to move to a smaller can to outwardly demonstrate their interest in recycling and waste reduction, but more will do this for the cost savings. The City of Auburn provides an example of this when they offered 10-gallon cans for garbage, nearly 10% of the residents switched to this size. The individual would save money, though system-wide savings could be small unless the service was popular enough to substantially reduce the number of garbage truck trips required. Staff handling the can size changes could promote the small can option. Implementation of this option would include analysis of the funding and rate impacts of volume-based collection fees for 10-gallon cans in addition to the projected waste prevention benefits.
- Transitioning the County service levels to every other week (EOW) garbage collection throughout the County. The City of Renton (King County) piloted and then successfully implemented EOW waste collection citywide. They complement the EOW garbage collection with EOW recycling collection, and weekly food and yard waste collection. Alternatively, the City of Richland (Benton County) had the opposite experience. They discontinued a pilot EOW garbage collection program due to a high degree of customer dissatisfaction without comparable benefits. Implementation of this option would include analysis of the funding, rate and customer service impacts of EOW garbage collection in addition to the projected waste prevention benefits.

**Alternative C – Government Sector Leading by Example**

Local government can set an example for local businesses and organizations, and become an even greater force in the marketplace, by broadening and upgrading procurement policies. Local and state governments spend on the order of $400 billion a year. King County has a long-standing, successful “green procurement” program with case studies and resources easily duplicated by the County and cities. The State of Washington has resources also. In addition, examples of Environmentally Preferable Purchasing policies and implementation guidelines in place in many other jurisdictions are available from a variety of sources.

The jurisdictions could target products that may include goods that:

- allow for greater waste reduction, such as purchasing copy machines that make double-sided copies more easily and setting duplex copying as default.
- require replacement or repair less often, such as long-life fluorescent bulbs, rechargeable batteries and durable furniture.
- are easily repaired, such as machinery with standardized, replaceable parts.
- can be reused, such as washable plates and glasses.
- have already been used.

- can be remanufactured or by making use of existing remanufacturing programs, such as refilling printer cartridges, re-refining motor oil, and retreading tires.
- are nontoxic or less toxic, such as many cleaning agents and solvents now available.
- are Energy Star certified products.

ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy that helps consumers save money and protect the environment through energy efficient products and practices. Energy Star products include appliances, building products, computers, electronics, heating and cooling, lighting, fans and plumbing. For the home, energy efficient choices can save families about a third on their energy bill with similar savings of greenhouse gas emissions, without sacrificing features, style or comfort. If looking for new household products, look for ones that have earned the ENERGY STAR. They meet strict energy efficiency guidelines set by the EPA and US Department of Energy. For businesses, a strategic approach to energy management can produce twice the savings — for a business' bottom line and the environment — as typical approaches, EPA's ENERGY STAR partnership offers a proven energy management strategy that helps in measuring current energy performance, setting goals, tracking savings, and rewarding improvements. EPA provides an innovative energy performance rating system which businesses have already used for more than 130,000 buildings across the country. EPA also recognizes top performing buildings with the ENERGY STAR.

The Electronic Product Environmental Assessment Tool (EPEAT) is an easy-to-use, on-line tool helping institutional purchasers select and compare computer desktops, laptops and monitors based on their environmental attributes.

EPEAT was developed using a grant by EPA and is managed by the Green Electronics Council (GEC). It is dedicated to informing purchasers of the environmental criteria of electronic products. GEC's EPEAT Web site provides guidance for purchasers and manufacturers and hosts the database of EPEAT registered products. EPEAT-registered computer desktops, laptops, and monitors must meet an environmental performance standard for electronic products.

Staples Business Delivery is a unified selling channel that combines staples.com and Staples' catalog business, allowing customers from small to medium–sized business to order office products and services from their home or business at their own convenience. Along with a myriad of corporations working toward the green effort, Staples is an example of practical sustainability. They reduce greenhouse gas, recycle ink and toner cartridges, recover electronic waste, copy and print with 50% post consumer paper.

Local jurisdictions could also develop more comprehensive in-house waste prevention programs. By monitoring and reporting on effectiveness, costs, avoided costs, and

program revenues for the waste reduction programs, the jurisdictions could provide a model for businesses and schools. In-house waste prevention programs can include:

- double- sided copying.
- routing slips instead of circulating multiple copies.
- electronic mail for intra-office messages.
- scrap pads from used paper.
- reusing large envelopes.
- use of very small cans for trash in individual offices, with larger containers provided for recycling.

To ensure the program's continued success, employees need to receive regular updates about new waste reduction techniques. This information could be provided by informational notices or newsletters that are routed electronically to all personnel on a regular basis.

This approach was also recommended by the Snohomish County Green Ribbon Climate Task Force. The recommendations in their report include establishing green procurement policies, encouraging other agencies to do the same, and also to work with local businesses to educate them about green procurement policies (Snohomish County 2009).

**Alternative D – Regional Business Waste Prevention Activities**

To strengthen waste reduction efforts practiced in the commercial sector, the county could work with neighboring counties and others to encourage businesses to use the following practices:

- assign a waste reduction team or coordinator.
- conduct an accounting of materials purchases and waste produced.
- develop a reduction plan targeting specific materials or practices.
- provide employee education.
- provide feedback and evaluation.

Businesses could be divided by large national corporations or local small business and marketing strategies could be tailored to the type and size of business. Businesses that do well with waste prevention and recycling programs could be provided with recognition in the local media or through other means.

Supply chain sustainability is a business issue affecting an organization's supply chain or logistics network and is frequently quantified by comparison with SECH ratings. SECH ratings are defined as social, ethical, cultural and health footprints. Consumers

have become more aware of the environmental impact of their purchases and companies' SECH ratings and, along with non-governmental organizations (NGOs), are setting the agenda for transitions to organically-grown foods, anti-sweatshop labor codes and locally-produced goods that support independent and small businesses. Because supply chains frequently account for over 75% of a company's carbon footprint, many organizations are exploring how they can reduce this and thus improve their SECH rating.

For example, in July, 2009, the U.S. based Wal-Mart corporation announced its intentions to create a global sustainability index that would rate products according to the environmental and social impact made while the products were manufactured and distributed. The sustainability rating index is intended to create environmental accountability in Wal-Mart's supply chain, and provide the motivation and infrastructure for other retail industry companies to do the same.

**Alternative E – Yard Debris Reduction**

An effective method of waste reduction is to compost yard debris on the property where it was generated. More could be done to promote yard debris reduction and to publicize techniques such as backyard or on-site composting, mulching (leaving grass clippings on the lawn), and related techniques. One or more demonstration gardens could also be a valuable tool for educating residents about these techniques.

Proper management techniques for backyard composting are necessary to prevent odors, vectors and other problems. The County provides public education materials on the proper methods to manage a compost pile. Practicing proper techniques for turning piles and adequate watering will help produce quality compost, but success requires regular attention and realistic expectations, factors that may limit the popularity of backyard composting.

**Alternative F – Product Labeling and Certification Programs**

Labeling requirements could be established to inform consumers about the impacts of their product choices. This approach could take various forms, but one example is to model it after the Energy Star program. The Energy Star program, which is jointly run by the EPA and US Department of Energy, informs consumers about the relative cost to operate appliances and other products. For waste prevention purposes, the County could follow a national lead on a new labeling system that could be used to address the probable lifespan of a product and hence the relative annual cost for using it. While this would probably have to be done on a federal level, some public education could be done on this issue on a local level.

**Alternative G – Reduce Specific Products**

This ongoing activity is most effectively done with other jurisdictions. Local governments are already working on the reduction of several specific products. For instance, Snohomish County and others are already working with the telephone book industry to

reduce the number of books printed and distributed. Other examples include Seattle and local governments looking for effective ways to ban or reduce junk mail, and various agencies and private companies encouraging the use of CFL light bulbs that last longer (and use less energy). This alternative is based on the idea that more could be done in this area, and that aggressively identifying and pursuing this approach would have long-term benefits.

In a related idea, other jurisdictions are working with architects and other design professionals to incorporate the concept of design for disassembly, which would allow the easier recovery of products, parts, and materials in buildings.

**Alternative H – Promote Waste Exchanges**

Another method to reduce industrial and commercial waste is to encourage greater reuse of items and materials. This could be done through an established waste exchange or a local program. The participating jurisdictions could promote, develop, and monitor use of IMEX (Industrial Materials Exchange), the regional waste exchange managed by the Seattle-King County Department of Public Health.

The success of any waste exchange program depends on how well it is managed and promoted. Advertisements in local newspapers and flyers are required to keep the waste exchange visible. Existing waste exchange listings could be made available to local trade associations and business groups. Those groups could be encouraged to subscribe to the listing independently. With good promotion, a waste exchange can be effective in reducing waste.

Most companies practice both source reduction and recycling of industrial wastes. If some businesses cannot achieve closed-loop recovery, some may be able to sell wastes as by-products; for example, electric utilities have found many applications for coal ash and other combustion products. However, there is still a huge amount of waste flowing into landfills—over 20 billion tons annually in the U.S. An emerging practice called “By-Product Synergy” (BPS) offers a new, collaborative approach to divert waste from landfills. One business’s waste stream could be a viable feedstock for some other company in a completely different industry. Similarly, businesses might be able to purchase lower-cost recycled materials from another company’s residuals.

**Alternative I – Monitoring Waste Prevention Results**

It would be useful to have a mechanism for monitoring the results of waste prevention programs in order to provide feedback to participants and also to provide a basis for future adjustments in the approaches being used. For many communities, this is typically done by periodically calculating the waste generation rate on a per capita basis. Unfortunately, changes in the generation rate due to waste prevention programs are typically very small in a given time period and so are easily masked or overwhelmed by other factors, such as economic problems or natural disasters. In the latter case, floods and earthquakes can create huge amounts of waste and it can be difficult to fully identify and separately account for these amounts.

Alternatives to per capita rates include periodically conducting surveys of the residents or businesses about their activities to reduce waste, or conducting waste stream surveys for specific materials, products or packaging. Both of these activities can be quite expensive and may still lead to ambiguous results.

A more effective approach than quantifying the amount of waste reduction may be to gauge success using a "performance-based standard." This is where waste prevention activities are presumed to be successful based on achieving a specific level of effort or on another criteria. An example of this approach is to use the number of backyard composting bins that are distributed as a measure of the amount of yard debris that may be kept out of the waste stream. Other criteria can be used and these need to be tailored to each specific waste prevention activity.

Another possibility is to use the Consumer Environmental Index (CEI, or "basket of goods") approach developed by Sound Resource Management for the Department of Ecology (SRM 2007). This model allows the monitoring of the environmental impact of consumer choices by calculating the impacts caused by the production and disposal of items purchased. In other words, the CEI declines when there are less toxic products, pollution and disposal from goods and services purchased each year by consumers. This model could potentially be applied to Snohomish County and used to monitor progress towards less waste and reduced toxicity of the waste that is generated, although it may be more appropriate to apply this model on a statewide basis.

### Evaluation of Alternatives

The alternatives are compared to the evaluation criteria below. The evaluation of cost-effectiveness is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives**: Activities that promote or support waste prevention are consistent with the solid waste planning objectives. All but two of the alternatives are highly consistent with the planning objectives. Ranking medium on consistency with the solid waste planning objectives are Alternatives F (labeling requirements) and I (monitoring waste prevention activities).

**Consistency with Other Regional Plans**: All of the alternatives except possibly Alternative F (labeling requirements) rate medium to high on consistency with other regional plans.

**Cost Effectiveness**: Most of the alternatives require only staff time and some public education expenses, and can be presumed to be cost-effective by virtue of being relatively inexpensive. Alternative A, however, may require a small amount of capital investment to create reuse shelves or a collection area at disposal facilities. The cost-

effectiveness of Alternative H is uncertain due to the uncertainty of how many more businesses could be encouraged to participate in a waste exchange.

### Rating of Alternatives

Table 1 summarizes the ratings of each alternative with respect to the evaluation criteria.

**Table 1**
**Summary Rating of the Waste Prevention Alternatives**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Promote smart shopping | H | H | M | H |
| B | Volume-based collection fees | H | M | M | M |
| C | Government sector leading by example | H | H | M | H |
| D | Regional business waste reduction activities | H | M | M | M |
| E | Yard debris reduction | H | M | M | M |
| F | Labeling requirements | M | L | L | L |
| G | Reduce specific products | H | H | M | H |
| H | Promote waste exchanges | H | H | M | H |
| I | Monitoring waste prevention results | M | M | M | M |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendations are being made for waste prevention programs:

### High-Priority Recommendations

WP1) Snohomish County and the cities will promote activities such as smart shopping, the use durable grocery bags, and buying in bulk when appropriate.

WP2) Snohomish County and the cities will implement upgraded procurement policies.

WP3) Specific products such as telephone directories and junk mail will continue to be targeted for waste reduction in cooperation with manufacturers and distributors.

WP4) Increased promotion of waste exchanges will be conducted.

**Medium-Priority Recommendations**

WP5) Additional measures for volume-based collection fees, including offering a 10-gallon can and every-other-week garbage collection will be evaluated.

WP6) The cities, with assistance from Snohomish County, will encourage businesses to practice waste prevention measures.

WP7) Coordinate publicity and communications to increase backyard composting practices.

WP8) The impacts and results of waste prevention efforts will be identified and monitored.

**Low-Priority Recommendations**

WP9) A new labeling system should be implemented to address the probable lifespan of a product and the relative annual cost for using it.

While rated a Low Priority, it was determined that there was little value in a County initiative for promoting a product labeling system that relies on federal development. There is significant cost and effort to develop standards and labeling programs, and there are existing transparent, third party standards and certifications such as Energy Star, EPEAT, Green Seal, and UL/EcoLogo, for example, that do factor in waste prevention practices such as reduced packaging and toxicity.

Snohomish County will provide the overall direction for the waste prevention program and will have primary responsibility for Recommendations WP1, WP6, and WP7. The cities and haulers will assist with several of the recommendations and will implement specific parts of the program, such as volume-based fees (WP3) and encouraging businesses to implement waste reduction practices (WP5). The last recommendation, WP9, would need to be implemented on the state or federal level and it was determined that would not be of significant value to the County.

The costs to implement these recommendations will primarily be staff time for planning and coordination, plus a small amount of additional public education and other expenses. The cost of Recommendation WP9 is uncertain but could be significant and it was determined that dedicated efforts would not be of value to the County.

The schedule for implementing most of these recommendations is either ongoing or to conduct these activities in the next five years. The one exception might be Recommendation WP9, which could take longer to implement. It was determined that dedicated efforts would not be of value to the County.

## REFERENCES

Snohomish County 2009. *Green Ribbon Task Force Recommendations*, January 12, 2009.

SRM 2007. The Washington State Consumer Environmental Index, by Sound Resource Management, July 31, 2007.

# RECYCLING

## SUMMARY

This technical memo addresses recycling activities in Snohomish County. "Recycling" refers to the act of collecting specific materials separately and then processing those materials to allow them to be used again in a manufacturing process. This *Solid Waste Management Plan* (Plan) addresses recycling separately from reuse (where products or materials are used again in their existing condition, see the Waste Prevention technical memo) and organics (where composting or similar steps are required to convert materials into a product that indirectly, through plant growth, creates a similar material, see the Organics technical memo for more information).

Recycling is clearly a very important part of any solid waste management system.

The recommendations made by this technical memo address the need for increased education on specific issues and outreach to specific sectors to increase recycling results. Other recommendations address refinements to the current system (including consistency between programs and the need to monitor the effectiveness of single-stream collection) and the need for more effort in market development (for glass and for procurement practices).

## BACKGROUND

Snohomish County's existing (2009) recycling rate is estimated to be 48.8% (see the Waste Quantities and Projections appendix for more details). Increasing this rate would provide benefits to the environment and economy of the County and the region. Broad benefits to the residents and businesses in Snohomish County would occur through increased sustainability of future activities. Recycling also has substantial benefits in greenhouse gas reductions and related areas. Other benefits of recycling include:

- Recycling creates more jobs. Ton-for-ton, recycling creates up to ten times more jobs than landfilling the same amount of a material (ILSR, 2010).
- Recycling returns resources back into the stream of commerce, not only providing for future sustainability but also ensuring that the necessary materials are available for manufacturing processes. Plus it is generally cheaper and more cost-effective to use recycled materials in manufacturing processes, thus making local industries that use recycled materials more profitable.

Ideally, local recycling activities could also have a more immediate benefit to the County's residents and businesses, by providing options for proper recycling of various materials.

## Goals and Policies for Recycling

Goals and policies specific to recycling include:

- Goal: Ensure efficient services for a growing and changing customer base.
- Policy 2-1: Continue to offer and develop programs that encourage recycling.
- Related policies from other technical memorandums include:
  - Policy 1-1, Climate Change: Support efforts and actions by County and other agencies to reduce GHG emissions and to lessen and prepare for the impacts of climate change.
  - Policy 1-3, Product Stewardship: Continue to be a leader in product stewardship initiatives and legislation.
  - Policy 1-4, Waste Prevention: Continue to offer and develop programs that encourage waste prevention.
  - Policy 2-2, Organics: Continue to promote and expand the collection and non-landfilling of yard debris, wood waste, and food waste.
  - Policy 2-3, Waste Collection: Provide a variety of equitable and efficient collection services to County residences and businesses that are in line with the Division's other goals and policies.
  - Policy 2-8, Moderate Risk Waste: Continue efforts to reduce the generation and toxicity of moderate risk waste, and to ensure that convenient, cost effective and sustainable options for its safe management are available.

## Regulations for Recycling

Washington State's goal of 50% recycling, composting and waste reduction must be addressed in solid waste plans, but each county is expected to set their own goal based on local conditions and constraints. State planning guidelines (Ecology 2010a) require solid waste plans to establish urban-rural boundaries and to designate a list of recyclable materials that must be collected by programs in the county (see the Planning Issues section of this technical memo). Solid waste plans must also address markets for recyclable materials, which in this Plan is included with the discussion of designated recyclable materials.

Several state rules and regulations affect the manner in which recycling can be conducted in Snohomish County, including RCW 70.95, RCW 70.95C, RCW 81.77, and various WACs (especially Chapter 173-350 WAC). Counties have limited authority over most solid waste management options but are allowed to contract for the collection of residential recyclables by requesting authority from the WUTC. An example where a county has taken control of the residential curbside recycling collection is in Clark County. Another county (Kitsap) took control of curbside recycling for awhile but then opted out. The WUTC resumed control and carried out the recycling provisions of the

Plan. Cities and private companies have more flexibility, and can conduct their own recycling programs or contract with various companies for recycling services. One opportunity that ties into the WUTC's jurisdiction is the establishment of rate incentives to encourage recycling. Through this Plan, an "incentive rate" structure can be established in the certificate (franchise) areas. Cities can also set rates that encourage recycling and waste reduction.

Private companies have significant flexibility in conducting recycling, at least for commercial recycling activities and for programs that provide drop-off opportunities (in other words, for most types of recycling except residential curbside programs, which are arranged by franchise or contract). In some cases, these activities must be allowed to operate with minimal constraints due to interstate commerce issues (especially for commercial recycling programs). In general, this flexibility is beneficial in that it allows a free market approach with open and competitive activities, thus helping to increase recycling activities in as cost-effective manner as possible. There are some limits on this open market approach, however, not the least of which is ensuring that materials are actually being recycled (see discussion of the state law on Recyclable Materials Transporter and Facility requirements below).

Recent changes in regulations affecting recycling include the following:

**The Event Recycling Law**: This requirement is in effect in communities where there is an established curbside service and where recycling service is available to businesses, a recycling program must be provided at every official gathering and at every sports facility by the vendors who sell beverages in single-use aluminum, glass, or plastic bottles or cans. A recycling program must include a provision for receptacles or reverse vending machines, and coordinators may choose to work with vendors to coordinate the recycling program. The recycling receptacles or reverse vending machines must be clearly marked, and must be provided for the aluminum, glass, or plastic bottles or cans that contain the beverages by the vendor. For further information see RCW 70.93.093.

**Revenue-Sharing Agreements**: A recent change in state law (RCW 81.77.185) allows waste collection companies (certificated haulers) to retain part of the proceeds from sales of recyclables as an incentive to increase the quantity and quality of recyclables collected, to seek out the best market prices or to improve services. Previously, all proceeds from the sales of recyclables had to be used to offset collection expenses, thus providing little incentive for the haulers to maximize the amount or value of recyclables collected. Under the new law, waste collection companies may retain up to 50 percent of the revenues for sales of recyclable materials if the WUTC approves their plan for the use of those revenues. Before such a plan can be submitted to the WUTC, it must be certified by the county as being consistent with the county's solid waste management plan, and generally the county and waste collection company enters into an agreement that specifies new or additional activities to improve recycling programs that will be undertaken using the retained funds. As of 2010, the WUTC has directed that the agreements include a detailed budget. Activities undertaken through the revenue sharing agreement are supplemental and in addition to activities covered

through the WUTC approved rates. Only a few counties (King, Pierce and Snohomish) have taken advantage of this approach. Snohomish County's agreement for these revenues specifies certain actions that the haulers must take in return for retaining the revenues. In recent years, examples of activities include: increasing company recycling outreach activities and staffing; new coordinated communication plans and educational materials; addition of food waste to yard debris collection programs; characterization studies of recyclables, residuals and contaminants; reporting of recycling and disposal data; efforts to increase collection service customers; expansion of curbside to include additional materials; multifamily customer outreach; and improving performance at material recovery facilities, including technology and equipment additions and upgrades.

**Recyclable Materials Transporter and Facility Requirements Law**: Another recent change in state law is the passage of the "Recyclable Materials Transporter and Facility Requirements" in 2005, and updated in 2009, which requires transporters of recyclable materials to register with the state, and requires certain recycling facilities to notify the state before commencing operation. A new state rule, the Recyclable Materials Transporter and Facility Requirements (Ch. 173-345 WAC), was developed in response to this legislation. Although originally directed at C&D recycling issues, the new rule covers all types of recyclable materials (all materials that are designated as recyclable in this Plan). The new rule prohibits recyclable materials that have been separated and collected for recycling from being delivered to transfer stations and landfills. The rule does not apply to several entities, including self-haulers, cities and city contractors, Tribes, and charities.

Finally, state law also requires a program "to monitor the collection of source separated waste at nonresidential sites where there is sufficient density to sustain a program" (RCW 70.95.090.7.b.ii). In Snohomish County, monitoring commercial recycling activities is being accomplished by the Solid Waste Division and others, who periodically collect information on services offered by the private sector and cities in order to help promote those.

**County Code**: Much of the solid waste activities, especially for regulation and enforcement, are directed by the Snohomish County Code. The sections of Title 7 of the County Code that are relevant to solid waste include:

- 7.34 – establishing the Solid Waste Advisory Committee.
- 7.35 – establishing a comprehensive county-wide program for solid waste handling, recovery and/or reclamation. This requires effective control of all non-exempted solid waste generated and collected within the unincorporated areas of Snohomish County.
- 7.41 – operating rules and disposal fees for Snohomish County solid waste facilities.
- 7.42 – minimum service levels for recycling and waste collection in the unincorporated areas. The purpose of this chapter is to define levels of single-family and multi-family residential solid waste and recycling services which shall be

provided to households in areas serviced by solid waste collection companies operating in unincorporated portions of Snohomish County.

The County Code was recently amended to provide better enforcement of flow control. Among other requirements, the new provisions require recycling containers used at construction sites and other locations to be clearly marked and not to contain 10% or more of non-recyclable materials. The flow control requirements are discussed more fully in the Disposal technical memo.

## EXISTING PROGRAMS AND ACTIVITIES

### Drop-Off and Buy-Back Recycling

Several sites throughout the county accept various recyclable materials. Depending on the value of material, these sites may either pay for the material (as is often the case with aluminum cans) or charge for accepting it, but many of the sites accept materials for no payment or charge. A few publicly-operated sites accept a wide range of materials, but the sites operated by private companies usually take only a specific material or similar types of materials (in line with the nature of the business). These sites can generally be used by either residential or commercial customers, although in some cases commercial customers can generate volumes of materials that are difficult to haul to the sites or that exceed the capacity of the drop-off sites to handle (in which case a commercial collection service would be more appropriate).

Mixed material sites that accept a wide range of paper, plastic, glass and metals are operated by the Snohomish County Solid Waste Division at three transfer stations and the three Neighborhood Recycling & Disposal Centers (NRDCs). These sites also accept (for a fee) separated wood and yard debris.

There is a large number of sites that accept a specific material or a limited range of materials for recycling. There are also some sites that accept materials for reuse (which are addressed in the Waste Prevention technical memo), or for composting (which are addressed in the Organics technical memo). The materials accepted by various sites for recycling include appliances and other metals, automotive wastes such as oil, construction wastes, electronic wastes, printer cartridges, plastic bags, rechargeable batteries, and many other materials that are too numerous to list here. The list below highlights some of the materials accepted for recycling, but by no means is this list complete:

- Appliances without freon or other chlorofluorocarbons (CFC's) can be dropped off at eight private vendors in the County. Six locations accept appliances with CFC's, which are located in Edmonds, Everett, Marysville and near Maltby.
- Automotive wastes such as oil and antifreeze are accepted at the County's transfer stations and NRDCs, and also by five private companies that host collections throughout the county. Oil, antifreeze and automotive products are recycled at 30

private locations in the county. Car batteries are collected throughout the County at 17 drop-off sites.

- Battery collection displays in many of the larger hardware stores in the county collect rechargeable batteries for recycling.
- Several companies collect construction, demolition and land debris in the county. Recycling sites for materials such as tree stumps, branches, clean lumber, leaves and clippings, particle board, plywood, wood pallets, soil, concrete, sod and stone are readily available throughout the County (see also the Organics technical memo). Wood waste is also accepted at the County-operated transfer stations. Gypsum board (drywall) is collected near Maltby. In the first quarter of 2011, there were 10 sites in the county that accepted asphalt paving for recycling.
- For electronics covered by the state's E-Cycle program, Ecology staff update their E-Cycle list every 6 months to a year by contacting the organizations for updated information. At the start of 2011, there was a collection network of recycling sites (22 locations) for computers, TV's, laptops, and monitors. Other sites (that are not part of the E-Cycle program) collect these items for a fee. Peripherals such as keyboards, copiers, printers, scanners and cell phones are also collected at five sites in the county.
- Metals are accepted by a variety of recycling operations in the county. Many of these accept aluminum cans, ferrous and non-ferrous scrap, auto bodies and parts, wire, and steel barrels. Metals recyclers will often pay for these materials.
- Plastic bags are accepted by several of the grocery stores in the county.
- Book and clothing drop boxes distributed throughout the county collect these materials primarily for reuse, but a portion of these materials isn't suitable for reuse and so is recycled into different products. Many of the materials accepted by the Household Hazardous Waste Facility are also recycled (see the MRW Plan for more details).
- Annual cleanup or periodic collection events conducted by some of the cities and others also provide an opportunity to recycle various materials.

### Curbside Collection

Curbside collection of recyclables is available to all residents in the county, both in the cities and the unincorporated areas. Four private haulers provide these services: Allied Waste, Rubatino Refuse, Sound Disposal, and Waste Management. Tonnages collected by these haulers in 2010, from single-family homes, are shown in Table 1. Most of the cities have their recycling picked up every other week, while a few of the cities have weekly service.

The materials accepted by the curbside programs vary depending on the service provider, but generally include paper, glass bottles, metal cans, and plastic bottles and tubs, as shown in Table 2. Some of the programs also collect electronics and small appliances.

**Table 1**
**Single-Family Curbside Recycling Tonnages**

| Collection Company | Number of Single-Family Customers[1] | Annual Tons, 2010 | Pounds per Household per Year |
|---|---|---|---|
| Allied Waste | 23,877 | 8,857 | 742 |
| Rubatino Refuse | 15,834 | 6,544 | 827 |
| Sound Disposal | 1,606 | 910 | 1,133 |
| Waste Management | 113,820 | 36,551 | 642 |
| **Total** | 155,137 | 52,861 | 681 |

Note: 1. The number of customers shown is the average number of single-family accounts for 2010.
Source: From data reported by haulers to Snohomish County (Snohomish County 2011).

**Table 2**
**Single Family Curbside Recycling Tonnages by Commodity**

| Material | Tons Collected, 2010 | Percent of Total |
|---|---|---|
| **PAPER** | **40,170** | **68.5%** |
| Newspaper | 10,580 | 18.1% |
| Cardboard | 7,010 | 12.0% |
| Mixed Paper | 22,580 | 38.5% |
| **GLASS** | **7,340** | **12.5%** |
| **METAL** | **2,230** | **3.8%** |
| Tin Cans | 1,380 | 2.4% |
| Aluminum Cans | 746 | 1.3% |
| Other Metals | 107 | 0.2% |
| **PLASTICS** | **3,130** | **5.3%** |
| HDPE | 1,270 | 2.2% |
| PET | 1,470 | 2.5% |
| Other Plastics | 398 | 0.7% |
| **CONTAMINANTS** | **5,730** | **9.8%** |
| **TOTAL** | **58,600** | **100.0%** |

Note: Figures in this table differ from curbside recycling totals shown in other tables of this technical memo because the amount of contamination (5,730 tons) is included here.

## Multi-Family Collection

Recycling services are available for multi-family buildings throughout the county. These services are provided by the certificated or contract haulers (Allied Waste, Rubatino

Refuse, Sound Disposal, and Waste Management) for that area, or under a separate contract in the two cities with municipal garbage collection programs (Marysville and Sultan). The haulers provide a variety of equipment and containers, such as 40-yard containers, roll-off (drop-box) containers, and carts (32, 64 and 96 gallons in size). The multi-family programs collect the same or similar materials as the curbside programs for single-family homes, including paper, glass bottles and jars, metal cans and plastic bottles and tubs. Multi-family residents can also use the drop-off and buy-back centers described above.

**Commercial Collection Programs**

Numerous recycling companies collect a variety of materials from commercial sources. These companies provide recycling services at the request of the commercial business. Items that are collected this way include wood waste, cardboard, scrap metal and food waste, while some businesses generate a commingled stream for recycling. The recyclers can provide a roll–off container (20 to 40 yards), dumpsters (1 to 8 yards), or carts for recycling collections at a regular frequency or on an on-call basis.

Most of the recycling companies provide this service for a fee, and only in a few cases is the value of the material collected sufficient to offset the cost of providing and emptying a container for it. In addition, there may be a fee charged at the processing facility to recycle the item(s). In most cases, however, these fees are well below the cost of handling the same material as garbage.

The County has a list of brochures available for more information on recyclers that take items from commercial sources. The brochures provide information about Ecology's webpage, food scrap composting, and Moderate Risk Waste materials. In addition, some "take-back" programs provide disposal for items that need proper handling, such as automotive hazards, batteries, computers and other electronics, fluorescent bulbs, mercury, and paint.

Industrial Materials Exchange (IMEX) is an on-line and catalog service designed to help businesses find markets for industrial by-products, surplus materials and waste.

**C&D Recycling Programs**

Recycling programs for construction and demolition (C&D) materials have undergone significant changes in the recent years. The most recent change was the adoption of an amended ordinance (Snohomish County Code 7.35 and 7.41), which will require waste generators of all types to adhere more closely to rules that require solid waste generated in the county to stay in the Snohomish County system. This particularly affects C&D recycling programs because construction sites will now be required to clearly label recycling and waste containers and to ensure that recycling containers do not contain 10% or more of non-recyclable contaminants.

### Other Recycling Programs

Other recycling opportunities in Snohomish County include:

- private agricultural firms are collecting agricultural plastics. In many cases the farmer can gather the plastics and the recycler will pick up the plastics and transport for recycling.
- manure is delivered via a local pipeline to move manure feedstock to Qualco Energy, the site of the anaerobic digester in the County. Here feedstock is digested to supply electricity to the area and includes other animal waste, grease trap waste and expired beverages as well.

### Processing Facilities

"Processing" is defined by Ch. 173-350 WAC to be "an operation to convert a material into a useful product or to prepare it for reuse, recycling, or disposal." In this Plan, "processing" refers to operations that do more than remove incidental amounts of contaminants or that simply accumulate source-separated recyclables. Processing includes manual and/or machine sorting and consolidating for shipment.

### Analysis of Recycling Results in Snohomish County

An analysis of the recycling tonnages collected by various public and private activities in the county provides a clearer picture of the current performance of those programs and helps to demonstrate the relative amount of recycling being conducted by the public and private sectors. Table 3 provides data on the collections conducted by contract and

**Table 3**
**Recycling Tonnages Collected by Contract and Certificated Haulers**

| Type of Generator | Tons Collected, tons per year (2010) | Number of Customers or Accounts (as of December 2010) | Total Households or Businesses | Percent Subscribed |
|---|---|---|---|---|
| Single-Family | 52,861 | 156,899 | 204,400 | 76.8% |
| Multi-Family | 4,321 | 3,045 | 79,095 | NA |
| Commercial | 14,242 | 8,244 | 16,259 | 50.7% |
| Yard Debris | 70,247 | 79,047 | NA | NA |
| Total | 141,670 | | | |

Notes: The figures for the recycling tons collected from each type of generator and the number of accounts are from hauler reports to Snohomish County (Snohomish County 2011).
The total number of households and businesses are from the Office of Financial Management (OFM 2010). The breakdown for number of single-family units (1-4 units) and multi-family units (5 units and above) are based on the total estimated number of households in Snohomish County in 2010 and the breakdown by housing type from the 2000 census.

NA = Not Available.  The participation rate for multi-family units and for yard debris customers cannot be determined based on the available data.

certificated haulers in Snohomish County. These figures provide a fairly accurate analysis of the participation rate and results for curbside recycling programs, but it should be kept in mind that there is a very large amount of other recycling activities that residential and commercial generators are participating in. Commercial generators in particular are recycling substantial amounts of other materials through a variety of other on-site and drop-off programs.

Another way to look at the results of the recycling programs in Snohomish County is to consider how much of the total is being collected by each method. Table 4 shows this analysis to the extent that the data is available (the data needed to do a more detailed analysis of this is lacking in some cases, including the lack of data for the breakdown of recycling tonnages from sources other than the haulers and County sites).

**Table 4**
**Recycling Tonnages Collected by Collection Method**

| Collection Method | Tons Collected, tons per year (2010) | Percent of Total |
|---|---|---|
| Haulers: | | |
| Single-Family (curbside) | 52,861 | 12.7% |
| Multi-Family | 4,321 | 1.0% |
| Commercial | 14,242 | 3.4% |
| Yard Debris (curbside) | 70,247 | 16.9% |
| Total | 141,670 | 34.0% |
| County-Operated Sites | 12,439 | 3.0% |
| All Other Recycling | 262,005 | 63.0% |
| Total | 416,114 | |

Notes: The figures for the recycling tons collected by contract and certificated haulers are from hauler reports to Snohomish County (Snohomish County 2011).
Tonnage figures for county-operated sites are from county records.
The tonnage for "all other" recycling is the difference between the amount of recycling reported by the Department of Ecology (Ecology 2010b), which is a 2009 figure, and the other sources.
The total recycling figure does not include the "diverted" materials reported by Ecology.
The data shown includes recycling tonnages collected in both incorporated and unincorporated areas of Snohomish County.

Another way to look at the current performance of the recycling programs is to examine how much waste and recyclables are still being disposed by the various sources (single-family, multi-family and commercial) in Snohomish County. Data shown in the Waste Quantities and Composition appendix addresses the amount of recyclable materials still in the waste streams from various types of generators, and also overall recovery rates by material. The figures on the amount of recyclable materials remaining in the waste

stream are shown below (see also Table 3 of the Waste Projections appendix for more detail). The composition figures shown below for the recyclables in the waste stream include the typical curbside/commercial recycling program materials (paper, bottles, metal, plastic and film and bags), plus yard debris and textiles. There are substantial amounts of other recyclable materials that are not included in this analysis, such as wood and other C&D materials (of which there is a significant amount in the two self-haul waste streams).

**Table 5**
**Recyclables Remaining in Snohomish County's Waste Stream**

| Type of Waste Generator (Source) | Typical Recyclables, %[1] | Percent of Waste Stream[2] | Estimated Tons in 2010[3] |
|---|---|---|---|
| Single-Family Homes | 33.1 | 25.5 | 30,860 |
| Multi-Family Households | 44.0 | 13.2 | 21,230 |
| Residential Self-Haul | 31.6 | 19.0 | 21,950 |
| Non-Residential Self-Haul | 12.2 | 7.8 | 3,480 |
| General Non-Residential | 35.3 | 34.5 | 44,520 |
| Total | 33.4 | 100.0 | 122,100 |

Notes: 1. "Typical recyclables" includes recyclable grades of paper, plastic and glass bottles, plastic film and bags, metals, yard debris, and textiles. From Table E–2 of the "*Snohomish County Waste Composition Study*" (Snohomish County 2009).
2. Figures shown are the percent of the total waste stream that is contributed by each type of generator. From Table E–1 of the "*Snohomish County Waste Composition Study*" (Snohomish County 2009).
3. Tons of recyclables are based on the percentages shown in the previous two columns and a 2010 total waste amount of 365,599 tons.

## County Policy on Marketing Recyclable Materials

Because the recycling industry operates within a system of global trade and many commodities are now delivered to overseas markets. Snohomish County must consider its responsibility to promote and maintain a high level of public health and to protect the natural environment wherever segments of the County's waste stream are sold.

In consideration of the goals of this Plan and the potential consequences of a "waste export" model when used in the County's recycling program, the Snohomish County Solid Waste Division and its partners in resource management have agreed that materials accepted as part of Snohomish County's recycling program shall meet the following standards:

- Materials must be sold to buyers engaged in business practices that are verified to be environmentally and socially responsible.

- Materials must allow for the collection, processing and market delivery to be cost-effective for all parties involved.
- Materials must have a foreseeable long-term market.
- Materials may fill a short-term market "niche" or take advantage of an emergent opportunity when the collection of these materials advances the goals of this Plan.

This policy will help guide decisions made for collecting, processing and marketing recyclable materials from Snohomish County.

## PLANNING ISSUES

This section of this technical memo provides information about near- and long-term planning issues specific to Snohomish County, issues required by State planning guidelines (Ecology 2010a) to be addressed (such as urban-rural designations and designation of recyclable materials), and issues related to the potential global problem of climate change.

### General Planning Issues

Current near-term planning issues related to recycling include:

- Anticipated closure of the Kimberly-Clark facility and its impacts associated with the markets for hog fuel.
- Harmonization with programs throughout the region.
- Optimizing collection/drop-off programs.
- Single stream collection issues, including commodity cross-contamination and quality.
- Options for handling glass.
- Options for significantly increasing material recycling rates.
- Options for significantly increasing multi-family and commercial recycling.
- Post-gate diversion of waste for recycling at stations.
- Processing of mixed loads to ensure proper separation of recyclables and waste.

Emerging long-term issues related to recycling include:

- Role of recycling requirements, disposal bans, mandatory programs in increasing recycling.
- EOW garbage as driver for increased recycling.
- How to recycle in a cost effective manner.
- What to do in case of bad markets.
- Public perception that recycling alone is good enough.

- Financial support for recycling.

### Flow Control Issues for Mixed Recyclables Loads

Recent discussions about flow control have highlighted the idea that some recyclables, especially from construction and demolition sources, are being diverted to landfills. Such practices are a violation of Snohomish County's flow control ordinance as well as the state's Recyclable Materials Transporter and Facility Requirements Law. The recent adoption by Snohomish County of amended ordinance #11-002 and the steps being undertaken to enforce that will help to address this issue.

### Designation of Urban-Rural Boundaries for Recycling Programs

State law (RCW 70.95.092) requires that criteria be adopted to designate all areas within a county as either urban or rural, and that recycling and other services be provided as appropriate for each type of area. For urban areas, the recommended minimum service level for recycling is curbside collection (alternatives are allowed if these can be shown to be more appropriate). For rural areas, the minimum service level recommended is drop-off or buy-back centers at all disposal facilities and other convenient locations.

There are several methods that can be used for developing criteria for urban or rural designations. Ecology's planning guidelines (Ecology 2010a) suggest using land-use plans, utility service plans, population densities and growth projections, and other relevant data. The designation criteria should also include a process for periodic review and adjustment of urban-rural boundaries. Most of these requirements are satisfied by the existing efforts conducted for another document: the *Snohomish County Comprehensive Plan* (Snohomish County 2010b).

This Plan satisfies the requirements for establishing urban and rural boundaries by adopting the urban boundaries shown in the *Snohomish County Comprehensive Plan*. By incorporating by reference the urban boundaries shown in the Comprehensive Plan, including any future revisions, the programs and policies of this solid waste plan are consistent with that important document, and are automatically updated as the urban boundaries are revised in the County's Comprehensive Plan.

## Designation of Targeted Recyclable Materials

State regulations (RCW 70.95.090.7.c) require "a description of markets for recyclables." State planning guidelines also require designation of what materials will be collected for recycling, with marketability being one of the factors to consider in this designation process. The designation of recyclable materials has taken on more importance with the recent adoption of Chapter 173-350 WAC, which defines recyclable materials as being those materials "that are identified as recyclable materials pursuant to a local comprehensive solid waste plan."

A description of markets for materials collected in Snohomish County is provided below. This is intended to be only a brief report of current conditions (current as of mid-2011). It should be noted that market conditions for recyclables can change drastically in a short amount of time, which is a challenge for a long-range document such as this Plan. Rather than provide an exhaustive review of current market conditions, this Plan will be more useful in the future if it can be responsive to changing conditions. Hence, the list of designated materials includes a description of the process for revising that list.

**Market overview**: A significant factor for market conditions for recyclable materials is the recent economic recession and the resulting decrease in demand for recyclable materials. As of this point in time (mid-2011), there are signs of economic recovery and prices have increased for many of the recyclables, although the prices for many materials have not returned to the higher pre-recession levels. The recycling markets are still recovering from the shock of moving from all-time high market prices in mid-2008 to rock-bottom prices six months later. This huge swing in market prices underscores the need for caution when implementing new or expanded programs, as well as the need for flexibility.

Additional factors affecting specific materials are shown in Table 6. The materials listed and factors discussed in Table 6 primarily address the established markets for existing recyclables, and do not reflect the potential for new markets being created in the future.

**Designated recyclable materials**: State law and Ecology's guidelines require that the counties adopt a list of recyclable materials that are designated as the materials to be commonly recycled in the county. In this case, the list is not intended to create the requirement that every recycling program in Snohomish County collect every designated material. Instead, the intent is that through a combination of programs offered throughout the County, residents and businesses should have an opportunity to recycle all of the designated materials through at least one program. In other words, if plastics are on the designated materials list, then at least one program in the county should collect plastics. In some cases, this program might only be an annual collection event.

Several criteria should be taken into account when considering whether to designate specific materials as recyclable, including but not limited to:

- **potential waste stream diversion**; the main factor considered for evaluating a material's potential for waste stream diversion is the percent (by weight) of the material in total waste stream, based on the results of a recent waste composition study conducted for Snohomish County (Snohomish County 2009).
- **collection efficiency and feasibility**; the primary consideration used to evaluate the collection efficiency of a source-separated recyclable material is a relative assessment of how easily the material can be handled, both in preparation and collection/loading.

**Table 6**
**Current Markets for Recyclable Materials**

| Material | Primary Market(s) | Comments |
|---|---|---|
| **Paper**, including cardboard, mixed waste paper and newspaper | Regional paper markets, paper mills, and export. | Markets for recycled paper are improving, with both export volumes and prices increasing by about 10% in the past year. |
| **Plastics** | Regional markets in western Washington and export. | Current markets for plastics are strong and prices are high due to higher oil prices, with prices for PET bottles hitting a record high recently. |
| **Metals**, including aluminum and tin cans, white goods (appliances), and ferrous and non-ferrous scrap | Regional markets in western Washington and Oregon. | There has been strong demand for non-ferrous metals such as aluminum and copper in the past year and this is expected to continue. Recent demand and prices have been mixed for steel, but the demand for steel is expected to be strong over the next year. |
| **Glass**, including clear, brown and green glass | Markets in western Washington and Oregon. | Prices are low for all colors of glass and demand is sometimes inadequate to keep up with the available supply. |
| **Organics**: | | Demand for these materials is moderate, although there is currently a surplus of finished compost due to lower demand in the construction industry. Also, with the planned closure of Kimberly-Clark the demand for wood will be greatly reduced in the near future. More information on the markets for these materials is provided in the Organics technical memo. |
| Wood | Hog fuel, mulch. | |
| Yard Debris | Compost. | |
| Food Waste | Compost. | |
| **Construction and Demolition (C&D)**, including concrete, asphalt, sheetrock and other materials | Aggregates, new asphalt paving, new sheetrock, other materials. | Markets for these materials are generally strong and have the added advantage that most are local markets, although many are also not high-value markets. |

Note: Information is current as of mid-2011, and is drawn from a variety of local and national sources, including trade publications (Resource Recycling 2011).

- **processing requirements (including costs)**; processing requirements were evaluated by assessing the relative degree of difficulty and the reliability of the technology used to prepare the material for market.
- **market conditions**; the assessment of market factors is based on the preceding discussion of markets.

Based on these criteria and information presented in other parts of this Plan, the proposed list of designated recyclable materials is shown in Table 7. This list of designated recyclables should be used to help guide program development and implementation, but is not intended to be universally mandatory. Residents and businesses in Snohomish County should have the opportunity to recycle these items through at least one program in the county, but not every program needs to collect every material.

Table 7 is based on existing conditions (collection programs and markets), and future markets and technologies may warrant changes in this list. The following conditions are grounds for additions or deletions to the list of designated materials:

- The market price for an existing material becomes so low that it is no longer feasible to collect, process and/or ship it to markets.
- Local markets and/or brokers expand their list of acceptable items based on new uses for materials or technologies that increase demand.
- New local or regional processing or demand for a particular material develops.
- No market can be found for an existing recyclable material, causing the material to be stockpiled with no apparent solution in the near future.
- Legislative mandate.
- Manufacturer and/or retailer provided product stewardship programs are put in place to handle the material.

- Any proposed changes in the list of designated materials should be submitted by the Solid Waste Division to the Solid Waste Advisory Committee (SWAC) for their discussion. With the concurrence of the SWAC, followed by approval by the Public Works Director, minor changes in the list could be adopted without formally amending the Plan. Thus, minor changes can be addressed in about 60 to 75 days, depending on the schedule of SWAC meetings at the time of the proposed change. Should the Solid Waste Division and SWAC conclude that the proposed change is a “major change”, then an amendment to the Plan would be necessary (a process that could take 120 days or longer to complete). What constitutes a “major change” is expected to be self-evident at the time, although consideration of the relative impact on the system by the established criteria including potential waste stream diversion,

collection efficiency and feasibility, processing requirements (including costs) and market conditions will be the primary factors. Ecology will be notified when changes to the list are adopted.

## Table 7
## List of Designated Recyclable Materials

| Program/Service | Material * |
|---|---|
| **Residential Curbside Materials**: Materials that are designated as recyclables for curbside and multifamily collections. These materials are also designated for drop-off or commercial collection programs. | Paper<br>Metal containers<br>Glass containers<br>Plastic containers<br>Small ferrous and non-ferrous metals<br>Yard debris<br>Food waste<br>Compostable paper and plastic<br>Other materials designated by the Solid Waste Director (SCC 7.42) |
| **Additional Materials for Drop-off, Commercial Collection, Product Stewardship and other Programs**: Materials that are designated as recyclables for programs other than residential curbside and multifamily recycling, including construction and demolition activities. | Antifreeze<br>Carpet and padding<br>Electronics<br>Ferrous metals, white goods<br>Household and rechargeable batteries<br>Mercury-containing devices, including light bulbs and tubes, thermostats, thermometers, switches, etc.<br>Manures<br>Mixed metals<br>Motor oil and filters<br>Non-ferrous metals<br>Paint<br>Plastic bags and films<br>Textiles<br>Tires<br>Vehicle batteries<br>Wood waste |
| **Construction, Demolition and Landclearing Debris**: Additional materials that are designated as recyclables from construction and demolition activities. | Aggregates (brick, porcelain, ceramics, rock)*<br>Asphalt (pavement and similar materials)<br>Cardboard<br>Concrete<br>Gypsum drywall<br>Land clearing debris (stumps, brush, limbs)<br>Plastic products (such as pipe and siding)*<br>Roofing*<br>Uncontaminated soil<br>Wood waste* |
| **Emerging or Potentially-Recycled Materials**: Additional materials that are designated as recyclables from construction and demolition activities. | Fiberglass insulation<br>Ceiling tile |

* Designation as recyclable only applies to those materials that have actual markets and that are actually recycled. For instance, not all roofing or wood may qualify as recyclable. If not recycled, designated materials and other wastes must be managed as solid waste for disposal.

## Current Recovery Rates and Potential for Greater GHG Reductions

It has long been recognized that recycling conserves energy as well as conserving natural resources. Manufacturing aluminum cans from recycled cans, for instance, uses 96% less energy than producing cans from ore. Put another way, recycling just 10 pounds of aluminum cans saves the equivalent of 7 gallons of gasoline (in terms of reduced greenhouse gas emissions).

One way to assess the energy and environmental benefits of recycling is through the use of EPA's Waste Reduction Model (WARM). This model can be used to compare the relative amounts of greenhouse gas emissions created (or reduced) by various waste management methods (such as source reduction, recycling, composting and landfill disposal). This model expresses results in terms of metric tons of carbon dioxide equivalent (MTCO2E), or the results of this model can also be expressed in terms of units of energy consumption (millions of BTUs) or the equivalent number of cars taken off the road.

Table 8 shows the results of applying the WARM model to Snohomish County's current curbside recycling tonnages and also to the recycling tonnages remaining in the county's waste stream. For the current recycling tonnages, only the tonnages collected curbside (including yard debris) from single-family homes by the four major haulers are included because the breakdown of these materials is well-defined and all of these materials are included in the WARM model. The WARM model also addresses many

**Table 8**
**Reductions in Greenhouse Gas Emissions from Recycling**

| Scenario | Net Metric Tons of $CO^2$ Avoided (MTCO2E) | Equivalent Number of Homes Heated Annually | Equivalent Number of Passenger Cars Removed from Road |
|---|---|---|---|
| For the Current Amount of Recyclables Collected Curbside [1] | 99,367 | 10,142 | 18,200 |
| For the Amount of Recyclables Remaining in the Waste Stream [2] | 249,037 | 26,337 | 45,613 |
| For the Amount of Recyclables Remaining in the Waste Stream, with 10% Source Reduction [2] | 256,773 | 22,285 | 47,030 |

Notes:
1. The results for current curbside tonnages are for the period January through December 2010 (52,861 tons) (Snohomish County 2011).
2. From Table 8 of the Snohomish County Waste Composition Study (Snohomish County 2009). This analysis assumes 100% recovery (or source reduction) of the most common types of recyclable material. The materials included in the analysis are the recyclable grades of paper, PET and HDPE bottles, aluminum and tin cans, mixed metals, glass bottles, and yard debris.

other materials (such as food scraps, wood, sheetrock, asphalt shingles, and tires), but some of the materials that are recycled (or source-reduced) in Snohomish County are not yet included in the model. Likewise, the figures for additional greenhouse gas reductions that could be gained by recycling more of the materials currently in the waste stream for Snohomish County only includes a limited range of recyclable materials (i.e., "typical" recyclables, including recyclable grades of paper, PET and HDPE bottles, glass bottles, aluminum and tin cans, mixed metals, and yard waste).

As can be seen in Table 8, the benefits of recycling are very substantial for reducing or offsetting greenhouse gas emissions from other activities. The greenhouse gas reductions from recycling are so significant that a recycling truck would not need to collect much recyclable material in a year to make it worthwhile for that truck to operate (at least in terms of greenhouse gas reductions). A recent study for Clark County (Clark County 2008) determined that a recycling truck would only need to collect 19.5 tons of recyclables per year per route to offset the $CO^2$ from servicing weekly curbside routes. A recycling truck would normally collect at least 40 to 50 times this amount in a year. This calculation is based on a recycling truck with typical gas mileage of 3.7 miles per gallon and a daily route distance of 90 miles.

## ALTERNATIVES

### Alternative A – Increased Focus on Multi-Family Recycling

One the most difficult areas for implementing recycling programs is the multi family sector. This alternative addresses measures that can be taken to increase multi-family recycling. Possible methods for this are listed below, and these are not mutually exclusive. While these methods overlap, the use of two or more could make a greater impact on the multifamily recycling rate.

Possible methods for increasing multi-family recycling include:

1. **Social Marketing Approach** – A social marketing approach involves looking at people's behavior in detail, and then conducting a marketing campaign that targets the barriers and incentives unique to the multi-family residents. Hence, this approach begins with a survey and other steps to identify the potential barriers and incentives. Potential barriers for multi-family residents include tenant transitions, language barriers, reduced sense of owner responsibility, containers not clearly identified, lack of financial incentive and possibly other barriers. Benefits and incentives could include increasing a sense of contribution and/or ownership; joining the rising social pressure of doing the right thing; rent reductions for recycling; and possibly other motivations.

   Once a clearer picture of the barriers and potential incentives has been developed, a marketing program could be designed to provide outreach to tenants or to apartment owners, or both. Additional publicity could be promoted through contests, awards,

bags or bins for use in the apartments, gatherings, door-to-door visits, and other activities.

**2. Outreach to Apartment Owners** – Apartment owners or managers could be visited or called to provide them with a plan for how they can set up a successful recycling program. This approach was practiced in the City of Auburn where all of the apartment owners and managers were invited into the recycling program. The apartment owners and managers were given a sense of ownership by allowing them to voice their concerns about the program, and then many opted to add or increase the recycling container capacity at their site. Each owner was given a folder with available sizes of containers, recycling and garbage charges, a list of phone numbers of the hauler, and the City contact. Once a recycling container was ordered, the City provided multi-family recycling bags to the owners for distribution to the tenants. When the container arrived, the City took a picture of the container and passed it on to the owner for his/her folder. City staff also presented recycling information to the tenants in a tenant meeting upon request of the owner. Through this program, the City's recycling rate for multi-family showed an increase over the next year.

**3. Design and Deliver Flyers to Each Multi-Family Tenant** – The simplest approach to encourage multi-family recycling is to prepare and distribute brochures to multi-family tenants that encourages them to recycle and provides information about recycling opportunities at their building or nearby.

**4. Rates and Rent Discounts** – Another approach that could be used is to treat disposal rates at multi-family buildings similarly to the approach used in some areas for single-family rates, where the cost of recycling is included ("embedded") in the cost of garbage disposal. Once the apartment owners are already paying for the program, they are more likely to sign up for recycling services at their buildings. This may require a service-level ordinance to implement in some areas of the county. The apartment owners and mangers could also offer a small rent discount to tenants who promise to recycle.

### Alternative B – Explore Alternative Services and Uses for Glass

There are significant problems currently with recycling glass. Glass from residential sources cannot be collected cost-effectively by itself, but it causes problems when collected with other materials. In commingled (single-stream) systems, glass bottles are broken and the pieces become a serious contaminant for paper, plastic and other materials. Plus, the glass creates a variety of problems for the recycling processing facilities.

Very little of the glass collected through commingled curbside programs is actually being recycled back to glass. Sometimes glass from a commingled MRF is shipped to a glass cullet processor who can screen the cullet glass for contaminants, separate the

colors and sell them for a higher use product such a bottle making. Typically, however, this type of market is limited and cleaner sources of glass are often purchased instead of the dirty, mixed glass from single-stream processors. Glass collected in a commingled stream is often used instead as landfill cover or road aggregate.

Other approaches that collect glass separately provide a more marketable product, but at a significant cost or reduced effectiveness. Glass is being collected separately through programs using dropboxes (such as Pierce County) or by curbside using a separate container (such as is being done in Tacoma and Clark County). Even better results, in terms of both the quality and amount of glass being collected, are being achieved in areas that have container deposit systems ("bottle bills"). Once people have been told to put glass bottles (or other materials) in the same container with other recyclables (as with single stream systems), however, it is very difficult to switch back to another collection system.

This alternative suggests that other uses of glass should be further explored. Given the current situation with glass, the following questions could be addressed:

- Should it continue to be collected?
- Should it be collected in a separate bin?
- Should it be collected in drop boxes and sorted by color?
- Should the status quo be continued?
- Should it be collected through product stewardship or container recovery incentive systems?
- Can equipment and technology improvements at MRFs address the issues?
- What is the impact of each decision?
- How to communicate to the public about recycling issues for glass? Is this necessary?

This type of analysis could be accompanied by an inventory of the alternative uses for glass and the market capacity for these applications.

### Alternative C – Expanded Education Campaign on Recycling and Reduction of Contamination

With the popularity of commingled recycling, also known as single stream recycling, some participants are erring on the side of throwing everything into the recycling cart, including garbage and other contaminants. Recycling processing facilities are reporting growing numbers of contaminants in the recycling bin, especially for some materials that may be recyclable through programs other than curbside (such as plastic bags). Hence, residents and businesses need to be reminded of which items are allowed in the recycling carts.

The most effective education campaigns begin with an identification of the problem, and may focus fairly narrowly on a specific issue and/or a specific audience. Once the problem (or message) and audience(s) have been identified, a variety of methods could be used:

**Website**: Snohomish County maintains a website to promote recycling: http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/SolidWaste/Recycling. The website features information about recycling resources, natural gardening, waste reduction, household hazardous waste and garbage rates.

**Public Events Recycling**: Snohomish County has established a program to provide recycling information to any group with an event.

**Other Methods**: other options include displays in various locations, video and radio ads, and social marketing avenues such as Facebook and Twitter.

Increased education for recycling programs would be best implemented by those with the direct responsibility for implementing the programs (i.e., either the collection companies, possibly through the revenue-sharing agreements, or the cities and towns).

### Alternative D – Increase Separation of Recyclables from Residential Customers

A significant amount of recyclables remain in the waste stream from residential sources, and it is likely that public education and other non-mandatory steps will only reduce this amount by smaller and smaller increments. Other provisions to increase recycling can take a number of forms, including a requirement to subscribe to recycling services, prohibitions on placing recyclables in solid waste containers, and disposal bans. Snohomish County already bans MRW from the solid waste disposal system and some of the cities have also banned yard debris, but neither of these are quite the same as a recycling requirement (although the net effect is similar). In the case of a recycling requirement or a disposal ban, it is vital that recycling services and other alternatives be available to the affected parties.

The effectiveness of disposal bans has provided reasons for local counties to consider either banning of materials from the landfill or mandatory separation of recyclables. For example, a Seattle ordinance bans recyclable materials and yard debris from garbage. Garbage containers filled with more than 10 percent of recyclable paper or yard waste can be tagged and then not emptied.

### Alternative E – Increase Separation of Recyclables from the Commercial Sector

Implementing recycling provisions for the commercial sector can take a similar approach to residential customers (as Seattle has done) or could be structured differently. In Seattle, businesses can be charged $50 for each violation after two

warnings. A different approach has been taken by the City of Portland, which has implemented mandatory commercial recycling by requiring businesses to prepare a plan.

### Alternative F – Increase C&D Recycling

Some counties have chosen to require C&D recycling plans as part of building permit applications. In Kitsap County, for instance, County staff have worked with city and county agencies to adopt building and zoning ordinances that require a mandatory waste diversion plan for projects over a specified size or value. They also promote salvage and re-use of C&D materials.

King County has also designed specifications and waste management plans for C&D recycling. King County has made the following forms available to assist with C&D recycling:

Section 01505 - Construction Waste Management

Section 01736 - Building Deconstruction (and Salvage)

Snohomish County SWD staff could work with the County Planning and Development Services (PDS) Department and similar city departments to develop rules for C&D waste recycling.

### Alternative G – Consider Material Bans

Material bans can be an effective way to increase the recyclability of the wastes generated or to achieve waste prevention. As an example of the first of these, the City of Seattle requires all food service businesses to find packaging alternatives for disposable containers, cups and other products in all food service businesses, including restaurants, grocery stores, delis, coffee shops and institutional cafeterias. By July 1, 2010, all food service products designed for one-time use had to be replaced with products that are either compostable or recyclable. In addition, businesses that have dining areas where customers discard single-use packaging must collect recyclable and compostable packaging in clearly-labeled bins and send that to a recycling or composting facility for processing.

Phase one of the Seattle ordinance applied only to expanded polystyrene (sometimes called “Styrofoam”). The foam ban took effect January 1, 2009. Phase two of the ordinance applies to all disposable food packaging and service ware. The ban on the other disposables took effect July 1, 2010. A temporary exemption is in place for utensils, straws, small-portion cups, and foil-faced insulated wrap until July 1, 2011.

Ordinance 123307, which took effect June 19, 2010, permits Seattle Public Utilities to issue director's rules for temporary waivers to the food service ware and packaging requirements established by the original ordinance (122751).

The City of Edmonds bans most plastics bags, but this could be viewed more as a waste prevention measure (not recycling) since it encourages the use of durable alternatives. The City of Edmonds' ban allows some plastic bags for meats, vegetable and bulk foods, and also allows plastic garbage bags and sandwich bags. The City's ban on single-use plastic checkout bags affects all retail establishments. More information on the City's ban can be found at: http://www.ci.edmonds.wa.us/CityDepartments/Climate_Prot/PlasticBagFAQs.

### Alternative H – Coordination with Programs in Nearby Jurisdictions

Designing for consistency of recycling programs within Snohomish County and with neighboring areas can take several forms, including consistency of materials collected, types of collection programs and outreach:

**Materials collected**: Snohomish County is made up of 22 cities and a large unincorporated area. A synchronization of the items collected could include participation from these cities plus the four existing collectors and the processors for the areas.

Four recycling companies conduct curbside recycling in the cities. These companies collect the same basic recyclables, but differ on shredded paper and plastic bags. Only one company picks up and processes these commodities. The only other difference in the materials is that one company in one city does not take scrap metal, plastic tubs, milk cartons, and juice boxes. It could be helpful to inform the cities to add in the missing items on their upcoming contract with their prospective collector to harmonize the collection program.

**Flow control enforcement**: enforcing flow control provisions can be done more effectively if Snohomish County coordinates their efforts with cities and neighboring counties to ensure the proper collection, separation, recycling, and disposal of recyclables and waste.

**New programs such as disposal bans**: disposal bans for generators would carry more weight if the cities took ownership in the ban, and implemented it in their city and in contracts.

**Joint education and outreach programs**: the County could include the cities and reflect their ideas in a county-wide program that could be adopted and implemented throughout Snohomish County.

**Neighboring counties**: the nearby counties already have similar programs but some differences do exist:

**Skagit County**: one city takes all of the materials listed above, including shredded paper and plastic bags. The remaining cities and the unincorporated area do not take shredded paper and plastic bags.

**Chelan County**: programs in Chelan County do not take shredded paper and plastic bags. In addition, a variety of approaches are used for glass, with some areas collecting it while others do not.

**King County**: most of the King County cities contract independently, although again most of the differences are with shredded paper and plastic bags.

**Pierce County**: Pierce County does not collect any glass curbside, and the City of Tacoma collects it in a separate container. They are also limited in collecting other items such as plastic tubs, juice boxes and milk cartons.

Coordination with the neighboring counties on disposal bans as well as education and outreach could have significant benefits for all involved.

### Alternative I – Periodically Assess MRF Performance and Recycling Methods

Ensuring that the materials collected for recycling from curbside programs are properly processed and marketed is an important aspect of program monitoring and evaluation. The current collection and processing system for curbside materials is still undergoing significant evolution, and the markets for these materials are also continuously changing. Monitoring and assessing this situation, especially as new technologies and collection methods are proposed, is an important activity to ensure that the recycling system is operating effectively and efficiently. Periodic assessments would also provide important feedback for education programs that could then focus more on any problem materials.

### Alternative J – Support Local Markets and Products

“Closing the loop” locally has several important benefits, not the least of which are the creation of local jobs and avoiding greenhouse gas emissions caused by long-distance transportation of recycled materials and finished products. Snohomish County and their partners in the recycling system (the cities, towns and haulers) could promote recycling markets in the Puget Sound region where possible. This assistance would likely be limited to publicizing the availability of a product made from local materials but could also include providing materials for test runs and other assistance.

## Evaluation of Alternatives

The alternatives are compared with respect to the evaluation criteria below. The evaluation of cost-effectiveness is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives**: All ten alternatives are consistent with the solid waste planning objectives.

**Consistency with Other Regional Plans**: Alternatives A, C, H and I are highly consistent with other regional plans, while other alternatives are largely neutral in this respect (depending on the alternatives that are used for glass and implementation details for the other alternatives).

**Cost Effectiveness**: Alternative C is rated high for cost effectiveness, on the assumption that the education methods used are both effective and not very costly. Alternative G also ranks as high for cost-effectiveness as does Alternative H (coordination of programs can result in a lowering of costs for individual jurisdictions). The other alternatives may also be cost effective, but possibly to a lesser degree. Alternative I could be cost-effective by improving collection and processing efficiencies, but this alternative could also lead to significant costs for public education (if changes are made to the collection systems).

## Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in the following table.

**Table 9**
**Summary Rating of the Recycling Alternatives**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Increased focus on multi-family recycling | H | H | M | H |
| B | Alternative markets for glass | M | M | M | M |
| C | Expanded education campaign | H | H | H | H |
| D | Increase residential recycling | H | M | M | M |
| E | Increase commercial recycling | H | M | M | M |
| F | Increase C&D recycling | H | M | M | M |
| G | Material bans | M | M | H | L |

| | | | | | |
|---|---|---|---|---|---|
| H | Coordination with programs in nearby jurisdictions | H | H | H | H |
| I | Assess MRF performance & effectiveness of single stream | M | H | M | M |
| J | Support for local markets | H | M | M | M |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendations are being made for recycling programs:

### High-Priority Recommendations

R1) Increase the focus on multi-family recycling with outreach to apartment owners and tenants.

R2) Increase educational efforts on the contamination issues with commingled recycling systems.

R3) The County should design consistency into their programs by working with neighboring jurisdictions on items such as materials collected, new programs such as disposal bans, and joint education and outreach programs.

### Medium-Priority Recommendations

R4) Develop alternative markets or collection systems for glass.

R5) Consider methods for increasing the separation of recyclables for residential customers.

R6) Consider methods for increasing the separation of recyclables for the commercial sector.

R7) Consider methods for increasing C&D recycling.

R8) Work with local jurisdictions and haulers on assessing MRF performance and the effectiveness of single stream collections.

R9) Local markets for recyclable materials will be supported by Snohomish County and their partners in the recycling program.

**Low-Priority Recommendations**

R10) Consider banning the use of specific products.

For Recommendation R1, the service-providers (cities and haulers) should take the lead in providing additional outreach to apartment owners as well as delivery of flyers to each multi-family tenant. If a measureable improvement is not accomplished within a few years (by 2013), additional steps should be implemented, such as a social marketing approach or a rate or rent discount.

For Recommendation R2, the service-providers (cities and haulers) should again take the primary lead for an expanded educational campaign but the County could assist or participate more in this case. Expanded educational efforts could include the use of the websites for all parties (haulers, cities and Snohomish County), recycling information at public events, other methods such as displays, video and radio ads, and the use of social media (Facebook and Twitter). These additional measures should be implemented immediately and be continued on an ongoing basis.

Recommendations R3, R4, R5, R6, R7, R9, and R10 are County responsibilities that can be implemented in the next year or two, to be continued until the underlying issues are resolved (or until sufficient progress has been made towards resolving the issue) or continued as an ongoing activity.

Recommendation R8, is a joint responsibility of all the parties involved in the recycling system (haulers, cities, County), but Snohomish County should take the lead on addressing this issue. An initial assessment should be conducted soon, and then repeated every two to three years.

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# ORGANICS

## SUMMARY

This section discusses existing programs, planning issues, and alternative strategies for several organic materials, including:

- yard debris
- food waste
- wood waste
- agricultural waste
- biosolids

The recommendations made by this technical memo address refinements to education programs, permitting activities and transfer capabilities; refinements which are intended to enhance the organics collection and processing system. Steps to increase the diversion of food waste and other organics, wood waste and edible food are also proposed.

## BACKGROUND

The discussion of organics in this technical memo focuses on five types of materials:

- **Yard Debris**: includes leaves, weeds, flowers, roots, grass clippings, shrubbery and small tree trimmings/branches (typically defined as being less than four inches in diameter).
- **Food Waste**: includes unwanted food preparation and table scraps. Many food waste collection programs also include compostable paper and compostable plastic bags. This technical memo does not address grease collection and rendering, since grease is generally handled by a separate collection system that is not part of the solid waste system.
- **Wood Waste**: includes woody vegetation (branches and limbs over four inches in diameter, stumps and trunks), and manufactured wood products. Manufactured wood products are often divided into “clean wood waste” (unpainted and untreated lumber, particleboard, plywood, OSB, and pallets), versus “dirty wood” (painted or treated wood).
- **Agricultural Waste**: includes crop residues, animal manures and other organic materials generated on farms and ranches.

- **Biosolids**: defined as sewage sludge that is a primarily organic, semisolid product, resulting from the wastewater treatment process, that can be beneficially recycled and meets all applicable requirements under WAC 173-308. Biosolids includes septic tank sludge, also known as septage.

Organic materials have the potential to create significant problems if not managed properly, but these materials also present significant opportunities. With increasing urban development and modern garbage collection practices, separate yard debris collection has emerged as the standard practice for residential organics. In the past few years, food waste collection and composting has also become a more common practice. With rising fuel prices and the need to decrease backyard burning of waste, wood waste is being increasingly collected as a commodity for energy generation. Historically, agricultural organics have been managed on-site (on the ranch or farm where generated) to reduce expenses and to improve soil quality, but management practices for these wastes continue to evolve. As regulations for disposal of wastewater treatment solids became more stringent, the industry began to compost biosolids. Now there is an increasing interest and need for doing more with all of these organics due to climate change and sustainability issues.

**Goals and Policies for Organics**

**Current Goals and Policies**: Current goals and policies specific to organics include:

- Goal 2: Ensure efficient services for a growing and changing customer base.

- Policy 2-2, Organics: Continue to promote and expand the collection and non-landfilling of yard debris, wood waste, and food waste.

- Related policies from other technical memorandums:

  - Policy 1-1, Climate Change: Support efforts and actions by County and other agencies to reduce GHG emissions and to lessen and prepare for the impacts of climate change.
  - Policy 1-3, Product Stewardship: Continue to be a leader in product stewardship initiatives and legislation.
  - Policy 1-4, Waste Prevention: Continue to offer and develop programs that encourage waste prevention.
  - Policy 2-1, Recycling: Continue to offer and develop programs that emphasize waste reduction and recycling.

**Beyond Waste Goals**: Reducing the amount of organics in the waste stream is one of the five key initiatives identified in the State's Beyond Waste Plan. The Beyond Waste Plan adopts a goal of "expanding and strengthening the closed-loop reuse and recycling system" for converting organic wastes into compost and other products. The materials

included in that plan's definition of organics are yard debris, food waste, animal manures, biosolids, crop residues, wood, and low-grade or soiled paper.

**Regulations for Organics**

While some organic materials such as biosolids have extensive regulations, others such as wood waste have less oversight. In addition to the legislation shown below, Chapter 173-350 WAC (the Solid Waste Handling Standards) also addresses organics management.

**Yard Debris**: The legislative findings that provide the basis for RCW 70.95 (see RCW 70.95.010 (10)) includes the policy "it is the state's goal that programs be established to eliminate residential or commercial yard debris in landfills by 2012 in those areas where alternatives to disposal are readily available and effective." Another section of RCW 70-.95 (see RCW 70.95.090 (7)(b)(iii)) also requires county solid waste management plans to address "programs to collect yard waste, if the county or city submitting the plan finds that there are adequate markets or capacity for composted yard waste within or near the service area to consume the majority of the material collected." No specific alternatives or other details are provided in either of these sections of RCW 70.95, but the Beyond Waste Plan (see previous section) lists a number of recommended actions for organics.

Snohomish County Code 7.42 requires the provision of curbside yard debris collection to customers of solid waste collection companies within the yard debris service zone of unincorporated Snohomish County. Collection companies set the rate for this voluntary subscription service.

A few of the cities in Snohomish County have banned yard debris from disposal with garbage and some require the use of a combined garbage, organics and recycling service.

**Food Waste**: The Snohomish Health District regulates food waste collection, primarily using solid waste storage, transportation and nuisance codes for this. These codes are described at http://www.snohd.org/snoSanitaryCode2/c3.pdf. The codes are based largely on Department of Ecology rules (primarily WAC 173-350).

Programs to collect food waste curbside with yard debris have been phased in over the past few years and are now available throughout Snohomish County.

**Wood Waste**: Legislation recently adopted, ESSB 6170 (Chapter 469, Laws of 2009), provides a sales/use tax exemption on the purchase of hog fuel to produce steam or electricity. Hog fuel is defined as wood waste and other wood residuals including forest-derived biomass. This new law became effective on July 1, 2009 and expires June 30, 2013.

**Agricultural Waste**: Anaerobic digesters that process 50% or more animal manure can also "import" up to 30% of their organic feedstocks from outside sources and are still exempt from solid waste permitting requirements in RCW 70.95.330. Sales and other tax exemptions were recently enacted for qualifying livestock nutrient management equipment and facilities, and also for purchases and installation of machinery and equipment used in a facility generating over 1,000 watts of electricity from biomass and several other sources (see ESSB 6170 for more details).

**Biosolids**: Long-term scientific studies have repeatedly demonstrated that biosolids recycling is safe. Monitoring of biosolids, soils, water resources and plants continue to show benefits from recycling. These studies formed the basis for the federal and state regulations that apply to biosolids.

- Federal regulations for biosolids include:
  - EPA Office of Waste Water Management Biosolids, includes rules and proposed rules for biosolids.
  - Standards for the Use or Disposal of Sewage Sludge, 40 CFR 503.
  - A Plain English Guide to the EPA Part 503 Biosolids Rule.
  - Guide to the Biosolids Risk Assessments for the EPA Part 503 Rule.
  - Guidance For Controlling Potential Risks To Workers Exposed to Class B Biosolids.

- Information about state regulations can be found at:
  - Department of Ecology Biosolids Home Page - includes guidelines, permits, and other information.
  - WAC 173-308 (WSR 98-05-101) - Biosolids Management.
  - Biosolids Management Guidelines for Washington State - Washington State Department of Ecology Publication #93-80, Revised July 2000.
  - Washington State Department of Ecology Biosolids Permitting.

## EXISTING PROGRAMS AND ACTIVITIES

### Yard Debris Programs

In the course of maintaining yards and gardens, Snohomish County residents and businesses often produce yard debris and landscaping residues. Many residents

practice backyard composting for these materials. The County has an interest in promoting beneficial uses for yard debris, and offers several brochures on natural lawn care and composting.

All local haulers separately collect yard debris as one of the services they provide. Self-haulers of yard debris can also bring it to one of the County's three transfer stations, or to one of several private compost facilities that accept yard debris directly from residential and commercial sources and use it to produce high quality compost.

Current collection programs in Snohomish County are doing well at diverting most of the yard debris that is generated. Recent information shows that 153,512 tons of yard debris were recycled (composted) in 2009 (Ecology 2010a). No figures are available for the amount of yard debris handled by backyard composting and other waste reduction activities. The *Waste Composition Study* (Snohomish County 2009) shows that only 9,580 tons per year of yard debris were disposed in 2009. Hence, the recovery rate for yard debris in 2009 was at least 94.1% (see Table 1).

**Table 1**
**Recovery Rates for Organic Materials**

| Organic Materials | Tons Disposed | Tons Recovered | | Total Tons | Recovery Rate |
|---|---|---|---|---|---|
| | | Recycled | Diverted [1] | | |
| Yard Debris | 9,580 | 153,512 | | 163,092 | 94.1% |
| Food Waste | 61,300 | 14,011 | | 75,311 | 18.6% |
| Wood Waste [2] | 57,630 | 75,800 | 36,768 | 170,198 | 66.1% |
| Agricultural Waste | NA | NA | NA | NA | NA |
| Biosolids | NA | 10,498 | | 10,498 | 100% |

Notes: 1. "Diverted" includes beneficial uses that are not defined as recycling but that still avoid landfill disposal of organic materials, such as wood used for hog fuel.
2. The wood waste category includes all grades of wood.

Sources: Disposed tons are based on figures from the 2009 *Waste Composition Study* (Snohomish County 2009) and the 2009 waste disposal amount of 419,130 tons. The recycled/diverted figures are from Ecology's 2009 *Annual Recycling Survey* (Ecology 2010a), plus additional information from Ecology for the biosolids amount.

## Food Waste Collection Programs

In most areas of Snohomish County, food scrap collection programs are available for residents and businesses. Residential food is collected curbside by the solid waste collection companies commingled with yard waste, and the material is brought to a

composting facility permitted to handle post consumer food waste. Currently, only Cedar Grove Composting and Lenz Enterprises are permitted to handle this material.

The County launched the expansion of food waste collection combined with yard waste collection through Revenue Sharing Agreements with Waste Management and Allied Waste. These companies continue to take the lead in promoting the residential organics curbside program in their service areas. Most cities that contract for services have now added food scraps to their yard debris collection programs. Brochures are available from the County on food scrap collection in schools as well as composting food scraps at home.

A growing number of commercial establishments are diverting their food waste through the Commercial Food Scrap Composting Collection Program, which is available to all businesses in the County. The outreach for that program was partially funded by an Ecology CPG grant (through the end of 2010). The program began in 2006 as a pilot and has since expanded to divert 735 tons in 2009. As of July 23, 2010, there were 239 businesses participating in this program, primarily restaurants but also including schools, hospitals and other institutions and businesses.

A significant development locally has been Cedar Grove Compost's work with national packaging producers to create a special line of compostable packaging that is used by restaurants, cafeterias, and institutional facilities to minimize contamination and streamline food waste composting. Cedar Grove Compost's work on these product lines and testing other products for compostability has made it a national leader and opened many new possibilities locally. This has been an important development related to City of Seattle's ban on non-compostable and non-recyclable single service foodware.

The most recent information on recycling of food waste (Ecology 2010a) shows that 14,011 tons of food waste were recycled in 2009. This figure does not include the additional 1,605 tons of grease and other materials handled by rendering services. The *Waste Composition Study* (Snohomish County 2009) shows that 61,300 tons of food waste were disposed in 2009. Hence, the recovery rate for food waste was 18.6% in 2009 (see Table 1).

**Wood Waste**

Residents and commercial businesses have several alternatives for disposal or recycling of wood waste in Snohomish County. Outdoor burning is illegal in many cases and can carry fines of up to $16,000 per day. Burning of land clearing debris is illegal in all areas of Snohomish County, as is burning of treated wood, construction debris and trash. The Puget Sound Clean Air Agency enforces outdoor burning regulations and provides information on health impacts and alternatives to burning.

Clean wood waste is accepted for composting, recycling or energy recovery at the County's three transfer stations. Stumps should be no larger than what can be handled by two people and without dirt.

Private companies play a role in the recycling of wood debris from residential and commercial businesses. Private recycling facilities process this resource into wood chips, mulch, landscape products, hog fuel and other useful materials. Much of the hog fuel generated in the region goes to a local facility (Kimberly-Clark) to be used as a fuel. The Kimberly-Clark facility is scheduled to close in March of 2012. This closure will drastically impact the markets for hog fuel. It is currently unknown how long it will take and where additional markets will develop to utilize the current quantities of hog fuel being produced.

The most recent information for wood waste (Ecology 2010a) shows that 75,830 tons of wood waste were recycled in 2009 and another 36,768 tons were used for energy recovery. The *Waste Composition Study* (Snohomish County 2009) shows that 57,630 tons of wood were disposed in 2009. Hence, the recovery rate for wood waste in 2009 was about 66.1% (see Table 1). Note that this recovery rate is not the same as the recycling rate since it includes diversion to energy recovery (which is not defined as recycling).

**Agricultural Waste**

In Snohomish County and in other parts of the state, there is little agricultural waste that is disposed as a solid waste. Most types of agricultural waste, whether crop residues or animal manures, can be returned to the land where these were generated, although in many cases some type of composting or other processing may be necessary to avoid creating problems with this approach. A few materials, such as branches and stumps from orchards, cannot easily be handled on-site. Other types of agricultural waste may need to be removed for disease prevention purposes or because a specific farm may not have the capacity to absorb all of the material (such is the case at times with amounts of animal manures that exceed the nitrogen-holding capacity of a farm). Some of these materials are currently being processed at composting facilities.

**Biosolids**

Proper management of biosolids is largely a responsibility of the cities and towns that operate wastewater treatment plants, since they are viewed as the generators of this material. The City of Everett, for instance, recycles biosolids in forestry, agriculture and soil improvement projects.

Ecology figures show that 10,498 dry tons of biosolids were disposed in 2008 (Ecology 2009). In the previous year, 7,902 dry tons of biosolids were disposed. The sharp variation from year to year of biosolids disposed is due to the variable lagoon cleanup schedules by several cities. In 2008, the City of Everett cleaned out their lagoon and generated another 4,000 tons of biosolids in that year. Everett tends to clean their

lagoon every other year, while smaller cities clean their lagoons even less frequently. Marysville, Snohomish, Lake Stevens, and Stanwood are among the many cities that report "zero" tons of biosolids in the years that they don't clean out their lagoons. Landfill disposal of sewage sludge is not permitted except in extreme cases, so the recovery rate for biosolids is essentially 100% by definition.

### Current Processing Facilities

Several processing facilities are currently operating in Snohomish County, and those are briefly summarized here in a separate section because these facilities handle more than a single type of material. Facilities currently permitted to operate in Snohomish County (SHD 2010) include:

**Bailey Compost** – Bailey Compost is a composting facility located at the Bailand Dairy Farm. This facility composts cow manure from the dairy with yard debris, which is accepted for a fee at the facility.

**Cedar Grove Compost** – Cedar Grove has operated a large composting facility in Maple Valley (King County) for over 20 years, and in 2004 opened an Everett location. Both facilities use the "Gore Cover Technology" to compost yard debris, food waste and wood waste.

**Lenz Enterprises** – Lenz Enterprises accepts yard debris, food waste and agricultural waste for composting. These materials are ground, mixed, and then composted in concrete bunkers. Air is pulled or pushed through the material as it is composted, depending on temperature levels and aeration needs. The compost is cured and then screened and blended with other materials.

**Misich Farms** – This composting operation is associated with Riverside Topsoils. Misich Farms composts yard debris, landclearing debris, manures, sawdust and shavings.

**Pacific Topsoils** – Pacific Topsoils accepts a variety of materials for recycling, including yard debris, sod, brush, stumps, wood waste, soil, asphalt and concrete. Organic materials are composted at their Maltby location and used in a variety of topsoil blends sold by them.

Table 2 shows a summary of the amounts handled by these facilities, according to the most recent data (2009) available from Ecology (Ecology 2011). This data shows the amounts of organics handled from out-of-county sources. A review of the data for neighboring counties did not show any tonnages processed from Snohomish County. In other words, Snohomish County is a net importer of organic materials for composting, which is probably due to the relatively large number of composting facilities in the county.

### Current and Future Processing Capacity

RCW 70.95.090 (7)(b)(iii) requires solid waste plans to address programs to separately collect yard waste if there are adequate markets or capacity for composted yard waste. As described above, in the sections on existing activities and processing facilities, Snohomish County meets this requirement. In fact, by endorsing the Beyond Waste goal of eliminating (to the extent possible) the discarded amounts of a broader range of organics, Snohomish County far exceeds this minimum requirement.

The current capacity for composting facilities in Snohomish County is adequate to handle the amounts of organics generated in Snohomish County as well as a significant

**Table 2**
**Materials Handled by Snohomish County Composting Facilities (2009)**

| Facility | Yard Debris | Land Clearing Debris | Food Waste | Agricultural Waste [1] | Wood Waste[1] | Totals |
|---|---|---|---|---|---|---|
| Bailey Compost | | | | | | |
| - Snohomish County sources | 15,500 | | | 2,000 | | 17,500 |
| - other sources | | | | | | |
| Cedar Grove Compost | | | | | | |
| - Snohomish County sources | 101,979 | 77 | 11,278 | 36 | 2,469 | 115,839 |
| - other sources | 79,355 | | | | | 79,355 |
| Lenz Enterprises | | | | | | |
| - Snohomish County sources | 477 | 663 | 2,765 | 6,229 | | 10,134 |
| - other sources | | | | | | |
| Misich Farms | | | | | | |
| - Snohomish County sources | 4,500 | 2,500 | | 50 | 100 | 7,150 |
| - other sources | | | | | | |
| Pacific Topsoils - Maltby | | | | | | |
| - Snohomish County sources | 31,056 | 16,325 | | | | 47,381 |
| - other sources | | | | | | |
| Totals | | | | | | |
| - Snohomish County sources | 153,512 | 19,565 | 14,043 | 8,315 | 2,569 | 198,004 |
| - other sources | 79,355 | | | | | 79,355 |
| Total, All Sources | 232,867 | 19,565 | 14,043 | 8,315 | 2,569 | 277,359 |

Note: 1. Agricultural waste includes manures, animal mortalities and other.
Source: Washington State Solid Waste Information Clearinghouse (Ecology 2011).

amount of material from neighboring counties (see Table 2). The best available data indicates that these facilities are at 63% of their maximum capacity and could possibly handle an estimated 140,000 tons per year of additional materials (Snohomish County 2010). This amount of remaining capacity would be able to handle virtually all of the disposed quantities of organics remaining in Snohomish County's waste stream (128,510 tons per year of yard debris, food waste and wood waste, see Table 1), assuming for the moment that no additional amounts of organics would also be imported from neighboring counties and that all of these materials would go to composting facilities (whereas likely at least part of the wood waste would be recycled in other ways or used for energy).

Capacity problems could still arise in the future, however, due to seasonal fluctuations and due to the future mix of materials versus processing abilities. The annual capacity of a facility that is handling yard debris is less of a limiting factor than the amount of material that the facility can handle during peak months, which occurs in the spring in

Western Washington (Ecology 2010b). The few facilities in the region permitted to compost post consumer food waste could also lead to capacity issues in the future. Another potential capacity problem is the vulnerability of the region's capacity in the event of a facility failure or closure. Facilities are vulnerable to actual and perceived noise and odor issues, as well as confirming to multiple regulatory guidelines. In addition, there is a public perception based on past practices and educational efforts that these facilities will always exist to provide outlets for recycling programs that have been implemented for multiple years. Developing new capacity to address these or other issues quickly is constrained by the multiplicity of agencies (with differing requirements and priorities) that are involved in permitting composting facilities.

**Current and Future Markets for Organics End Products**

The County has taken a lead role in the past in research and promotion of the use of compost, mulches and other organics in improving the environmental functioning of soils and landscapes, and for erosion control. Soils and landscapes with a higher organic content reduce the need for pesticides and herbicides, capture toxics before they enter water systems, and assist with storm water management. Working with the Washington Organic Recycling Council and other jurisdictions, the County launched the "Soils for Salmon" program, promoting these techniques to developers, agencies and the public. This also served to promote markets for compost produced in Snohomish County and the region.

The current markets for products made from organic materials are generally adequate, although specific conditions for each material vary somewhat, as described below.

**Yard Debris**: seasonal surpluses in both raw materials and compost sometimes occur, but are being adequately handled currently by transfers between processing facilities and sales of compost to low-value markets such as agricultural users. During the recent economic downturn and resulting reduction in new construction and renovated landscapes, however, larger stockpiles of compost have accumulated. In addition, sales of compost to low-value markets do not adequately supplement incoming material tip fee costs.

**Food Waste**: the use of food waste and compostable packaging as a feedstock is still a relatively new development and this material may require more attention and assistance in the near future. On the other hand, food waste could also become a feedstock for other markets (such as energy production through anaerobic digestion) as increasing volumes of this material are collected, and these markets could absorb a substantial amount of material. Since anaerobic digestion does not fully consume or process the incoming materials, the residuals from anaerobic digestion would still need to be processed and marketed.

**Wood Waste**: wood waste is being used in several markets and, although demand varies somewhat with energy prices and other factors, future demand for this material appears strong.

**Agricultural Waste**: agricultural waste is also being used in several markets, and with increasing interest in producing energy from manures and crop residues, the future demand for these materials appears to be strong.

**Biosolids**: markets for biosolids appear relatively stable.

There are a few additional market-related issues that may be of concern in the future:

- **Facility capacity**: as discussed in the preceding section on market capacity, there may be capacity problems in the future, either due to the total volume of material or the mix of specific materials. In either case, the driving force for these problems would be increasing amounts of food waste and the capacity of facilities in the greater Puget Sound region to compost food waste. A successful food waste diversion program throughout the region could increase the amount of organics to be composted by 50% or more over current volumes. At the same time, food waste will likely require more bulking agents (supplies of which are already running short) and possibly more processing steps to remove contaminants.

- **Potential for future wood waste shortages**: wood waste is an important raw material for compost facilities as it is needed to provide porosity and carbon to particularly wet and high nitrogen feedstocks, such as grass clippings and food waste. Without the addition of wood waste, composting these materials can create more odors and other management problems. If the cost of wood waste increases for compost facilities, so will the rates they charge their customers.

  In the past, hog fuel markets have provided a significant amount of support for composting and other recycling operations. The hog fuel markets have helped stabilize demand and prices for organics over the past decade by providing a market for lower-value wood wastes, even though at times there have been price fluctuations and other problems. Supply and demand competition between hog fuel markets, landscaping mulch and higher-value markets (such as paper production) provide a good example of how the free market system allows for adjustments in processing systems and amounts allocated to the various markets, and how the private sector can respond to changes in market demand and prices. There is, however, some concern about the future ability to satisfy market demand for all of these materials due to subsidies being applied to the energy market. These subsidies are in the form of stimulus funds and other financial support from the U.S. Department of Energy, U.S. Forest Service, and various other federal and state agencies. These funds are helping to finance new or expanded abilities for industry to utilize wood waste (hog fuel). Some of the projects potentially being funded in this way may also lead to new or expanded anaerobic digesters for agricultural and food wastes.

  On the other hand, a significant amount of wood waste remains in the waste stream (57,630 tons per year, or about one-third of the amount generated), and increased recovery of this would help satisfy current and future demand. In addition, there are

"stockpiles" of wood waste at logyards and other locations, and a substantial amount of woody residues is left behind by logging operations. These wastes are not being counted in the disposal or generation figures, and at least part of this would not be suitable for energy production but could be used for mulch (SMPN 2009).

### County Policy for Future Development of Processing Facilities and Markets

In recent years, there have been varying degrees of involvement by Snohomish County and other local governments in the development of processing facilities, markets and other systems to manage organics. Currently, however, it is anticipated that Snohomish County will have only a limited role in the future development of handling and management systems for organics. Although the County (and the cities as appropriate) will continue to set goals and encourage collection programs, this policy recognizes the ability of the private sector to find the proper balance for growth and economic sustainability in the future development of organics processing capabilities and markets.

## PLANNING ISSUES

### Near-Term Planning Issues

- Current yard debris recovery is very good (94.1%), but there are another 9,580 tons per year (tpy) of material that could be diverted from disposal. There is also much more food waste (61,300 tpy) and wood waste (57,630 tpy) that could be diverted.
- Agricultural waste is not being disposed in landfills, but as a resource some of it could be managed better.
- A larger priority could be placed on local and higher value markets for compost rather than shipping it out-of-county.
- Improvements could be made to the existing organics system to increase efficiency, reduce energy (fuel) usage and increase convenience to customers.
- New facilities (or new systems at existing facilities) may be needed to handle different mixes of materials (i.e., more food waste, less bulking agents).

### Long-Term Planning Issues

- Improved management of organics could have significant benefits for reducing global warming emissions.
- Need expanded and stable markets for compost to encourage more diversion of organics in the future.
- More processing capacity may be needed in the future.

- Clean energy and biomass projects could consume a significant amount of woody materials in the future, creating shortages of wood waste for composting facilities and landscapers, but these markets are also needed for a portion of the wood currently collected and may also be needed more in the future if more wood is diverted from the waste stream.
- There is a growing interest in the presence of pharmaceuticals and personal care products in biosolids and in water. It is too soon to tell whether this will lead to new requirements. Recent findings have, however, spurred growing interest in separate collection systems for pharmaceuticals (to prevent these from being disposed in septic and other wastewater treatment systems).

## ALTERNATIVES

### Alternative A – Alternating Collection for Organics/Recyclables and Garbage

Alternating weekly collection of recyclables/organics and waste would be an effective method to reduce fuel consumption and other costs for collection services, while also encouraging higher participation in waste diversion programs. Having garbage collection only available every other week would encourage more people to make greater use of recycling and organics collection systems. A possible variation on this approach would be to conduct once-weekly collection of mixed organics (on the assumption that the food waste would be in that container and so weekly collection would reduce odors and other problems) and every-other-week (in alternating weeks) collection of recyclables and garbage. For those areas with every-other-week collection of yard debris currently, increasing the frequency to weekly would not lead to a significant increase in costs since garbage collection would be reduced from weekly to every-other-week.

It would be important to combine this approach with properly-sized containers. As a practical matter, people stop putting materials into a recycling or organics container once the container is full, and then typically the excess materials are put into waste containers instead. Recycling and organics containers would need to be checked as these are emptied to avoid the reverse happening as well (trash being placed in these containers because the garbage can is full). Reliable pickup services and clear instructions would also be important to the success of this approach.

Implementation of this option would include a cost-benefit analysis of the funding, rate and customer service impacts of collection frequency changes in addition to the projected increases in recycling and organics quantities.

### Alternative B – Encourage Food Waste Diversion

Food waste is the largest single material remaining in the waste stream, and getting people to recognize that this is a resource, not a waste, will require a strong educational effort. The growing number of options for food waste could be promoted to residential

and commercial generators. The use of compostable paper and compostable plastic products, especially for commercial generators, would be an important aspect of this as well. For this, encouraging consistency with the City of Seattle's regulations on single-serving foodware could be considered, especially since Seattle and Snohomish County generators currently utilize the same compost companies. It would also be important to promote the use of the finished product (compost), in order to provide better markets for the increased volumes of compost that will result from separate food waste collections.

**Alternative C – Intermediate Handling or Processing for Organics Loads**

The County could design and implement interim processing steps for organics to increase efficiency and reduce transportation related greenhouse gas emissions. For instance, Snohomish County is currently considering a process where the haulers could drop off organics at the transfer stations, where the organics would be compacted and then hauled to a composting facility. This process would be similar to how garbage is aggregated for transporting.

**Alternative D – Long-Term Sustainable System for Diversion of Yard Waste**

The "alternatives to burning" program is doing well for providing an alternative to backyard burning in rural areas, but this program is temporary in nature and a longer-term solution may be necessary. Developing a long-term sustainable system for the diversion of yard waste from rural areas would provide a number of benefits.

**Alternative E – Increased Diversion of Wood Waste from Disposal**

A significant quantity of wood waste continues to be disposed as solid waste. The County could develop a plan for increasing diversion of wood waste from disposal by increasing efforts to divert wood at its transfer facilities, by requiring separation of wood waste from other materials brought to the stations, by wood waste disposal bans, or other means. Increased diversion of wood waste may be particularly important in the future as demand and prices paid for wood waste increase.

**Alternative F – Market Development**

The County can assist in private sector market development activities by working with other County departments and other agencies to increase utilization of compost and other organics in public works projects and by promoting compost use by the private sector. Other County departments that have common objectives and that could also benefit from use of organics include programs that deal with storm water, groundwater, municipal wastewater treatment, and on-site sewage systems. By coordinating the message with other resource protection and waste management programs, the message will be repeated and attention will be focused on the multiple benefits of the high benefit management practices.

### Alternative G – Edible Food Diversion to Social Programs

A great deal of food is wasted that is still edible and could be provided to food banks and other programs providing food to those who need it. The County could explore methods to assist these programs to prevent the waste of edible food and divert food to those in need. It should be noted that evidence in other communities with effective commercial food scraps collection programs for composting shows decreasing donations of edible food to charitable organizations.

### Alternative H – Coordinate a Working Group to address Compost Facility Permitting

A working group could be established to address permitting of compost facilities. This group could include representatives of Snohomish County, the Snohomish Health District, the Puget Sound Clean Air Agency, the Department of Ecology and appropriate others. This group could develop tools such as a checklist or flow diagram for the permitting process, and also discuss areas where conflicting goals or requirements might exist. Private companies interested in permitting new facilities or expansions could meet with this group prior to submitting applications, to at least clarify the information and other requirements for the application process.

### Evaluation of Alternatives

The alternatives are compared with respect to the evaluation criteria below. The evaluation of cost-effectiveness is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives**: All of the alternatives are consistent with the policy of continuing to promote and increase the collection and non-landfilling of organic materials.

**Consistency with Other Regional Plans**: All of the alternatives are consistent or neutral with respect to other regional plans.

**Cost Effectiveness**: Alternative A could increase the cost-effectiveness of collection programs. Significant savings would be incurred due to reduced services from the hauler, although the implementation schedule may depend on the timing for renewal of municipal contracts. Alternative C could also reduce collection costs, although the County would incur extra costs for this alternative. The other alternatives would have only minor impacts on cost-effectiveness, or would need to be designed to keep costs within reason, but none should be significantly negative in respect to costs.

### Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in the following table.

**Table 3**
**Summary Rating of the Organics Alternatives**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Alternating weekly collection | M | M | M | M |
| B | Encourage food waste diversion | H | H | M | M |
| C | Compacting organic loads | H | M | M | H |
| D | Long-term system for rural yard debris | H | M | M | M |
| E | Increased diversion of wood | H | H | M | M |
| F | Market development | H | H | M | H |
| G | Edible food recovery | H | H | H | H |
| H | Working group for permitting | M | M | M | M |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendations are being made for organics programs:

### High-Priority Recommendations

O1) A transfer system for organics should possibly be implemented at Snohomish County transfer stations.

O2) County departments will work together to promote the use of compost.

O3) Methods to encourage the diversion of additional amounts of edible food to charitable programs should be explored.

### Medium-Priority Recommendations

O4) A working group will be established to coordinate permitting activities for new and expanded composting facilities.

O5) The idea of changing collection schedules for organics, recyclables and garbage, to provide additional incentive to divert organics, should be further explored.

O6) A program will be developed to replace the “alternatives to burning” program when it expires.

O7) Wood waste diversion will be increased by a combination of voluntary measures and mandatory requirements.

O8) A regional educational program should be implemented to promote diversion of food waste and compostable paper.

Snohomish County would be the lead agency for most of these recommendations, although Recommendations O2, O4 and O8 will involve other agencies and/or other county departments besides the Solid Waste Division. The implementation for some of these (especially Recommendation O5 if collection schedules are actually changed) will be conducted by others.

Many of the above recommendations do not require a significant amount of budget to implement, just some additional staff time. Recommendation O1, however, could require significant capital investment in new transfer capabilities, and several of the recommendations (especially O1, O4 and O5) could decrease costs for others. The cost-benefit analysis for O5 could require significant staff time if economic, participation and GHG factors are evaluated.

All of these recommendations can be implemented beginning immediately or in the next few years. Recommendation O4 may only need to be a temporary measure or could be deferred, as the current capacity for composting facilities in Snohomish County is adequate to handle the amounts of organics generated in the County as well as a significant amount of material from neighboring counties (see Table 2). Other recommendations (such as O2, O3, O6 and O8) may only need to be continued until their goals are met, but many of these should be viewed as ongoing activities.

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# WASTE COLLECTION

## SUMMARY

The Waste Collection Technical Memorandum describes the Snohomish County solid waste collection system, including identification of policies, regulations, emerging issues, current garbage haulers, service areas and rates.

The recommendations made in this technical memorandum address increased transfer station access by commercial haulers, mandatory collection and expanded options for waste collection.

## BACKGROUND

Effective and efficient waste collection is an important aspect of a well-designed solid waste management system. Although a major goal of Snohomish County's Solid Waste Management Plan is to reduce waste volumes to the extent possible, waste collection services will continue to play a vital role for the foreseeable future.

This technical memorandum addresses garbage collection, which is regulated differently than collection of recyclable and compostable materials. Collection of other materials (such as recyclables, organics, moderate risk wastes and other special wastes) is addressed in the technical memorandums dealing with those materials.

### Goals and Policies for Collection

Goals and policies specific to collection include:

- Goal 2: Ensure efficient services for a growing and changing customer base.
- Policy 2-3: Provide a variety of equitable and efficient collection services to County residences and businesses that are in line with the Division's other goals and policies.
- Related Policies from other technical memorandums:
  - Policy 2-2, Organics: Continue to promote and grow the collection and non-landfilling of yard debris, wood waste, and food waste.
  - Policy 2-4, Waste Transfer: Provide a variety of equitable and efficient waste transfer services to County residences and businesses that are in line with the Division's other goals and policies.
  - Policy 2-7, Administration and Regulation: Ensure that administrative services and regulatory activities provide adequate support for policies and programs undertaken by the Division.

## Regulations for Collection

The governing authorities for collection are the Washington Department of Ecology (Ecology), the Washington Utilities and Transportation Commission (WUTC), Snohomish County, and the cities and towns within Snohomish County.

The Tulalip Tribes have inherent authority to govern all activities related to solid waste management within the boundaries of the Tulalip Reservation.

The Revised Code of Washington (RCW) 70.95.020 assigns local government primary responsibility for the management of solid waste handling while encouraging the use of private industry.

The WUTC regulates solid waste collection companies under:

- Chapter 81.77 RCW, Solid Waste Collection Companies: This law establishes the regulatory authority for solid waste collection companies and the procedures and standards with which they must comply.
- Chapter 35.21 RCW, Cities and Towns: This law establishes authorities of towns and cities in regards to solid waste and the procedures and standards with which they must comply.
- Chapter 480-70 WAC, WUTC Rules for Solid Waste and/or Refuse Collection Companies: This chapter establishes standards for public safety, fair practices, reasonable charges, nondiscriminatory application of rates, adequate and dependable service, consumer protection, and compliance.
- Chapter 480-07 WAC, WUTC Procedural Rules: This chapter addresses how to conduct business with the Washington Utilities and Transportation Commission.

Title 7 of the Snohomish County Code has several provisions that affect collection programs. This section also addresses illegal dumping and littering. Section 7.42 establishes minimum service levels for residential recycling in unincorporated areas.

One of the more important provisions of the Snohomish County Code establishes “flow control” authority for the County, which requires that waste generated in the County be disposed only at sites within the Snohomish County solid waste system (see Section 7.35.125). This provision also requires that clearly-marked containers for garbage and recycling be used at construction sites and other locations, to help ensure that materials collected as recyclables go to reclamation facilities rather than landfills. This helps ensure that landfill-disposed materials are properly handled and disposed of within the Snohomish County solid waste disposal system.

Many of the cities in Snohomish County have adopted codes that require homes and businesses to subscribe to garbage collection services and to keep their properties free of junk accumulations and related problems.

## EXISTING PROGRAMS AND ACTIVITIES

### Waste Haulers

Four forms of collection services are allowed in the county: certificated (franchised), municipal, licensed, and contracted. Only cities and towns are authorized to engage in the last three options (except that Snohomish County is allowed to contract for residential curbside recycling services in the unincorporated areas):

- **Certificated**: With this collection method, the municipality is not actively involved in the management of garbage collection. Instead, it allows the WUTC-certificated hauler to provide service. This is the only form of collection available in the unincorporated areas of the county.
- **Municipal**: Municipal collection utilizes municipal employees to collect waste.
- **Licensed collection**: This method applies to municipalities that require private collectors to have both a city-issued license as well as a WUTC Certificate. This gives the municipality some measure of control over collection services.
- **Contracted collection**: The municipality contracts with a private hauler to provide waste collection services.

Two municipalities collect waste within their city limits: Marysville and Sultan. Four private haulers perform collection for the rest of Snohomish County: Allied Waste Services of Bellevue, Rubatino Refuse Removal, Sound Disposal, and Waste Management (operating under that name or as Stanwood-Camano Disposal, depending on the service area). Their contact information follows:

Allied Waste Services (a.k.a Rabanco)
(a Republic Services company)
21309 66th Ave. West
Lynnwood, WA 98037
(425) 778-0188
www.rabanco.com

Rubatino Refuse Removal,
2812 Hoyt Ave.
P.O. Box 1029
Everett, WA 98206-1029
(206) 259-0044
www.rubatino.com

Sound Disposal Inc
8421 - 202nd SW
P.O. Box 487
Edmonds, WA 98020-0487
(206) 778-2404

Waste Management of WA, Inc
13225 NE 126th Place
Kirkland, WA 98034
(509) 468-8225
www.wmnorthwest.com

Table 1 lists the form of collection service found in each municipality and notes the eight municipalities where collection is mandatory.

**Table 1**
**Snohomish County Collection Services**

| Municipality | Form of Collection Service | Mandatory Collection |
|---|---|---|
| Arlington | Contract | No |
| Brier | License | No |
| Darrington | License | Yes |
| Edmonds | License | No |
| Everett | WUTC Certificate | No |
| Gold Bar | Contract | No |
| Granite Falls | Contract | No |
| Index | Contract | Yes |
| Lake Stevens | WUTC Certificate/Contract | No |
| Lynnwood | WUTC Certificate | No |
| Marysville | Municipal | Yes |
| Mill Creek | License | No |
| Monroe | License | Yes |
| Mountlake Terrace | Contract | Yes |
| Mukilteo | WUTC Certificate | No |
| Snohomish | License | Yes |
| Stanwood | License | No |
| Sultan | Municipal | Yes |
| Woodway | License | No |

## Frequency of Collection

Marysville, Sultan, and the four private haulers in Snohomish County offer weekly and monthly collection options for residential garbage collection. Monthly services are provided at a discount from the weekly service rate for the same size can. This provides incentive for residents to reduce waste and encourages recycling and composting.

Sultan offers four options for collection frequency.

## Tiered Rates Based on Can Size

Marysville and all four private haulers in Snohomish County offer tiered rates based on can size. Sultan does not offer a tiered rate based on can size.

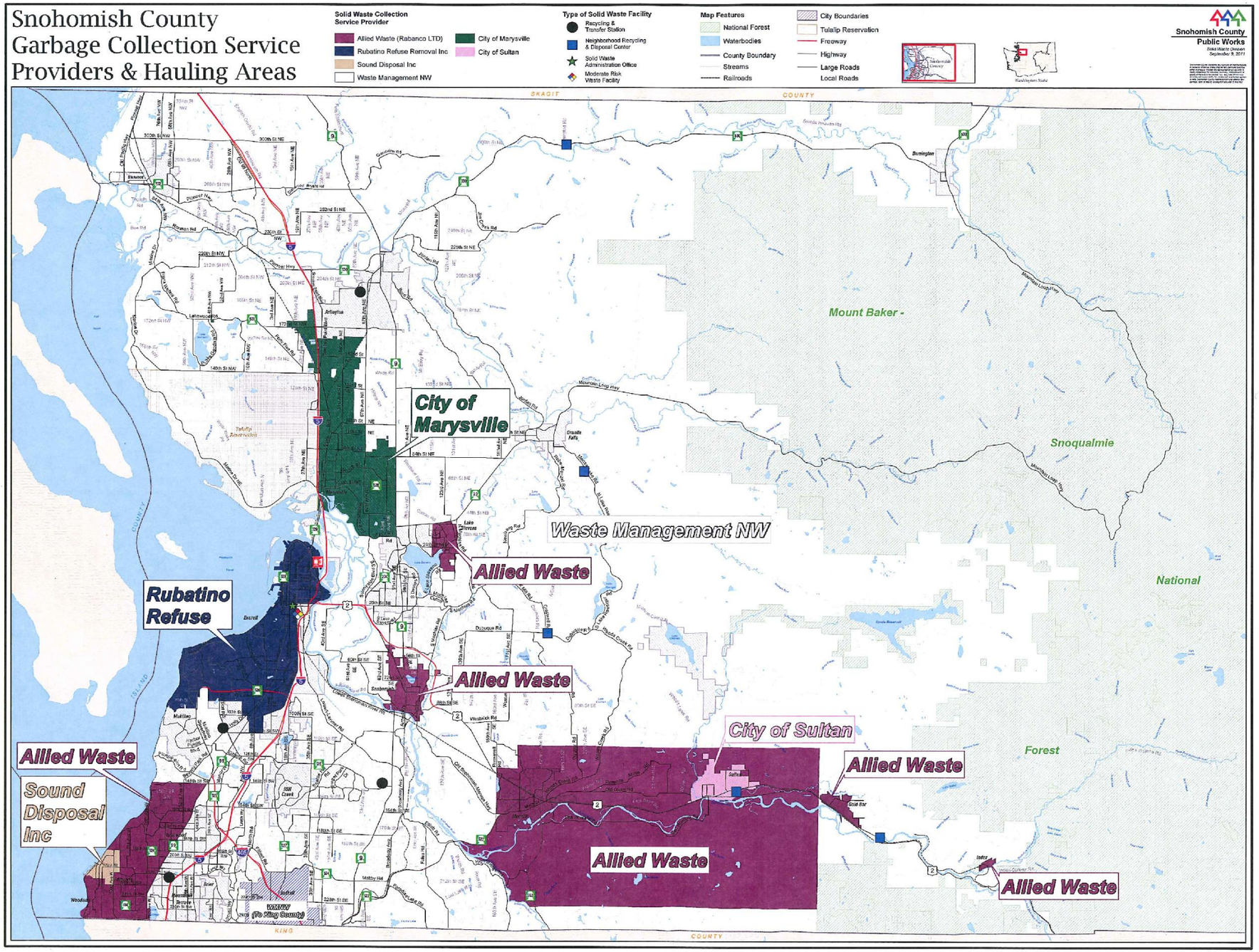
Providing discounted rates for smaller can sizes also encourages waste reduction, recycling and composting.

Table 2 lists the haulers, their service districts, and each district's area (square miles), population, and population density. The map following Table 2 shows the areas serviced by the private haulers.

## Table 2
## Snohomish County Solid Waste Haulers

| HAULER & SERVICE DISTRICT | SQ. MI. | POPULATION | POPULATION DENSITY |
|---|---|---|---|
| **City of Marysville** | 16.4 | 37,530 | **2,289** |
| MARYSVILLE | 16.4 | 37,530 | 2,289 |
| **City of Sultan** | 3.0 | 4,555 | **1,510** |
| SULTAN | 3.0 | 4,555 | 1,510 |
| **Allied (Rabanco) - Permit Number G-12** | 14.2 | 60,444 | **4,249** |
| EDMONDS | 7.4 | 32,401 | 4,393 |
| LYNNWOOD | 3.1 | 14,822 | 4,794 |
| SNOHOMISH COUNTY (unincorporated areas) | 2.7 | 12,031 | 4,497 |
| WOODWAY | 1.1 | 1,190 | 1,101 |
| **Allied (Rabanco East) - Permit Number G-12** | 93.5 | 29,146 | **312** |
| MONROE | 5.8 | 16,374 | 2,830 |
| SNOHOMISH COUNTY (unincorporated areas) | 87.7 | 12,771 | 146 |
| **Rubatino Refuse Removal Inc - Permit Number G-58** | 19.6 | 84,966 | **4,331** |
| EVERETT | 19.3 | 83,217 | 4,307 |
| SNOHOMISH COUNTY (unincorporated areas) | 0.3 | 1,749 | 5,939 |
| **Sound Disposal Inc. - Permit Number G-82** | 1.3 | 7,536 | **5,621** |
| EDMONDS | 1.3 | 7,536 | 5,621 |
| **Town of Index** | 0.2 | 155 | **750** |
| INDEX | 0.2 | 155 | 750 |
| **Waste Management NW – Permit Number G-00237** | 1,955.4 | 479,969 | **245** |
| ARLINGTON | 9.2 | 17,150 | 1,861 |
| BOTHELL | 6.4 | 15,980 | 2,496 |
| BRIER | 2.1 | 6,490 | 3,071 |
| DARRINGTON | 1.7 | 1,505 | 890 |
| EDMONDS | 0.2 | 963 | 4,629 |
| EVERETT | 10.2 | 20,283 | 1,991 |
| GOLD BAR | 1.0 | 2,150 | 2,092 |
| GRANITE FALLS | 2.2 | 3,375 | 1,531 |
| LAKE STEVENS (except Rabanco in NE portion of city) | 5.3 | 14,800 | 2,815 |
| LYNNWOOD | 4.8 | 20,918 | 4,397 |
| MILL CREEK | 4.7 | 18,480 | 3,947 |
| MONROE | 0.2 | 336 | 1,950 |
| MOUNTLAKE TERRACE | 4.2 | 20,960 | 5,037 |
| MUKILTEO | 6.2 | 20,110 | 3,238 |
| NATIONAL FOREST | 1,035.1 | 203 | 0 |
| SNOHOMISH | 3.6 | 9,145 | 2,567 |
| SNOHOMISH COUNTY (unincorporated areas) | 821.0 | 290,063 | 353 |
| STANWOOD | 2.8 | 5,590 | 2,030 |
| TULALIP RESERVATION | 34.7 | 11,466 | 331 |

Density data was calculated through an involved process. Cities, national forest, Tulalip tribe, and UTC service district boundaries were combined in the GIS (Geographic Information System). This information was overlaid with the centroid of all residential properties. The number of properties was multiplied by a factor of 2.61 to estimate numbers of people per household. The percentage of each population that lives within each city was then calculated, and sorted by service district. The April 2009 population estimates for cities and unincorporated county were obtained from the OFM website. The OFM 2009 data was multiplied by the percentage population in each service district (calculated from the GIS data), then divided by the square miles, to obtain population per square mile.


Snohomish County
Garbage Collection Service
Providers & Hauling Areas
Solid Waste Collection Service Provider
Allied Waste (Rabanco LTD)
Rubatino Refuse Removal Inc
Sound Disposal Inc
Waste Management NW
City of Marysville
City of Sultan
Type of Solid Waste Facility
Recycling & Transfer Station
Neighborhood Recycling & Disposal Center
Solid Waste Administration Office
Moderate Risk Waste Facility
Map Features
National Forest
Waterbodies
County Boundary
Streams
Railroads
City Boundaries
Tulalip Reservation
Freeway
Highway
Large Roads
Local Roads
Snohomish County Public Works
Solid Waste Division
September 9, 2011
SKAGIT
COUNTY
Mount Baker -
Snoqualmie
National
Forest
City of Marysville
Waste Management NW
Allied Waste
Rubatino Refuse
Allied Waste
City of Sultan
Allied Waste
Allied Waste
Allied Waste
Sound Disposal Inc
Allied Waste
KING
COUNTY

### Biomedical Waste

The State's definition of biomedical waste (RCW 70.95K.010) preempts that of local health jurisdictions and includes animal waste, biosafety level 4 disease waste, cultures and stocks, human blood and blood products, pathological waste and sharps.

The WUTC regulates transporters of biomedical wastes. Its regulations also allow solid waste haulers to refuse to haul wastes that they observe to contain infectious wastes as defined by the WUTC. The WUTC has issued a statewide franchise to Stericycle to transport biomedical wastes. In addition, Rubatino Refuse Removal collects biomedical waste, in its contracted area, for incineration at Oregon.

The list of potential generators of biomedical waste includes medical and dental practices, hospitals and clinics, veterinary clinics, farms and ranches, as well as individual residences. There is no definitive estimate of the quantity of syringes and other biomedical wastes that are improperly disposed locally, but haulers in other areas often report anecdotally seeing syringes sticking out of garbage bags. This problem could be expected to increase without proper disposal education due to an aging population and additional medications that have recently become available for home use (e.g. for HIV, arthritis, osteoporosis and psoriasis).

Stericycle, Inc. collects biomedical/infectious wastes in Snohomish County. Due to privacy considerations, Stericycle does not provide detailed information about where these wastes are generated. It sends pathological and trace chemotherapy waste to its incineration facility in Salt Lake City, Utah. The other biomedical wastes are sent to its facility in Morton, Washington for autoclave heat treatment (Stericycle 2008).

## PLANNING ISSUES

### Near-Term Planning Issues

Current planning issues related to waste collection include:

- Increased hours of access to the transfer stations for commercial haulers.
- The desire of commercial haulers for a facility to handle waste from the east county as it continues to grow. This issue is addressed in the Transfer technical memorandum.

### Long-Term Planning Issues

Emerging long-term issues related to collection include:

- In 2008, the State's Climate Action Team adopted a general set of recommendations, passing forward the work of its four Implementation Work Groups

(IWG) and related legislative proposals. The Beyond Waste Implementation Working Group (BW IWG) developed proposed legislation that included a requirement for all generators to source separate materials into at least three categories: organics, recyclables, and garbage. It would also require residents to participate in a collection program, thus expanding mandatory collection to some unincorporated areas. The bill was not introduced; however, it is anticipated to be introduced in 2010. If passed, the legislation would require the County to address collection services for incorporated and unincorporated areas with population densities greater than 333 people per square mile, through a plan update.

- Collection of waste for disposal is becoming secondary to collection of waste for recycling and composting.

## ALTERNATIVES

### Alternative A – Every Other Week Collection

While all the haulers offer discounted rates for monthly waste collection, most do not offer a choice of collection frequency in between once-a-week and once-a-month. Some customers may find that weekly collection is not necessary, but choose weekly service anyway because monthly service is too infrequent to meet their needs.

The discounted rate for every other week collection can encourage increased recycling and composting. Every other week collection also has the potential to decrease the number of hauler trips and attendant fuel usage, but only if the service is chosen by a large number of households. If most people continue with weekly collection, there will probably be little savings in hauler trips and fuel. In a worst case scenario, if the majority of households chose every other week, the hauler would have to make a special trip on the “off” week to collect from those subscribing to weekly collection, reducing the advantages of the program.

For some cities and towns, however, it may be desirable and economically feasible to change all residential service to every-other-week residential waste collection and increase promotion of recycling and yard debris/food waste collection. While some cities have implemented every-other-week garbage collection, it has proven to be very unpopular with the rate payers. As an example. customer satisfaction with the City of Portland, Oregon’s every-other-week service is at an all-time low when compared to its weekly garbage collection of the past. The City of Richland, Washington completed an every-other-week garbage collection pilot program where 70% of the participants were dissatisfied with the program. The Richland City Council has not considered this option in future waste collection programs.

Alternatively, varying the size of containers offered on a weekly basis (10 – 20 – 30 gallons, for example) could offer similar benefits with the convenience of weekly collection.

Implementation of this option would include a cost-benefit analysis of the funding, rate and customer service impacts of collection frequency and container size changes in addition to the projected participation and increases/decreases in GHG emissions, recycling and organics quantities, and costs.

**Alternative B – Consider Mandatory Collection**

If the previously proposed legislation is passed (see BW IWG discussion under planning issues), waste collection would become mandatory for all areas (both incorporated and unincorporated) in the County. If the legislation does not pass, the cities and county could still choose to make it mandatory in areas where it is currently voluntary.

**Alternative C – Automated Access to Transfer Stations**

Commercial haulers could gain increased access to the transfer stations if the County extended the hours of operation at some or all the stations. However, this would involve increased staffing and utilities costs. Alternatively, haulers could be afforded automated access through the use of electronic transponders attached to their vehicles. This would reduce their wait times and allow for faster processing. A pilot program with a limited number of vehicles from Rubatino and Waste Management is currently underway at the Airport Road Transfer Station. If successful, the program could be expanded to one or more of the other stations.

**Evaluation of Alternatives**

The alternatives are compared with respect to the evaluation criteria below. The evaluation of cost-effectiveness is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives:** All of the alternatives are consistent with solid waste planning objectives.

**Consistency with Other Regional Plans:** None of the alternatives are inconsistent with other regional plans.

**Cost Effectiveness**: If every other week waste collection is chosen by a large number of households, Alternative A could decrease overall collection costs. This could be the case in a smaller geographic area such as a town or city.

Mandatory collection (Alternative B) would mostly affect the cost of waste collection in rural areas. The per-household cost of mandatory rural collection is likely to be higher than in urban areas, where housing density is greater. On the other hand, the per-household cost of mandatory rural collection is probably lower than in the case of voluntary rural collection.

Alternative C is likely to be cost effective.

### Rating of Alternatives

Table 3 summarizes the ratings of each alternative with respect to the evaluation criteria.

**Table 3**
**Summary Rating of the Collection Alternatives**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Every-other-week collection | H | H | M | H |
| B | Consideration of mandatory collection | M | M | L | M |
| C | Automated Access to Stations | H | H | H | H |

H – High M – Medium L – Low

## CONCLUSIONS

The current collection system has adequate capacity to handle the anticipated waste stream for years to come and is currently functioning well.

## RECOMMENDATIONS

The following recommendations are being made for the solid waste collection system.

### High-Priority Recommendations

C1) Provide automated access at transfer stations to commercial haulers.

C2) Evaluate increased use of every other week residential garbage collection.

### Medium-Priority Recommendations

C3) Consideration of mandatory collection for all areas of the County.

Snohomish County is the lead agency for Recommendations C1 and C3. For Recommendation C2, Snohomish County is the lead agency for discussions about adopting every-other-week service in the unincorporated areas while the cities and towns are the lead agencies within their jurisdictions.

Recommendation C1 could be implemented within the next few years, pending the results of an ongoing pilot program. Recommendations C2 and C3 could be considered over the entire six-year planning period.

The cost of Recommendation C1 could be approximately $10,000 to $15,000 per station, depending on the electronic vehicle identification equipment and scale/billing data interface. The cost for Recommendation C2 would consist only of staff time, but this could be significant if the cost-benefit analysis adequately evaluates economic, participation and GHG factors. However, it is expected that in areas where every-other-week collection is actually implemented, the overall costs for garbage collection would be decreased. Recommendation C3 would also require staff time to implement. If implemented, this approach would appear to increase the expense for some households (those that believe they are paying less to self-haul), but the overall costs would probably stay about the same.

## REFERENCES

Snohomish County 2004. *Snohomish County Comprehensive Solid Waste Management Plan Update*. Prepared by Snohomish County Public Works Solid Waste Division, Washington. January 2004.

# TRANSFER

## SUMMARY

This technical memorandum discusses the existing municipal solid waste transfer system in Snohomish County, identifies relevant planning issues, and develops and evaluates alternative transfer system strategies.

The recommendations made in this technical memo address the need for additional transfer capacity.

## BACKGROUND

The transfer component of a solid waste system involves consolidating numerous small loads of waste into larger containers or vehicles that are more economical to transport. Transfer stations in Snohomish County have the ability to receive waste and compact it into shipping containers for transport by railroad to a landfill in Klickitat County, Washington, owned and operated by Allied Waste Systems. County transfer stations offer extensive opportunities to drop off a variety of recyclable materials, and in some locations, the ability to collect household hazardous wastes (HHW).

Smaller facilities, generally without waste compaction and with fewer recycling opportunities, are typically used in rural or less densely populated areas where waste flows do not justify the large capital investment for a transfer station. In Snohomish County, these are called Neighborhood Recycling and Disposal Centers (NRDCs). They are informally known as drop box sites, since drop boxes are the type of containers used to receive the wastes.

### Goals and Policies for the Transfer System

Goals and policies specific to the solid waste transfer system include:

- Goal 2: Ensure efficient services for a growing and changing customer base.
- Policy 2-4, Waste Transfer: Provide a variety of equitable and efficient waste transfer services to County residences and businesses that are in line with the Division's other goals and policies.
- Related Policies from other technical memorandums:
  - Policy 2-1, Recycling: Continue to offer and develop programs that encourage recycling.
  - Policy 2-2, Organics: Continue to promote and expand the collection and non-landfilling of yard debris, wood waste, and food waste.

### Regulations for the Transfer System

The following regulations apply to transfer facilities:

- State regulations consider transfer stations and drop boxes to be intermediate solid waste handling facilities, addressing them in WAC 173-350-310, the Intermediate Solid Waste Handling Facilities section of the Solid Waste Handling Standards.
- Snohomish County has a flow control ordinance requiring all solid waste generated in the county to be delivered to a facility located in the county.

## EXISTING PROGRAMS AND ACTIVITIES

The solid waste transfer system for Snohomish County consists of three large transfer stations: Airport Road Recycling and Transfer Station (ARTS) in Everett, North County Recycling and Transfer Station (NCRTS) in Arlington, and Southwest Recycling and Transfer Station (SWRTS) in Mountlake Terrace. A fourth station, the Cathcart Way Recycling and Transfer Station (CWRTS), is opened only when one of the other stations is temporarily closed for maintenance or repair.

There are also three NRDCs located in Granite Falls, Sultan, and Snohomish. These NRDCs are used almost exclusively by self-haul customers, although City of Sultan garbage trucks deliver some loads to the Sultan NRDC. Altogether, the NRDCs handled only 2.8% of the County's solid waste in 2010. Figure 1 shows a map of the County's solid waste transfer facilities.

At the transfer stations, some materials (e.g. yard debris and wood waste) are separated and diverted from landfill disposal. Materials that cannot be diverted are compacted into shipping containers and trucked to the Regional Disposal Company (RDC) Rail Loading Facility in Everett. The shipping containers are placed on a train and hauled by Burlington Northern Santa Fe to the Rabanco (now Allied Waste Systems) Regional Landfill near Roosevelt (Klickitat County), Washington. This is discussed in more detail in the Disposal technical memorandum.

### Transfer Stations

The four transfer stations accept waste from municipal, commercial, and self-haulers, but the Cathcart Way facility accepts waste only from vehicles that unload mechanically. Fees for garbage disposal at these stations are a minimum of $20 (including tax) for quantities up to 360 pounds, and $105 per ton plus tax for quantities over 360 pounds. Some wastes require special preparation prior to acceptance at County facilities and other wastes are not accepted at all.

The four transfer stations are:

**Airport Road Recycling & Transfer Station (ARTS)**
10700 Minuteman Drive, Everett, WA 98204

The $25 million ARTS facility opened in October 2003. Located on a 10-acre site, it has a 55,000 square foot tipping floor and a design capacity of about 1,800 tons/day and 250,000 tons/year. It can handle 180 tons per hour, 1,100 vehicles per day, and 140 vehicles per hour. About 80% of its tonnage comes from commercial haulers.

In 2010, ARTS received 215,166 tons of waste. Table 1 presents a breakdown of that tonnage by waste type.

**North County Recycling & Transfer Station (NCRTS)**
19600 63rd Avenue NE, Arlington, WA 98223

NCRTS opened for operations in 1986. Located on a 9-acre site, the station has an older design with push pits and a 6,000 square foot floor. NCRTS has peak capacities of 600 tons per day, 60 tons per hour, 650 vehicles per day, and 110 vehicles per hour.

In 2010, NCRTS received 80,690 tons of waste.

**Southwest Recycling & Transfer Station (SWRTS)**
21311 61st Place W, Mountlake Terrace, WA 98043

The $28 million SWRTS facility opened in September 2004. Located on a 9-acre site, it has a 37,500 square foot tipping floor and a design capacity of about 1,000 tons/day and 200,000 tons/year. SWRTS has peak capacities of 1,200 tons per day, 120 tons per hour, 1,100 vehicles per day, and 140 vehicles per hour. About 80% of its tonnage comes from commercial haulers.

In 2010, SWRTS received 108,462 tons of waste.

**Cathcart Way Recycling & Transfer Station (CWRTS)**
8915 Cathcart Way, Snohomish, WA 98296

The CWRTS facility opened in 2003 and underwent significant upgrades in 2009, including new scales and a new compactor. Located on a 2.3-acre site, it has a 4,300 square foot tipping floor. CWRTS is open only on an intermittent basis; it serves any customer that has a hydraulic or mechanically unloading vehicle diverted from other Snohomish County transfer stations when they are closed for maintenance or repair.

In 2010, CWRTS received 418 tons of waste.

## Solid Waste Neighborhood Recycling & Disposal Centers (Drop Boxes)

Two Neighborhood Recycling & Disposal Centers (NRDCs), in Gold Bar and Oso, were closed in early 2009, leaving three NRDCs in Snohomish County. Self-haulers may utilize NRDCs at the following locations:

- Granite Falls NRDC: 7526 Menzel Lake Road, Granite Falls, WA, 98252
- Dubuque Road NRDC: 19619 Dubuque Road, Snohomish, WA, 98290
- Sultan NRDC: 33014 Cascade View Drive, Sultan, WA, 98294

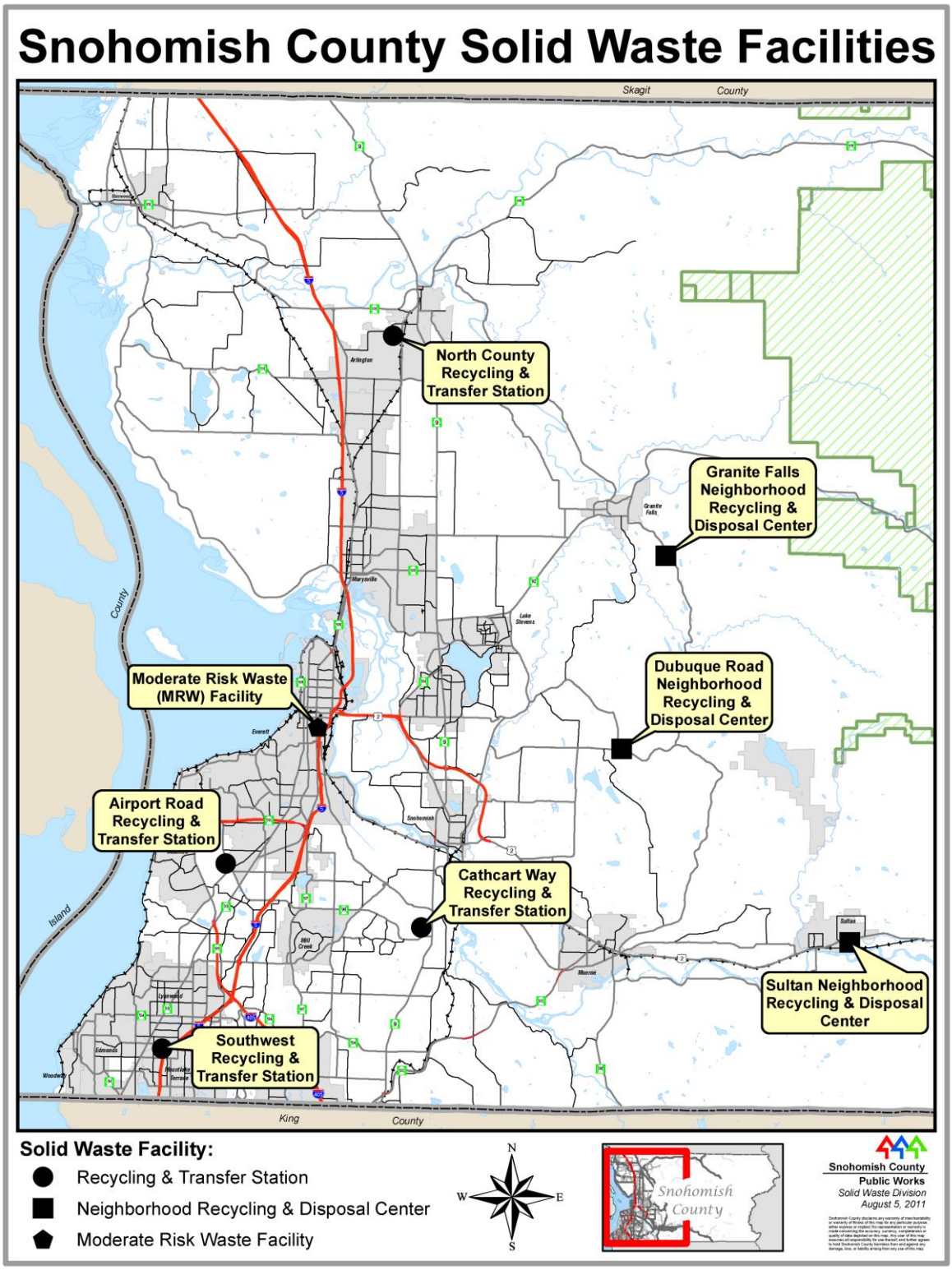
NRDCs have a 5 cubic yard maximum load per customer. The minimum cost for up to one cubic yard is $20, and each additional cubic yard is $20.

Table 1 summarizes 2010 waste tonnages received at each facility, broken down by waste type.

**Table 1**
**Waste Received at Transfer Stations and NRDCs**
**(2010 tonnage)**

| Amount of Waste Received in 2010 (rounded to nearest ton) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Station/NRDC | Solid Waste | Construction | Wood Waste | Yard Waste | Automotive | Furniture | **Totals** |
| **ARTS** | 193,248 | 18,107 | 732 | 2,084 | 178 | 817 | **215,166** |
| **Cathcart Way** | 418 | 0 | 0 | 0 | 0 | 0 | **418** |
| **Dubuque** | 3,571 | 220 | 5 | 0 | 15 | 6 | **3,817** |
| **Granite Falls** | 1,798 | 243 | 9 | 0 | 2 | 59 | **2,111** |
| **NCRTS** | 71,262 | 8,148 | 341 | 642 | 106 | 191 | **80,690** |
| **Sultan** | 5,346 | 289 | 24 | 0 | 2 | 6 | **5,667** |
| **SWRTS** | 89,957 | 14,132 | 420 | 3,652 | 58 | 243 | **108,462** |
| **Totals** | **365,600** | **41,139** | **1,531** | **6,378** | **361** | **1,322** | **416,331** |

Figure 1 – Snohomish County Solid Waste Facilities



## SPECIAL WASTES

WAC 173-350 Solid Waste Handling Standards does not define special wastes. However, WAC 173-303 Dangerous Waste Regulations does define special waste as a type of dangerous (i.e., hazardous) waste. For the purpose of this Plan, special waste refers instead to special kinds of solid waste, a usage that is consistent with other Solid Waste Management Plans in Washington State.

Some special wastes have some similarities to "normal" municipal solid waste and can be managed in a similar fashion at solid waste facilities. However, many special wastes require additional precautions or special handling procedures to avoid creating elevated risks to the environment or to human health and safety.

The County has a waste acceptance policy, posted on the County website, which is updated periodically to reflect evolving programs and regulations. This policy identifies the various wastes accepted at County solid waste facilities, notes those that require special preparation, and lists options for handling wastes that are not accepted at County facilities. The waste acceptance policy is periodically updated to address new materials. Any changes in the waste acceptance policy take precedence over the information in this SWMP. There are three broad categories of special waste:

- Wastes with special requirements for acceptance at County facilities:
  - Ash
  - Asphalt, brick, concrete, dirt, sod, sand, gravel, rocks
  - Canopies
  - Contaminated soil
  - Dead animals (less than 10 pounds) and fecal matter
  - Grease trap solids
  - Latex paint
  - Metal containers
  - Sewage treatment plant screenings and grit
  - Tires
  - Treated wood
  - Yard debris/wood debris recycling
- Wastes not accepted at County facilities:
  - Asbestos and material containing asbestos
  - Canisters and tanks
  - Electronics (E-waste)
  - Liquid waste
  - Chlorofluorocarbon (CFC)-Containing Appliances
  - Septage or Septic Tank Waste
  - Biomedical waste
  - Pharmaceuticals
  - Animals (larger than 10 pounds)

- Wastes accepted for recycling only:
  - Automotive oil and antifreeze
  - Fluorescent tubes, high intensity discharge lamps, and compact fluorescent bulbs
  - Oil filters.

E-waste is handled via a product stewardship program funded and managed by the manufacturers of the original products. These are discussed further in the Product Stewardship, Waste Prevention, and Recycling Technical Memoranda.

## PLANNING ISSUES

### Near-Term Planning Issues

Current issues related to the solid waste transfer system include:

- Biodiesel use: Snohomish County adopted an initial goal of reducing community greenhouse gas emissions by 20% below 2000 levels by the year 2020. As part of that effort, in 2005 Fleet Management committed to use cleaner fuels in its diesel vehicles. A facility was developed at the Cathcart Landfill to burn landfill gas (methane) to dry canola and other oil-seeds. The facility has equipment to crush the seeds and extract the oil, which is then sent to an in-state refinery to be converted into biodiesel. Currently, B-40 (a blend of 40% biodiesel to 60% petroleum diesel) is used in 70% of the fleet, except during the cold months when B-20 is used to prevent the biodiesel from “gelling” (thickening) in the fuel lines. Wheeled loaders and yard tractors at the transfer stations, as well as road tractors pulling shipping containers filled with garbage to the rail yard, all run on biodiesel.
- Waste disposal tonnages in Snohomish County, the Pacific Northwest, and throughout the United States decreased sharply in 2008 and 2009, due to the ongoing economic downturn. Once the economy begins to recover, it is not known when or if people will return to the previous levels of waste generation.
- CWRTS is open periodically to serve commercial hauler vehicles diverted from other transfer stations that are closed temporarily for maintenance and repair. This intermittent operation does not relieve peak traffic conditions at the other stations.

### Long-Term Planning Issues

The 2007 *System-Wide Facilities Evaluation* predicted an impending shortfall in transfer capacity and recommended construction of a new station at Cathcart (not the existing intermittent operation facility) to serve the growing population in the east county. However, the 2008-2010 recession reduced waste tonnages, the associated revenues to the County, and the imminent need for a new station. The Division’s current position is not to site and construct a new transfer station to serve the east county. Furthermore,

if mandatory collection is enacted in unincorporated areas, self-haul tonnage and the number of self-haul vehicles going to transfer stations and NRDCs would probably decrease.

**Table 2**
**Transfer Station Capacity Data**
**(Estimated and 2010 Actual)**

| | ARTS | | CWRTS | | NCRTS | | SWRTS | |
|---|---|---|---|---|---|---|---|---|
| | Peak Capacities | 2010 | Peak Capacities | 2010 | Peak Capacities | 2010 | Peak Capacities | 2010 |
| Average Tons per Day | 1,800 | 617 | not available | 5 | 600 | 247 | 1,200 | 309 |
| Average Vehicles per Day | 1,100 | 507 | not available | 3 | 650 | 289 | 1,100 | 420 |

## ALTERNATIVES

### Alternative A – Consider Operating CWRTS as a Full-Time Commercial-only Station

CWRTS currently operates intermittently when other transfer stations are temporarily closed or operating at reduced capacity due to major maintenance or repair. If growth in the east county warrants, CWRTS could be operated full-time, but would still serve only commercial haulers. This would include certificated haulers as well as business customers with credit accounts.

Because CWRTS has already been constructed, it would be cost-effective to put it into full-time service when waste tonnages have increased to suitable levels. CWRTS could also be used to reduce commercial vehicle traffic at the other stations and/or reduce the distance that commercial vehicles must travel, along with their GHG emissions.

Implementation of this option would include a cost-benefit analysis of the projected costs, revenues and tonnages in addition to the impacts on the rest of the transfer system and GHG emissions.

### Alternative B – Consider Operating CWRTS as Full-Time Commercial and Self-Haul Station

CWRTS could be operated full-time to serve both commercial (certificated haulers and credit account customers) and self-haulers.

Implementation of this option would include a cost-benefit analysis of the projected costs, revenues and tonnages in addition to the impacts on the rest of the transfer system and GHG emissions.

**Alternative C – New Facility**

Based on waste tonnage and demographic trends in 2007, it appeared that a new transfer facility would be necessary to serve the growing east county population. However, a global recession intervened and it will take time before waste tonnages return to their pre-recession levels. At present, it does not appear that a new transfer station will be necessary within the planning period of this document.

**Evaluation of Alternatives**

The alternatives are compared with respect to the evaluation criteria below. The evaluation of cost-effectiveness is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives:** All of these alternatives support the goal of ensuring efficient services when implemented based on demand. Alternative A and B increase the transfer system's capacity without the necessity of siting, permitting, and constructing a new facility. Alternative C is not likely to be necessary within the planning period of this document.

**Consistency with Other Regional Plans:** Alternatives A and B are consistent with other regional plans, and would take advantage of the under-utilized (intermittently operated) station at Cathcart. Alternative C would require construction of a new station, but there appears to be no demand or economic justification for it in the near future.

**Cost Effectiveness:** Alternative A and B require only staff time, utilities, and fuel, and can be presumed to be cost-effective. Because commercial trucks bring in larger tonnages per vehicle and require less staff supervision, Alternative A likely will have a lower operating cost per ton than a combined commercial and self-haul station. However, it should be noted that unless CWRTS is operated entirely by staff reassigned from other stations (keeping the total number of transfer station staff unchanged from present levels), the number of total staff will increase. This increase in labor cost would increase the cost per ton of waste transfer slightly across the entire system. However, the implementation of Alternative A could be postponed until 1) waste tonnages increase significantly, and 2) the other stations reach capacity and begin to experience decreased customer service levels and longer queuing times. In that case, the revenue from the increased tonnage could offset the additional operational costs of running CWRTS as a full-time station. Alternative C is not likely to be necessary within the planning period of this document.

### Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in the following table.

**Table 2**
**Summary Rating of the Transfer System Alternatives**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Consider operating CWRTS as full-time commercial-only | M | H | M | M |
| B | Consider operating CWRTS as full-time commercial and self-haul | M | L | L | L |
| C | New Facility | L | M | L | L |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendations are being made for the solid waste transfer system.

### Medium-Priority Recommendations

TS1) Consider operating Cathcart Way Recycling and Transfer Station full-time for commercial haulers to increase transfer capacity, reduce traffic at other stations, and reduce miles traveled and associated greenhouse gas emissions when waste tonnages in east county warrant it.

### Low-Priority Recommendations

TS2) Consider opening CWRTS full-time to both commercial and self-haulers, when waste tonnages and self-haul customer demand in the east county warrant it.

TS3) Begin a siting process for a new transfer facility to meet the demands of east county growth.

Snohomish County would be the lead agency for all three recommendations. They would require additional Solid Waste Division staff time. TS1 could be implemented as soon as the necessary trained personnel were available to staff the facility. However, it would be prudent to postpone its implementation until such time as waste tonnages

increase to the extent that the other stations were reaching capacity. At that point, revenues from the increased tonnage would help defray the higher cost of operating CWRTS as a full-time rather than an intermittent station. Completion of the cost-benefit analysis evaluating revenues, costs, tonnages, GHG emissions and other transfer system-wide factors will help to determine the timing of implementation.

## REFERENCES

Snohomish County 2004. *Snohomish County Comprehensive Solid Waste Management Plan Update*. Prepared by Snohomish County Public Works Solid Waste Management, Washington. January 2004.

Snohomish County 2007. *System-Wide Facilities Evaluation*. Prepared by RW Beck. September 2007.

# DISPOSAL

## SUMMARY

This technical memorandum discusses existing programs and facilities, identifies relevant planning issues, and develops and evaluates alternative strategies for disposal of municipal solid waste (MSW).

The recommendations made in this technical memorandum address disposal bans and appropriate uses of closed landfills and references other technical memoranda for recovery of energy from waste and yard debris.

## BACKGROUND

Where and how waste is disposed affects public health and the environment, today and in the future, making the final disposition of waste a critical element of this plan. This memorandum discusses the County's current garbage disposal system and touches on goals for waste prevention and diversion. Current prevention and diversion methods (such as recycling and composting) are addressed in other memoranda.

### Goals and Policies for Disposal

Goals and policies specific to disposal include:

- Goal 2: Ensure efficient services for a growing and changing customer base
- Policy 2-6, Waste Disposal: Continue to evaluate and monitor waste disposal options and services that meet customer needs and are in line with other goals and policies of the comprehensive plan
- Related Policies in other technical memoranda:
  - Policy 2-1, Recycling: Continue to offer and develop programs that emphasize waste reduction and recycling.
  - Policy 2-2, Organics: Continue to promote and grow the collection and non-landfilling of yard debris, wood waste, and food waste.
  - Policy 2-4, Waste Transfer: Maintain and support an active flow control program to ensure rate stabilization and recycling of appropriate wastes.
  - Policy 2-7, Administration and Regulation: Continue to support actions that reduce and remedy the effects of illegal dumping.
  - Policy 2-8, Moderate Risk Waste: Continue to manage and plan for an increase of special waste categories.

### Regulations for Disposal

Regulations specific to disposal include:

- RCW 70.95, Solid Waste Management – reduction and recycling laws
- WAC 173-350-320, Solid Waste Handling Standards for piles used for storage or treatment
- WAC 173-350-400, Solid Waste Handling Standards for limited purpose landfills – This law establishes standards for all landfills except municipal solid waste landfills, inert waste landfills, special incinerator ash landfills, dangerous waste landfills and chemical waste landfills.
- WAC 173-350-410, Solid Waste Handling Standards for inert waste landfills – This law establishes standards for inert waste landfills and facilities that use inert waste as a fill component. This regulation is applicable to facilities with a total capacity greater than 250 cubic yards.
- WAC 173-351, Criteria for Municipal Solid Waste Landfills – This law establishes minimum statewide standards for Municipal Solid Waste Landfills.
- Snohomish County Code Chapters 7.35 and 7.41 – Changes were made to the County Code in early 2011 to promote recycling and to ensure that materials destined for landfill disposal are properly handled and are disposed in the Snohomish County solid waste system. These are discussed in detail under Impact of Flow Control.
- Snohomish County, King County, and the City of Bothell have reached an agreement regarding disposal of waste collected in Bothell. Waste collected within the city limits established prior to January 1, 2011, will remain under King County jurisdiction for disposal. Any annexations after January 1, 2011 by the City of Bothell of Snohomish County lands will fall under Snohomish County jurisdiction for disposal. See Appendix G for copies of interlocal agreements.

## EXISTING PROGRAMS AND ACTIVITIES

Solid waste that is not recycled or otherwise diverted is compacted into shipping containers at the transfer stations and hauled by truck to the Regional Disposal Company (RDC) Rail Loading Facility in Everett. The waste is hauled by the Burlington Northern-Santa Fe railroad to the Republic Services (formerly Rabanco and Allied Waste Systems) Regional Landfill in Klickitat County, Washington. The landfill began operations in 1991 and has an on-site landfill gas-fired power plant that generates electricity for sale to the Klickitat Public Utilities District.

Table 1 on the following page lists the active solid waste sites located in Snohomish County. As of mid-2009, the only active landfills in Snohomish County are inert waste landfills. Instead of buried waste, some facilities have aboveground piles of waste, as described below:

- CEMEX Regional Petroleum Contaminated Soil Treatment stores petroleum contaminated materials, which are later treated through thermal desorption and disposed of in the CEMEX Inert Waste Landfill.

- The City of Everett Solid Waste Handling Facility stores and processes street waste solids, vactor waste, street sweepings and some potentially contaminated soils. Vactor waste is dewatered and sent to the sewage treatment plant. Organic material, solids and potentially contaminated soils are tested to determine if they are suitable for re-use. Material that is suitable for re-use is used for utility projects and other various projects. Materials that are not suitable are sent to CEMEX for treatment and re-use or to Roosevelt Regional Landfill for disposal.

- The Kimberly-Clark Riverside Wood Yard has piles of woodwaste that is used to fuel industrial boilers.

- Hampton Lumber Mills is mining a wood waste landfill, composting the wood for use as topsoil and reusing rock for reclamation projects.

**Table 1**
**Active Solid Waste Sites in Snohomish County**

| Site Name | City | Owner | Type |
|---|---|---|---|
| AAA Diorite Quarry LLC | Monroe | Zakary Fiorito - AAA Monroe Rock | IWL |
| AAA Monroe Rock Quarry | Snohomish | Monroe Rock Inc. | IWL |
| CEMEX Inert Waste Landfill 016 | Everett | Cemex, Inc. | IWL |
| CEMEX Inert Waste Landfill 204 | Everett | Cemex, Inc. | IWL |
| CEMEX Regional Petroleum Contaminated Soil Treatment | Everett | Cemex, Inc. | Piles |
| City of Everett Solid Waste Handling Facility | Everett | City of Everett | Piles |
| Everett Water Filtration Plant - Backwash Solids Disposal Site | Sultan | City of Everett, Public Works | IWL |
| Hampton Lumber Mills - Washington Inc. | Darrington | Hampton Lumber Mills | Piles |
| Kimberly-Clark Riverside Wood Yard | Everett | Kimberly-Clark Paper Company | Piles - private |

IWL = Inert Waste Landfill, SWL = Solid Waste Landfill
(Snohomish Health District, 2009)

The Snohomish County Regional Solid Waste Landfill was constructed in 1992 but never accepted any waste, and was deconstructed in 2008. Snohomish County Public Works owns four solid waste landfills: the Bryant Solid Waste Landfill, Cathcart Solid

Waste Landfill, Lake Stevens Solid Waste Landfill, and Warm Beach Solid Waste Landfill. All of these landfills show decreasing landfill gas production, ground water contamination, and surface water contamination. Snohomish County Parks and Recreation owns the McCollum/Emander Solid Waste Landfill, but its post-closure care is the responsibility of Snohomish County Public Works.

Table 2 on the next page lists closed landfills and disposal sites located within Snohomish County (data from Snohomish Health District 2009).

Other closed landfills worthy of mention:

- Everett Solid Waste Landfill: [DOH 2000]
  - Established in 1917 and closed in 1974;
  - In 1977 leased to a private company that burned rubber tires for fuel;
  - Two fires from 1983 to 1985; the resulting ash was determined to be non-dangerous waste; portions of the site have been covered and the remaining ash was disposed of on-site.

- Tulalip Solid Waste Landfill: [EPA 2009]
  - This landfill was listed on National Priorities List in 1995, due to contamination of groundwater and environmentally sensitive areas;
  - The site was cleaned up and deleted from National Priorities List in 2002.

Active solid waste facilities such as drop boxes, transfer stations, and moderate risk waste facilities are addressed in other technical memoranda. The Vactor Decant Facility at 8915 Cathcart Way in Snohomish accepts waste from cleaning out storm drains and catch basins.

Stericycle, Inc. collects biomedical/infectious wastes in Snohomish County. It sends pathological and trace chemotherapy waste to its incineration facility in Salt Lake City, Utah. The other biomedical wastes are sent to its facility in Morton, Washington, for autoclave heat treatment (Stericycle 2008).

**Table 2**
**Closed/Removed Disposal Sites in Snohomish County**

| Site Name | City | Type |
|---|---|---|
| Arlington-Marysville Solid Waste Landfill | Arlington | SWL |
| Baxter North Woodwaste Landfill | Arlington | LPL |
| Baxter South Woodwaste Landfill | Arlington | LPL |
| Boeing Woodwaste Landfill | Everett | LPL |
| Brummett Solid Waste Landfill/Hyde Park | Mill Creek | SWL |
| Bryant Solid Waste Landfill | Arlington | SWL |
| Cathcart Solid Waste Landfill | Snohomish | SWL |
| Darrington Solid Waste Landfill | Darrington | SWL |
| Everett Solid Waste Landfill | Everett | SWL |
| Ford Cedar Woodwaste Landfill | Sultan | LPL |
| Fruhling Woodwaste Landfill | Bothell | LPL |
| Go East Woodwaste Landfill | Everett | LPL |
| Gold Bar Solid Waste Landfill | Gold Bar | SWL |
| Granite Falls Solid Waste Landfill | Granite Falls | SWL |
| Index Solid Waste Landfill | Index | SWL |
| Kummerfeldt's Landfill | Bothell | |
| Lake Roesiger Solid Waste Landfill | Snohomish | SWL |
| Lake Stevens Solid Waste Landfill | Lake Stevens | SWL |
| Loth Lumber Woodwaste Landfill* | Gold Bar | LPL |
| McCollum/Emander Solid Waste Landfill | Everett | SWL |
| Monroe Solid Waste Landfill | Monroe | SWL |
| Nielsen Demolition Landfill (formerly Scandia Log Homes)* | Woodinville | LPL |
| Northwest Hardwoods Woodwaste Landfill* | Arlington | LPL |
| Old Bryant Solid Waste Landfill | Arlington | SWL |
| Oso Solid Waste Landfill | Arlington | SWL |
| Paine Field Landfill | Everett | |
| Poeschel and Schultz Woodwaste Landfill | Arlington | LPL |
| RDA (Verbeek) Woodwaste Landfill | Everett | LPL |
| Simmons Woodwaste Landfill | Snohomish | LPL |
| Sisco Woodwaste Landfill | Arlington | LPL |
| Smith Island Woodwaste Landfill Pacific Topsoils (formerly Weyerhaeuser) | Everett | LPL |
| Snohomish County Regional Solid Waste Landfill | Snohomish | SWL |
| Snohomish Solid Waste Landfill | Snohomish | SWL |
| Son Cedar Products Woodwaste Landfill | Darrington | LPL |
| State Reformatory Solid Waste Landfill | Monroe | SWL |
| Sultan Solid Waste Landfill | Sultan | SWL |
| Tulalip Solid Waste Landfill | Marysville | SWL |
| Van Mar Woodwaste Landfill | Woodinville | LPL |
| Verlot Solid Waste Landfill | Granite Falls | SWL |
| Village Sand & Gravel Woodwaste Landfill (RUX) | Lake Stevens | LPL |
| Warm Beach (Lake Goodwin) Solid Waste Landfill | Stanwood | SWL |
| Weyerhaeuser Kraft Woodwaste Landfill | Everett | LPL |
| Wolford Woodwaste Landfill* | Woodinville | LPL |

*Removed
LPL = Limited Purpose Landfill, SWL = Solid Waste Landfill
(Snohomish Health District 2009)

## SITING OF DISPOSAL OR RECYCLING FACILITIES

Solid waste disposal, transfer, recycling, and composting facilities are often not welcomed as potential neighbors. Nevertheless, they are necessary for public health and implementation of public policy. Therefore, the ability to site, construct, and operate these types of facilities must be preserved. While environmental and land use controls are not a responsibility of the solid waste system, the Solid Waste Management Division will cooperate with those agencies and jurisdictions having land use and environmental control powers. This will help ensure that such facilities can be located in a manner that is fair and equitable for those who will be impacted by their location, as well as those who utilize or benefit from the facilities.

Siting criteria in state solid waste regulations were developed in the 1980s to address the siting of new MSW landfills. Because recyclables are (from a regulatory standpoint) a form of solid waste, recycling facilities must in general meet the same siting requirements as solid waste handling and disposal facilities.

## IMPACT OF FLOW CONTROL

Changes made in early 2011 to Snohomish County Code 7.35 and 7.41 were known as "flow control" because they control the handling and ultimate disposal of solid waste generated within Snohomish County. The Code now further clarifies the requirement that wastes generated in Snohomish County go to transfer facilities in the County.

The purpose of the change was:

- to provide transparency about which materials are being recycled and which materials are being disposed at a landfill;
- to promote recycling; and
- to ensure that landfill-disposed materials are properly handled and are disposed in the Snohomish County solid waste system.

Disposal fees for waste generated in Snohomish County pay for the ongoing monitoring of nine closed landfills, operation of five disposal facilities, illegal dumping cleanup, recycling and program planning, and operation of a household hazardous waste drop-off station. The County's solid waste system benefits all residents and businesses in Snohomish County and receives no local taxes or general fund revenues. It is important to keep revenue associated with waste generated in Snohomish County in the local solid waste system ("flow control") to cover the cost of these community programs and services.
Key highlights of the clarifications in the code include:

- Commercially provided containers for hauling non-recyclable waste for landfill disposal must be marked with the words "solid waste for disposal," "landfill," or "garbage." These containers must be transported to a Snohomish County Transfer Station. (Note that state law restricts the commercial hauling of waste

for landfill disposal to WUTC-certificated waste haulers, city contracted haulers, and demolition companies hauling waste from their own demolition projects. Others can “self-haul” their own waste, including contractors, who can “self-haul” construction waste for landfill disposal. In all cases, the waste must go to Snohomish County owned disposal facilities.)

- Commercially provided containers for hauling recyclables for recycling must be marked with the words “recyclables” or “recycling” or display the universal recycling symbol (three chasing arrows that form an unending loop). These containers can ONLY be transported to a reclamation site/processor to be recycled. They can be transported to a recycling facility within or outside of Snohomish County at whatever rate is offered by the hauler/processing facility. (Note that state law allows materials that will be recycled to be commercially hauled by a wider range of businesses, including properly licensed common carriers, such as construction and demolition material haulers. Materials can also be “self-hauled.”)
- Any site utilizing recycling services must also have a properly marked container for non-recyclable waste for landfill disposal.
- Only recyclables that are actually going to be recycled should be put in the recycling containers. If the recycling containers have more than 10 percent accidental and incidental non-recyclable waste (by volume), they need to be “cleaned up” on site before they can be hauled to a recycling facility.
- Intermodal containers for hauling waste for landfill disposal directly to rail facilities are not allowed on construction/demolition job sites, except as otherwise approved by Snohomish County Solid Waste Division for the hauling of friable and non-friable asbestos containing material.
- Construction and demolition waste hauled to Snohomish County transfer stations are charged at the rate of $105/ton (2011).
- Non-recycled residuals from reclamation facilities processing recyclables in Snohomish County must be disposed of as solid waste at a rate of $105/ton (2011) or the rate of $65/ton (2012) if the facility meets certain requirements and utilizes an intermodal container.

## PLANNING ISSUES

### Near-Term Planning Issues

Current planning issues related to waste disposal include:

- The waste export contract with Regional Disposal Company (RDC) expires in 2013. The current contract has the following tonnage requirements:
  - Requires the County to deliver the greater of 150,000 tons or 95% of waste received at transfer stations and other designated county facilities.
  - Excludes from the 95%: waste that is diverted from the waste stream by reuse or recycling; moderate-risk waste of household origin; wood waste, land clearing debris, construction debris and demolition debris.
  - Allows for waste import to meet the annual tonnage requirement.
- Some transfer station customers may co-mingle yard waste with garbage, either on purpose or inadvertently. If this yard waste had been separated from the garbage, it would not have become contaminated and could have been composted. Instead, it will be landfilled due to the co-mingling. State law (RCW 70.95.010) establishes a goal of eliminating yard waste from being landfilled by 2012, in geographic areas where reasonable alternatives are available.

  By banning the co-mingling of yard waste and garbage brought to County transfer stations and NRDCs, yard waste could be easily separated on the tipping floor so it could be composted. However, because tipping fees for yard waste are generally lower than for garbage, the County would lose some net revenue.

- While its disposal contract allows the County to accept out-of-county waste, it currently does not encourage the import of MSW. The motivation behind this is to prevent the waste from one county from becoming a disposal problem in another county.
- The County is interested in establishing a policy for beneficial use of closed landfills. This could include locating recreational activities on closed landfills, provided they do not compromise the integrity of environmental control systems such as the landfill cover or landfill gas control systems. For example, these activities may be restricted to passive recreational activities such as walking trails and educational kiosks.
- A periodic review of post-closure policies and programs at each closed landfill, along with the associated financial assurance data, would be prudent.

### Long-Term Planning Issues

Emerging long-term issues related to waste disposal include:

- Energy from waste (EfW)
  - The Energy from Waste technical memorandum provides an overview of conversion technologies that provide an alternative means of MSW disposal. They offer many potential benefits: increased waste diversion and recycling, energy recovery, displacement of fossil fuels, reduced air and carbon emissions (greenhouse gases), local control over waste management, reduced transportation costs, preservation of landfill capacity, reliability and diversity, and support for technology innovation. However, current experience with these technologies on a commercial scale in the United States is limited.
  - For an EfW facility to be economically viable, it must be assured of a steady, predictable fuel supply, i.e., the incoming waste stream. This may involve flow control issues. In addition, directing waste to an EfW facility will likely impact disposal fees at existing disposal facilities, including the County's long-term landfill disposal contract.

## ALTERNATIVES

### Alternative A – Disposal Bans

Placing a ban on specific types of MSW can help divert waste from landfills. As an example, Yakima County plans to implement a yard debris ban in 2012. Banning the co-mingling of yard debris delivered to transfer facilities could increase the amount of yard debris that is easily recovered and sent to composting facilities. While this has the advantage of increasing diversion from landfill disposal, it may negatively impact overall revenues to the County if yard waste tipping fees continue to be lower than MSW fees.

It should also be noted that the existing yard debris collection programs are working well and diverting at least 94.1% of yard waste generated from landfill disposal. The *Waste Composition Study* (Snohomish County 2009) shows that only 9,580 tons per year of yard debris were disposed in 2009 (see Table 1 in Organics Technical Memorandum). A cost-benefit analysis would assist in determining the value and projected effectiveness of implementing a ban on delivering yard debris mixed with garbage at the transfer facilities.

### Alternative B – Policy for Beneficial Activities at Closed Landfills

The County could establish policy and guidelines for appropriate uses of closed landfills that support Beyond Waste goals, while protecting the integrity of the environmental protection systems in place at the landfills.

### Alternative C – Continued Enforcement of Flow Control Portion of County Code

This alternative involves the monitoring of waste generated at construction or demolition sites and the placement of wastes in the properly labeled containers, as well as tracking the final disposition of waste and recyclables.

### Evaluation of Alternatives

The alternatives are compared with respect to the evaluation criteria below. The evaluation of cost-effectiveness is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives:** The alternatives are consistent with the solid waste planning objectives.

**Consistency with Other Regional Plans:** The alternatives are consistent with other regional plans. Alternatives A and C could contribute to increased diversion of certain waste stream components (e.g. yard and construction/demolition debris) from landfill disposal.

**Cost Effectiveness:** Alternative A may adversely impact revenues to the County if tipping fees for banned waste (e.g. yard waste) are lower than MSW fees. Alternative B only requires staff time and some public education expenses, and can be presumed to be cost-effective by virtue of being relatively inexpensive. Alternative C requires staff time and assistance of the Snohomish County Sheriff's department.

### Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in the following table.

**Table 3**
**Summary Rating of the Disposal Alternatives**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Disposal Ban | M | H | L-M | M |
| B | Policy for Beneficial Activities at Closed Landfills | M | H | M-H | H |
| C | Continued Enforcement of Flow Control | H | M | H | H |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendations are being made for disposal of municipal solid waste.

### High-Priority Recommendations

D1) Establish policy and guidelines for appropriate uses of closed landfills.

D2) Continue enforcement of the flow control elements of the revised County Code.

### Medium-Priority Recommendation

D3) Implement disposal ban for waste such as yard debris that could be diverted from landfills.

Snohomish County would be the lead agency for these three recommendations, although Recommendation D1 will involve other agencies and/or other county departments besides the Solid Waste Division.

Recommendations D1, D2, and D3 involve additional Solid Waste Division staff time. Recommendation D2 requires Sheriff's department personnel. Under Recommendation D3, customers would be required to separate yard waste from MSW prior to arriving at the transfer station. Since source-separated yard waste is already processed through the compactors at Snohomish County transfer stations, the impact to staffing and hauling costs should be minimal. However, completing the cost-benefit analysis would help determine the value and effectiveness of such a ban.

These recommendations can be implemented beginning immediately or in the next few years, although a disposal ban would require one to two years to actually implement, allowing time for education and outreach about the ban.

## REFERENCES

Kennaugh, Ellen. Snohomish Health District. Email communications with Holly Hildebrand, URS Corp., August 7, 2009 and August 10, 2009.

Washington State Department of Health 2000. *Health Consultation: Everett Landfill, Snohomish County, WA, CERCLIS #WAD980639405*. Prepared by Washington State Department of Health Under a Cooperative Agreement with the Agency for Toxic Substances and Disease Registry. October 2000.

EPA website
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# OUTREACH AND EDUCATION

## SUMMARY

Outreach and education is a critical element of waste diversion programs, serving to both inform people of the opportunities that exist for waste reduction and recycling and then motivating them to act. Outreach and education programs should encourage people and businesses to avoid producing waste in the first place, and then inform them about access to recycling and composting programs. People should also be encouraged to properly dispose of their wastes.

This tech memo addresses how best to implement various outreach and educational messages. It does not address outreach and educational efforts specific to program implementation. Outreach and education for specific programs and areas of focus are addressed in their corresponding technical memos. For example, educational and outreach activities related to organics are addressed in the Organics technical memo.

The recommendations shown in this technical memo address the roles and responsibilities for public education efforts, the need for outreach to a more culturally-diverse audience, and the long-term need to find alternative funding sources for public education efforts.

## BACKGROUND

The solid waste system is performing the same function it did twenty years ago – providing the county's citizens and businesses with environmentally safe waste disposal methods. Currently, however, this function is being performed in a very different manner. The system is now involved with not just disposal but also waste processing, transport, planning, engineering, recycling and waste prevention, moderate risk waste management, environmental regulation, compliance at operating and closed facilities, assistance in debris management planning, and contract monitoring. Furthermore, there is an increasing emphasis on sustainability, which goes far beyond the field of solid waste management.

### Goals and Policies for Outreach and Education

- Goal 2: Ensure efficient services for a growing and changing customer base.
- Policy 2-6: Meet required educational components mandated by the State of Washington.

- Policies for most of the other technical memos can be viewed as being related because public education has the potential to support all other aspects of solid waste management.

**Regulations for Outreach and Education**

Regulations affect outreach and education in several different ways, which are discussed below by sector/responsible agency.

**The Washington State Department of Ecology (Ecology)**: Public education is seen as an important support tool for the waste hierarchy and other mandated programs. The State has only a few regulations specific to public education:

RCW 70.95.090 (7) (iv): states that the waste reduction and recycling element of the solid waste plan must include "programs to educate and promote the concepts of waste reduction and recycling."

RCW 70.95.100: parts (3) and (4) are related to local governments, but this section is mostly targeted at Ecology providing the education/outreach (which is now viewed as an outdated approach).

70.95.010 (6)(c): "It is the responsibility of county and city governments to assume primary responsibility for solid waste management and to develop and implement aggressive and effective waste reduction and source separation strategies."

70.95.010 (15): "Comprehensive education should be conducted throughout the state so that people are informed of the need to reduce, source separate, and recycle solid waste."

70.95.020 (1): the primary responsibility for adequate solid waste handling is assigned to local government.

**The Washington Utilities and Transportation Commission (WUTC)**: The above idea also parallels the WUTC requirement (WAC 480-70-361) that garbage haulers publicize recycling and their other services at least annually.

**Local Government**: Snohomish County and the cities have set their own service level requirements or executed contracts that sometimes include outreach and education.

**Contracted Haulers**: While largely governed by WUTC, haulers also implement contractual requirements and service level ordinances to include the performance of outreach and education. The following is a list of improvements that Snohomish County has asked one or more of their haulers to complete.

1. Increase curbside collection services.
2. Coordinate with Cedar Grove Composting on the latest issues in collection.
3. For e-waste, ensure that customer service staff knows where to find information on the E-Cycle WA program for free disposal of electronics.

4. Create new cart decals with the latest information on disposal, recycling, and yard debris.
5. Create invoice message to promote recycling.
6. Develop and distribute a flyer targeting customers with garbage collection service but that are not signed up for yard debris/food waste.
7. Improve brochure for Snohomish County residents on latest information about curbside collection and recycling.

## EXISTING PROGRAMS AND ACTIVITIES

Snohomish County has implemented programs for outreach and education by assessing the need for educating children, the general public, business and institutions concerning waste reduction, pollution prevention, and recycling/composting. The County has established effective communications with private parties, other subdivisions within the county, other relevant county and city governments, and state and federal agencies. The cities, waste collection companies and others have also conducted programs to educate their residents and customers on similar issues.

A summary of current activities by agency and private companies is provided below.

### Snohomish County

The County has delivered recycling education via an information phone line, referral materials, customer outreach and advertising. A significant amount of information is currently distributed through the County's website (http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/SolidWaste/Brochures/). Website information includes details for household recycling at the transfer stations and drop boxes. The County's website lists where to take hazardous materials, addresses appliance recycling, lists private recycling facilities, and lists curbside collection programs. For businesses, the County website shows private recycling facilities, recycling collection services from local haulers, and hazardous waste recycling services. Information is also available through attendance at various community functions such as Everett Navy Days and the Commercial Food Scrap Education campaign.

Brochures and other information regarding many solid waste disposal, recycling, waste prevention and hazardous waste programs are available on the County's website. County residents may also borrow videos and books from the Resource Library. The categories of brochures available (as of mid-2009) include:

- Businesses
- Car care
- Composting
- Espaňol (Spanish brochures)
- Garbage disposal

- Household hazardous wastes
- Illegal dumping
- Medical waste
- Recycling/waste prevention
- Tips for the holidays
- Miscellaneous

This approach to outreach reflects the resources normally available to the Solid Waste Division for education, although at times special campaigns may be warranted. In 2011, for example, an educational campaign was conducted for the updated flow control ordinance. The purpose of this campaign was to encourage construction companies and others to “Recycle Right” by separating “good recyclables” from “bad recyclables”. This campaign helped to educate people about the 90-10 rule, which requires that recycling containers at construction sites and other commercial locations contain less than 10% non-recyclable materials.

**Cities**

The interlocal agreements obligate the county and the cities/towns to each other with respect to solid waste management. The cities and towns ensure that waste generated within each jurisdiction enters the County system, and the County supplies solid and moderate risk waste services including assistance with outreach and education.

Several of the cities employ part or full time staff to conduct outreach and education for their programs. These cities utilize funds from Ecology’s Coordinated Prevention Grant (CPG) program to educate single-family and multifamily residents, schools, and businesses. The County sets the overall direction of the waste prevention and recycling message and the cities implement the bulk of the programs.

The cities’ education role includes commercial business outreach on waste prevention and recycling. They educate about household hazardous waste, visit multifamily units, and conduct public education events (such as America Recycles Day and Earth Day). The cities also provide education on food waste collection and conduct school presentations.

The cities are working cooperatively with the County on commercial organics education. The County is also working with the cities to spread the word about rejection of latex paint at the hazardous waste collection events.

Much of the outreach and education is envisioned by the County, with the cities implementing those messages on a local level. The County provides a strong support for city programs as well as administering the Coordinated Prevention Grant monies for use at the city level.

## State Programs

Ecology funds outreach activities for the cities through the Coordinated Prevention Grant funds. Ecology offers two-year non-competitive grants to all of the counties based on population, and a portion of these funds is passed through to the cities for education and other purposes. Ecology also offers supplemental grants on a competitive basis, with the total grant amount based on unspent grant money and additional funds when available. This Ecology grant money is often spent on recycling and waste reduction activities.

Ecology also offers Public Participation Grants for public groups wishing to implement an environmental program. In addition to funding, Ecology houses the 1-800-RECYCLE hot line, and provides numerous brochures, publications and workshops to the public and recycling coordinators.

In recent years, Ecology has launched and maintains several statewide campaigns including the Litter Campaign, the Beyond Waste Program, and the E-Cycle WA Program. These programs included advertising campaigns that target all areas of the state.

## Haulers

The haulers are active in promoting their recycling and yard debris services, publicizing the E-Cycle WA program, and helping distribute messages on recycling and sustainability in general. Many of the haulers have messages on their invoices for promoting recycling, and targeted customers are sent flyers on yard debris/food waste. At least one of the haulers invites residents to tour their recycling facility. All of the haulers continue to improve their brochures for curbside collection and recycling. Lastly, most of the haulers provide educational information through websites.

## Other Private Companies

Many different private companies are involved in educational efforts about waste reduction and recycling. Naturally, these efforts generally focus on the specific products manufactured or sold by the companies. For instance, many local grocery stores provide a small credit to customers that bring their own bag. The retailers also sell reusable shopping bags.

Private efforts are sometimes implemented through a consortium approach, where several companies join forces to promote the recycling of their product. One example of this is the Rechargeable Battery Recycling Corporation (RCBC). RBRC broadcasts on their website, in retail stores and on mass media to promote the collection and recycling of rechargeable batteries.

With the recent focus on green technology and carbon footprint, many private companies are evaluating their carbon footprint and, in some cases, publicizing the

results. This helps to draw attention to personal and household carbon footprints (sustainability).

### Non-Profit and Charitable Organizations

The Washington Green Schools provides education and outreach throughout the state to elementary school students on recycling, waste prevention, energy and sustainability topics. Schools can review the Green Schools website and go online to register their school for participation.

The Product Stewardship Council is looking at several items for possible legislative actions to implement product stewardship, including paint, mercury, batteries, unwanted medicines, fluorescent bulbs, and carpet. If implemented, these programs would presumably include an educational component funded by the manufacturers and/or distributors of those items.

## PLANNING ISSUES

### Short-Term Planning Issues

Current planning issues related to outreach and education include:

- The need to review the effectiveness of waste-related education programs.
- Continue to develop alternative funding sources for waste reduction efforts.
- The need to determine the level of local involvement in statewide programs such as the Washington Green Schools program.
- Curriculum requirements for teachers leave little in class time to add additional topics of discussion.
- The basic principles related to sustainability apply across a wide spectrum of topics.
- The need to have common county-wide messages for sustainability and solid waste.
- The need for addressing inclusiveness and diversity in communication and public involvement strategies.

### Long-Term Planning Issues

Emerging long-term issues related to outreach and education include:

- The increasing emphasis on sustainability raises questions about what is the appropriate message and who should take the lead on public education.
- The need for better measurement of the results of outreach and education efforts.
- A growing need for education on product stewardship issues and new programs.

- Establishing the amount of effort needed to create the desired level of waste reduction.

## ALTERNATIVE STRATEGIES

### Alternative A – Increase Regional Efforts

This alternative is based on the idea that coordination with other municipal solid waste agencies can lead to the distribution of more consistent messages, and that these messages can also be distributed more effectively. Distributing more consistent messages in the region will reduce confusion for residents and businesses in the Puget Sound region. This will not only allow the outreach programs to be more effective in terms of getting the message to the target audiences, but will allow the messages to be distributed more cost-effectively as well.

At a minimum, this effort should involve staff from Snohomish County, King County, Seattle, and other cities in Snohomish and King Counties. Staff from Pierce County, Tacoma and Skagit County should be invited. Efforts should be coordinated with private organizations as well. The goal of the coordination would be to incorporate solid waste issues into the broader context of similar messages. For example, waste reduction and reuse could be briefly mentioned as part of the solution when discussing global warming. Similarly, litter prevention could be tied into pollution concerns for the Puget Sound. The costs of this approach would only be the staff time for planning and coordination of outreach campaigns.

### Alternative B – Participate in a Multi-Agency Task Force to Encourage Sustainability

This alternative is based on the idea that sustainability is a much broader issue than just solid waste management. Hence, education on sustainability should involve other county departments as well as other agencies, organizations, utilities and private companies. This perspective highlights the idea that the Solid Waste Division is not the appropriate agency to conduct outreach on sustainability, and may not even be the appropriate agency for educating people about recycling (since those programs are generally being implemented by cities, haulers, and others).

At the moment, the county does not have a clearly-identified sustainability team. A number of staff people have been identified as the ones to engage in a sustainability-related project, and these staff are occasionally pulled together as a team (such as with the county's Green Ribbon Climate Task Force on climate change), but there is no publicly-recognized team with a specific and constant "membership".

The sustainability efforts could be led by those already in the field practicing outreach and education related to their programs. These include Puget Sound Energy, the water utilities, and the cities. The cost of this effort would include staff time and any costs associated with the development and distribution of a public education campaign.

**Alternative C – County could take Lead on Solid Waste Messages**

The County could take a leadership role or become the central voice on solid waste issues. The County could set the standards and tone of the message so that others, including haulers and cities, can provide consistent (and thus more effective) messages. The County could develop and produce materials for the haulers and jurisdictions to use, or the County could develop guidelines to help others develop their own program and materials that would ensure the message is universal across Snohomish County.

**Alternative D – Identify Alternative Financing Sources for Public Education**

Current public education and outreach efforts are funded primarily by grants and service charges (as part of the services provided by haulers and cities). Should the County or others choose to expand their education and outreach programs, additional funding may be needed. Alternative funding sources may also be needed if the CPG funds are restricted or eliminated due to the State budget crisis or other problems. Alternative funding mechanisms, such as fees or taxes placed on certain goods or services that create a disproportionate amount of waste or use a disproportionate amount of resources, could also help influence consumer behavior and call attention to problem areas. Possible alternatives for new or additional funding could include:

- **Other grants**: other grants monies are available from federal agencies, private foundations, non-profit organizations and others. Although grants are an attractive method, applying for a grant can be a time-consuming and potentially fruitless effort, plus grants may lack long-term stability.

- **Collection or disposal rate surcharges**: the County can attach surcharges to the disposal tipping fee to pay for education and other programs, and the cities can attach surcharges to collection contracts that they have executed with haulers (or to their own rates in the case of municipal collection systems). Both of these approaches are currently in use for other programs, however, and there would be some resistance to further increasing collection or disposal costs.

- **Service fees**: a surcharge could also be attached to service fees charged by haulers and others, or additional funds could be generated by embedding the cost of education into a fee for recycling or other service. This is also already done to some extent, and as with the above example there would be some resistance to the idea of further increasing collection costs.

- **Other fees, surcharges and taxes**: a variety of other taxes or fees could be implemented, but none of these are considered to be politically feasible at this time.

**Alternative E – Transition all Educational and Outreach Efforts to a Third Party**

Snohomish County could contract with an outside consultant or agency to provide educational services on an as-needed basis for school and program requests. This approach could potentially be less expensive than maintaining internal staffing

dedicated to education or it could also be more expensive, depending on a number of factors.

This alternative conflicts or overlaps with the next alternative, although this alternative could be applied so as to use a consultant to develop an overall theme that could be used by service-providers, and to provide a standard school program that could be used by city or other staff.

### Alternative F – Transition all Educational and Outreach Efforts to Other Governmental Agencies

Greater responsibility for education and outreach could be shifted to those parties that are more directly involved in providing specific services or addressing related issues. For local recycling programs, this shift could be accomplished by specifying that education and outreach will be conducted by the service-provider (the city or private collector). For school programs, the schools could conduct their own programs with the assistance of the Washington Green Schools programs and other resources (i.e., without relying on a third-party presenter to provide a special program).

### Alternative G – Extend Recycling Outreach to a Culturally-Diverse Audience

Public education and promotional efforts could target a diverse cultural audience, as appropriate to the topic and locality being addressed. In Snohomish County, 16.1% of the population speaks a language other than English in their homes (U.S. Census Bureau 2009). Many of these households can speak and understand English even though it is not their primary language in the home, and only 7.4% of them speak English less than "very well." Of this 7.4%, 41% speak Asian and Pacific Islander languages, 33% speak Spanish, 21% speak other Indo-European languages, and the remaining 5% speak other languages. The children in these families are receiving education about environmental issues in school, but the adults may not be as well-informed. Hence, this alternative focuses primarily on educating the adult members of these families, through printed and electronic materials in non-English languages.

## Evaluation of Alternative Strategies

The alternatives are compared with respect to the evaluation criteria below. The evaluation of cost-effectiveness is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives**: All of the alternatives are consistent with the overall planning objective of conducting appropriate and cost-effective public education and outreach.

**Consistency with Other Regional Plans**: Alternatives A, C and G are consistent with regional planning efforts. Alternative B may not be consistent with the plans of other

local and regional agencies. Some of the alternative funding methods discussed in Alternative D could conflict with other regional plans. Alternatives E and F are neutral with respect to other regional plans.

**Cost Effectiveness**: Alternatives A and C should increase the cost-effectiveness of outreach and education by coordinating the efforts of several agencies and other groups. Alternative B may not be cost-effective for the Solid Waste Division. Alternative D may not be cost-effective, depending on which alternative funding mechanism would be implemented or expanded. Alternatives E and F would need to be more cost-effective than current practices or these would not be implemented. Alternative G would need to be designed carefully and expenses kept relatively low to be cost-effective, since this alternative addresses only a small portion of the population. Preparing a cost-benefit analysis as part of more detailed planning for any of these alternatives is recommended to determine the value and effectiveness of each prior to implementation.

## Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in the following table.

**Table 1**
**Summary Rating of the Outreach and Education Strategies**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Increase regional efforts | M | H | H | H |
| B | Multi-agency task force for sustainability education | M | L | L | L |
| C | County take the lead on solid waste messages | M | H | H | H |
| D | Identify alternative financing sources | M | L | L | L |
| E | Education conducted by third party | M | M | M | M |
| F | Education conducted by other agencies | M | M | H | M |
| G | Extend recycling outreach to diverse audience | H | H | M | H |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendations are being made for outreach and education programs:

### High-Priority Recommendations

O&E1) Snohomish County should participate in a regional effort to provide more consistent messages for solid waste programs and issues.

O&E2) Snohomish County will take the lead on messaging solid waste issues.

O&E3) Greater efforts will be made to extend recycling outreach to a diverse audience.

### Medium-Priority Recommendations

O&E4) Public education will be conducted primarily by service-providers and/or through contracts with third-party agents.

### Low-Priority Recommendations

O&E5) The Solid Waste Division will participate in a multi-agency task force to address sustainability, if such a task force is created.

O&E6) Alternative funding sources for public outreach and education should be explored.

Historically the County has conducted more public education, including programs in schools, but in the past few years more of this responsibility has been shifted to the schools, service-providers and others that have more direct involvement with the various target audiences. These recommendations recognize the appropriateness of this approach. The County's activities in public education will be limited to general messages, assisting with the overall theme (evaluating the adequacy of public education efforts by others), and these activities may be conducted by staff or through contracts with third-party agents. Hence, the Snohomish County Solid Waste Division will be the lead agency for the first two recommendations. The Solid Waste Division will also be the lead agency for Recommendations O&E5 (but only within the solid waste field) and O&E6. Cities, service groups, haulers and other private companies will promote local programs, including reaching out to a more diverse audience. Schools will take the responsibility for their environmental curriculum (as they are essentially already doing).

The cost for the first two activities will consist primarily of continuing the existing budget plus small additional amounts for new activities. In other words, the costs for these two recommended activities would primarily be staff time for planning, including preparing the recommended cost-benefit analysis, and coordination. The cost to address Recommendations O&E5 and O&E6 will also consist primarily of staff time.

Recommendations O&E3 and possible O&E4 may lead to increased costs for cities and service-providers but the cost-benefit analysis will provide a quantitative evaluation for decision-making.

Most of these recommendations should be conducted on an on-going or as-needed basis. Recommendation O&E6 should be implemented over the next five years.

## REFERENCES

U.S. Census Bureau 2009. Snohomish County profile from 2006-2008 American Community Survey, from U.S. Census Bureau website, November 5, 2009.

# ADMINISTRATION AND REGULATION

## SUMMARY

This technical memo addresses the administrative and regulatory activities related to solid waste, including illegal dumping programs and financing methods.

The recommendations made by this technical memo address changes to the current solid waste management system, including refinements to financing methods and to programs addressing illegal dumping and litter cleanup.

## BACKGROUND

This technical memo addresses those activities related to administering and regulating the solid waste system. This memo also addresses responsibilities and activities such as cleaning up illegal dumping, the Solid Waste Advisory Committee (SWAC), and funding sources.

The solid waste management system in Snohomish County is an integrated collection of facilities and programs that are intended to operate as a cohesive system. Achieving this requires the cooperation and coordination of government agencies on several levels and the involvement of many private companies. The various facilities and programs are not only intended to satisfy the statutory requirements that private and public sector participants are responsible for fulfilling, but altogether the system is intended to provide waste management services in the most cost-effective and environmentally-responsible manner possible.

### Goals and Policies for Administration and Regulation

Goals and policies specific to administration and regulation include:

- Goal 2: Ensure efficient services for a growing and changing customer base.
- Policy 2-7: Ensure administrative services provide adequate support for policies and programs undertaken by the Division.
- Related policies from other technical memorandums: All of the other policies are related in some way to administrative and regulatory activities, since the administration of the solid waste division affects all of the other topics addressed in this Solid Waste Management Plan.

## EXISTING PROGRAMS AND ACTIVITIES

Administrative responsibility for solid waste handling systems in Snohomish County is currently divided among several agencies and jurisdictions in local, county, and state government. Enforcement and regulatory responsibilities are assigned to cities, counties, or jurisdictional health departments, depending on the specific activity and local preferences. Each organization involved in the Snohomish County solid waste management system is described below.

### Snohomish County Solid Waste Division

The Washington State Solid Waste Management Act, RCW 70.95, assigns local government the primary responsibility for managing solid waste. Solid waste handling, as defined in RCW 70.95, includes the "management, storage, collection, transportation, treatment, utilization, processing, and final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from solid wastes, or the conversion of the energy in solid wastes to more useful forms."

RCW 36.58 authorizes Snohomish County to develop, own, and operate solid waste handling facilities in unincorporated areas of the county, or to accomplish those activities by contracting with private firms. The County may regulate tipping fees, hours of operation, facility access, and waste acceptance policies at each of its facilities. The County also has the authority and responsibility to prepare comprehensive solid waste management plans for unincorporated areas and for jurisdictions that agree to participate with the County in the planning process. Through interlocal agreements, all of the cities and towns in Snohomish County have agreed to participate in the planning process. The interlocal agreements also require that all waste collected by or in the cities must go to a Snohomish County disposal facility.

Snohomish County exercises its solid waste responsibilities through the Public Works Department, and specifically through the Solid Waste Division. The specific administrative functions performed by the Solid Waste Division include:

- Administering, staffing, and operating four transfer stations, three neighborhood recycling and disposal centers (NRDCs), a household hazardous/moderate risk waste collection facility, a vactor waste decant facility, and various recycling and organics collection programs.
- Monitoring, providing post-closure maintenance, and providing financial assurance for closed solid waste facilities including the Cathcart Landfill.
- Conducting public education programs for waste reduction and recycling.
- Administering contracts.
- Maintaining the Solid Waste Management Plan (SWMP) as adopted relating to public health, safety, and sanitation, and providing regulations to govern the storage, collection, transfer, transportation, processing, use, and final disposal of solid waste by all persons in Snohomish County.

- Providing staff support for the SWAC.

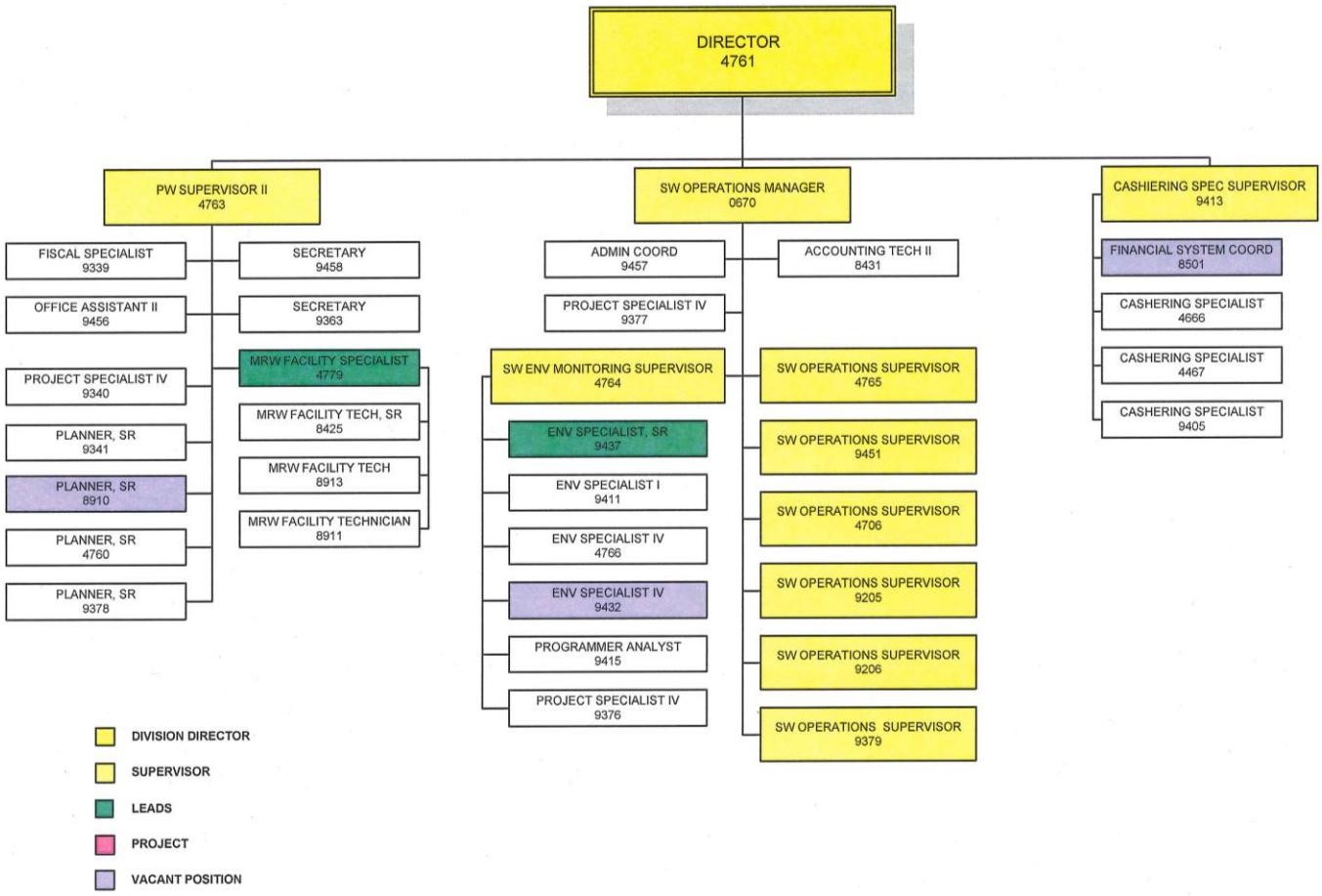
The Solid Waste Division is staffed by about 122 employees and most are involved in the operation of transfer and disposal facilities. Figure 1 illustrates the Solid Waste Division organizational structure as of June 2010.

One important program for the Solid Waste Division is the Environmental Cleanup program (ECUP), which was implemented in 2000 as a collaborative effort between the Snohomish Health District, the Washington State Department of Ecology, and a variety of County Departments including the Solid Waste Division, Road Maintenance Division and Sheriff's Office. ECUP's mission is to remove solid and hazardous waste illegally dumped on public lands, mitigate sites where illegal dumping frequently occurs and educate the public on the variety of alternatives to unlawfully dumping material throughout Snohomish County.

In the eleven years since the start of this program, ECUP has collected over 4,300 tons of illegally dumped solid waste from Snohomish County properties. More than 3,000 tons, or approximately 70%, of that material was recycled. ECUP Team members and volunteers have worked over 16,800 hours cleaning up more than 6,600 sites throughout the county. The ECUP program recently began providing two new services. Assistance is now provided to help residents remove and dispose of unwanted recreational vehicle (RV) campers, travel trailers, and boats by recycling and disposing of them in the proper manner. The ECUP team also offers VIN inspections in an effort to assist private property owners in the removal of unwanted vehicles from their properties.

The Solid Waste Division is funded primarily by the fees collected at the NRDCs and transfer stations. Fees charged at the County's solid waste facilities are established in the solid waste service fee schedule approved through a County Council motion. The County also receives grant monies from the Washington Department of Ecology (Ecology) for solid waste management planning activities and other projects. In the past, these fees and grants have adequately covered the expenses for the solid waste system, but a substantial and unanticipated drop in disposal tonnages (and hence in tipping fee revenues) beginning in 2007 has caused budgetary challenges for Snohomish County as well as for most other counties. This drop in tonnages was due to a decrease in construction activities and other impacts of the local and national economic problems experienced recently. As of mid-2011, there are some signs of an economic recovery and that, together with adjustments that were made in the past few years, should lead to a more stable funding situation for Snohomish County. On the other hand, this situation has underscored the concern that many have had for several years, which is that as recycling tonnages increase, waste quantities and tipping fee revenues will decrease. Since a large portion of the financial support for recycling and related programs is derived from the tipping fees, this situation could eventually lead to long-term financial challenges.

**Figure 1**
**Snohomish County Solid Waste Division Organizational Structure**
**September 2011**




Another significant factor for the Solid Waste Division's budget is the post-closure costs for the old Cathcart Landfill. The Cathcart Landfill began operation in 1980 as the County's primary MSW disposal facility and closed in 1992. To meet the long-term financial obligations of closed landfills, state law requires that landfill owners maintain closure and post-closure plans that reflect reasonable costs for post-closure activities occurring over at least twenty years or until a site becomes stabilized. The total closure costs for the Cathcart Landfill in 2008 were $985,123.

Much of the solid waste activities, especially for regulation and enforcement, are directed by the County Code. The sections of Title 7 of the County Code that are relevant to solid waste include:

- 7.34 – establishing the Solid Waste Advisory Committee (see the following section).
- 7.35 – establishing a comprehensive county-wide program for solid waste handling, recovery and/or reclamation. This requires effective control of all non-exempted solid waste generated and collected within Snohomish County.
- 7.41 – operating rules and disposal fees for Snohomish County solid waste facilities.
- 7.42 – minimum service levels for recycling and waste collection in the unincorporated areas.

**Snohomish County Solid Waste Advisory Committee (SWAC)**

The formation of the Snohomish County Solid Waste Advisory Committee (SWAC) is governed by Chapter 7.34 of the County Code and also by state law. The SWAC is an advisory body and does not have the authority to implement programs. As shown in state law:

> "Each county shall establish a local solid waste advisory committee to assist in the development of programs and policies concerning solid waste handling and disposal and to review and comment upon proposed rules, policies, or ordinances prior to their adoption. Such committees shall consist of a minimum of nine members and shall represent a balance of interests including, but not limited to, citizens, public interest groups, business, the waste management industry, and local elected public officials. The members shall be appointed by the county legislative authority" (RCW 70.95.165 (3)).

The SWAC meets regularly to coordinate the exchange of information of solid waste and resource recovery issues, provide policy recommendations to Snohomish County and review and provide comments on plans concerning solid waste handling and disposal. Meetings are held at least quarterly and are open to the public. The SWAC website maintains agendas and minutes for public review.

**Snohomish Health District**

The Snohomish Health District (SHD) is responsible for enforcing solid waste regulations and issuing permits for solid waste facilities. Permits are required for all solid waste facilities in accordance with WAC 173-350 and WAC 173-351. Permitted solid waste facilities include, but are not limited to, landfills, transfer stations, recycling processing, composting, and petroleum-contaminated soil (PCS) remediation sites. The SHD inspects all permitted solid waste facilities at least once per year. The SHD also reviews permit applications to ensure that proposed facilities meet all applicable laws and regulations, conforms to the approved solid waste management plan, and complies with all zoning requirements.

The Solid Waste and Toxics Section of the SHD investigates complaints concerning the following activities:

- **Illegal dumping**: garbage and/or other solid waste dumped on private or public property without the owner's permission.
- **Garbage**: improper storage, handling, and disposal practices that attract flies or rodents. This includes uncontained garbage, or garbage not removed weekly.
- **Rodent/Vector problems**: conditions that are attracting or feeding rodents or vectors, causing a neighborhood infestation.
- **Hazardous waste**: storage, handling, or disposal practices that allow toxic chemicals to be released to surface water, groundwater or soil.
- **Initial investigations for chemical releases**: the Health District works in cooperation with Ecology to investigate releases or potential releases of chemicals to the environment.

In 2011 the Health District issued 42 solid waste handling permits; reviewed 2 permit applications; conducted 399 inspections at permitted and exempt facilities; and responded to 780 complaints.

### Snohomish County Road Department

The Snohomish County Road Department administers the Adopt-a-Road program. The Adopt a Road Program is a roadside clean-up campaign designed to remove litter along county roadways, enhance the quality of the environment, and promote community pride. The program establishes a partnership between volunteer groups and Snohomish County Public Works. Community groups sign up to remove litter along "adopted" sections for county road. In recognition of their efforts, Public Works installs two Adopt-A-Road signs with the group's name along their adopted section of road, and these are installed after the group's first clean-up event.

The Snohomish County Road Department provides safety training for group leaders, safety-training materials for volunteers, safety equipment, and supplies for clean-up events. Individuals, families, civic organizations, service clubs, churches, businesses, and other organizations can participate in the program.

### Cities and Towns

There are 22 incorporated cities and towns in Snohomish County. RCW 35.21.152 empowers cities to develop, own, and operate solid waste handling systems and to provide for solid waste collection services within their jurisdictions. Most of the cities contract with a hauler to collect garbage within their city, while garbage collection routes outside the city borders are regulated by the Washington Utilities and Transportation Commission (WUTC). Fees charged for collection services generally cover the expenses of the system, although some cities also charge a "utility tax" that helps fund

other city functions. More detailed information about garbage collection in individual cities is included in the Waste Collection Technical Memo.

Most of the cities and towns also have some form of code enforcement program for properties that accumulate junk such as wood, inoperable cars, car parts, appliances, and furniture.

**Washington State Department of Ecology**

The Solid Waste Handling Standards (Ch. 173-350 WAC) were promulgated by Ecology under the authority granted by Ch. 70.95 RCW. In addition, Ch. 173-351 WAC, Criteria for Municipal Solid Waste Landfills, contains the current standards for municipal solid waste landfills. Both of these rules are currently being amended. Ch. 173-350 WAC is being amended to address when contaminated soil becomes classified as a solid waste and to address a number of "general housekeeping" items. Ch. 173-351 WAC is being amended to address new federal regulations and change in liner requirements.

The Model Litter Control and Recycling Act (RCW 70.93.060) prohibits depositing garbage on any property not properly designated as a disposal site. There is also the waste reduction, recycling, and litter control account that has been created through a tax levied on wholesale and retail businesses, and the monies from this fund have been used for education, increased litter clean-up efforts, and contracts to eligible county entities for illegal dump clean-up activities.

Ecology's litter program had been hiring youth ages 14-17 years old to pick up litter in the summer. The program removed approximately one million pounds of litter each year across the state. Ecology also conducted litter awareness campaigns such as the "Litter and It Will Hurt" education campaign consisting of media and billboard advertising, public relations, special events and enforcement. In the State budget that began in 2009, however, part of the litter funds were transferred from this dedicated account to the State General Fund to meet other state priorities. From July 1, 2009 to June 20, 2011, 4.4 million dollars were cut from this program to the extent that no youth crews operated in Washington State in 2010, except for two small crews in King County. Ecology also reduced local government grants for county litter pickup. At this point, Ecology will have only a few adult crews operating statewide to pick up litter only on the interstate freeways (but not on any of the state highways or county roads).

The Community Litter Control Prevention (CLCP) program's funds were cut in half by the most recent State budget. Hence, many of the county litter programs were not able to operate litter crews from June 2010 through June 2011.

Under the Model Toxics Control Act (RCW 70.105D), grants are available to local governments for solid waste management plans and programs, hazardous waste management plans and programs, and remedial actions to clean up existing hazardous waste sites. Solid and hazardous waste planning and programs are funded through the Coordinated Prevention Grants program administered by Ecology's Solid Waste and Financial Assurance Program. The state rule that governs this program is WAC 173-

312 – Coordinated Prevention Grants. The *2010-2011 Coordinated Prevention Grant Guidelines* (Ecology publication #09-07-030) outlines the Coordinated Prevention Grant program and the fund that supports the grants. Cleanup of existing hazardous waste sites is funded through Remedial Action Grants, described in Ecology's *Remedial Action Grants and Loans Program Guidelines* (Ecology publication #10-07-012).

Ecology also responds to complaints regarding hazardous material spills or releases.

**Washington Utilities and Transportation Commission (WUTC)**

The Washington Utilities and Transportation Commission (WUTC) regulates privately-owned utilities and companies that provide public services such as electric power, telephone, natural gas, private water, transportation, and waste collection. The WUTC's authority over solid waste collection is established in RCW 81.77 and Chapter 480-70 WAC.

The WUTC regulates residential and non-residential garbage collection services, primarily in unincorporated areas. Cities are permitted by state law to choose their form of waste collection regulation. Most of the cities in Snohomish County contract with a private hauler for garbage collection services (or collect it with city crews as in the case of Marysville and Sultan), and only a few rely on the WUTC to regulate a private garbage hauler as if they were an unincorporated area. WUTC authority does not extend to companies operating under contract with any city or town, or to any city or town that undertakes solid waste collection. This regulatory system was set up by the State Legislature in the 1960's to ensure that every citizen, no matter how remote, is offered garbage collection service.

The WUTC regulates solid waste collection companies by granting "certificates of convenience and necessity" that permit collection companies to operate in specified service areas. It also regulates solid waste collection, under authority of RCW 81.77.030, by:

- Fixing collection rates, charges, classifications, rules, and regulations.
- Regulating accounts, service, and safety of operations.
- Requiring annual reports and other reports and data.
- Supervising collection companies in all matters affecting their relationship to their customers.
- Requiring collection companies to use rate structures consistent with state waste management priorities.

The WUTC requires certificate holders to provide the minimum levels of solid waste collection and recycling services established by a local solid waste management plan and enacted through an ordinance for unincorporated areas of the County. Solid waste companies operating in the unincorporated areas of the county must comply with the solid waste management plan (see RCW 81.77.040).

This Plan contains a cost assessment prepared according to the W*UTC Cost Assessment Guidelines for Local Solid Waste Management Planning* (WUTC 2001). RCW 70.95.096 grants the WUTC 45 days to review the plan's impact on solid waste collection rates charged by solid waste collection companies regulated under RCW 81.77, and to advise the County and Ecology of the probable effects of the Plan's recommendations on those rates.

**Puget Sound Clean Air Agency**

The Puget Sound Clean Air Agency (Clean Air Agency) is a special-purpose, regional agency chartered by state law in 1967 (RCW 70.94). Its jurisdiction covers King, Kitsap, Pierce and Snohomish counties, and it is governed by a Board of Directors that is comprised of elected officials from each of the four counties, a representative from the largest city in each county, and one member representing the public-at-large. The Clean Air Agency also has an Advisory Council comprised of individuals representing large and small businesses, non-regulated business, education, transportation, health, tribes, fire officials, the environmental community, ports and the public-at-large.

Clean Air Agency regulations apply to all areas of Snohomish County except for Tulalip Tribal lands, which are guided by the Federal Air Rules for Reservations (FARR) regulations.

**Environmental Protection Agency (EPA)**

At the federal level, the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Solid Waste Disposal Act Amendments of 1980 (42 U.S.C. 6901-6987), is the primary body of legislation dealing with solid waste. Subtitle D of RCRA deals with non-hazardous solid waste disposal and requires the development of a state comprehensive solid waste management program that outlines the authorities of local, state and regional agencies. Subtitle D requires that the state program must prohibit "open dumps" and must provide that all solid waste is disposed in an environmentally-sound manner.

**Tulalip Indian Nation**

The Tulalip Indian Reservation is a federally-recognized Indian Nation and their reservation occupies 22,000 acres located north of Everett and the Snohomish River and west of Marysville, Washington. The Tribe's population is about 4,000 and growing. The Tribe is governed by a Tribal Council made up of elected members. The Council holds regular meetings and handles the business affairs of the Tribe. The Tulalip Nation has inherent authority to govern all activities as they pertain to solid waste management within the boundaries of the Tulalip Nation Reservation.

### U.S. Naval Station Everett

The decision to build a naval station in Everett was made in 1984 as part Secretary of the Navy John Lehman's Strategic Homeporting concept. As the newest and most modern homeport in the Navy, Naval Station Everett boasts environmentally-conscious facilities. The Fleet and Family Support Center are located in nearby Marysville on a separate campus.

The U.S. Navy is responsible for the collection of solid waste on the U.S. Naval Station Everett. Rubatino Refuse is the current hauler for the Naval Station.

## PLANNING ISSUES

### Near-Term Planning Issues

Current planning issues related to regulation and administration include:

- Financing waste reduction and recycling programs with limited state grant funds.
- Continuing to finance waste diversion and other programs when waste tonnages (hence revenues from tipping fees) have decreased.
- Identifying better methods to prevent or clean up illegal dumping.
- Reducing the cost of cleaning up illegal dumping.
- Evaluating the impact of a growing population on both services and revenues.
- Evaluating litter pickup needs in light of reduced services from the state.

### Long-Term Planning Issues

Long-term issues related to regulation and administration include:

- Identifying better long-term financing methods for recycling and other waste diversion programs as these programs decrease revenues from solid waste tip fees.

## ALTERNATIVES

### Alternative A – Explore Alternative Funding Sources to Replace Tipping Fees

The tipping fee currently includes funds for recycling programs, landfill closure costs, administrative support and other fees. While alternative funding sources are not easy to identify, a concerted effort could be made to identify alternatives for specific charges and steadily transfer those costs to other sources. Ecology has examined funding methods as part of the Beyond Waste project (Ecology 2004), and the options that they have identified are summarized in Table 1 (see Attachment A for more details).

**Table 1**
**Current Funding Methods for Solid Waste Management**

| Possible Funding Methods | Potential Implementation Agency | | | |
|---|---|---|---|---|
| | City | County | State | Private Sector |
| **User Fees, Rates, Surcharges** | | | | |
| 1. Cost-of-Service-Based Rates | X | X | | X |
| 2. Other Volume-Based Rates | X | | | |
| 3. Fixed Per-Customer Service Rates | X | | | X |
| 4. Collection Rate Surcharges | X | | | |
| 5. Planning Fees | | X | | |
| 6. Weight or Volume-Based Disposal Fees | X | X | | X |
| 7. Fixed Per-Customer Disposal Fees | X | X | | X |
| 8. Disposal Surcharges | X | X | | |
| **Taxes** | | | | |
| 9. MTCA Funds, Hazardous Substance Tax | | (x) | X | |
| 10. State Litter Tax | | (x) | X | |
| 11. Disposal District Excise Tax | | X | | |
| 12. Mandatory Collection | | X | | |
| 13. Franchise Fees | X | | X | |
| **Specialized Fees** | | | | |
| 14. Advance Recovery Fees | | | X | |
| 15. Permitting Fees | | X (HD) | | |
| **Other** | | | | |
| 16. Enforcement Fines/Penalties | | X | | |
| 17. Sales of Recyclable Materials | X | X | | X |
| 18. Recycling Fees/Charges | X | X | | X |
| 19. Sales of Recovered Energy | | X | | X |
| 20. Utility Tax | X | | | |
| 21. General Fund Revenues | X | X | | |
| 22. Bond Financing | | X | | (x) |
| 23. Public Works Assistance Account | X | | | |

X = Implementing authority, (x) = potentially benefits from funding method but cannot implement it, HD = Health District.

### Alternative B – Maintain Support for Illegal Dumping Enforcement and Litter Cleanup

Despite tight budgets and a scaling back of Ecology's grants and cleanup activities, maintaining the current level of enforcement for illegal dumping and support for litter cleanup efforts is important for avoiding problems in the future. Both illegal dumping and littering tend to increase when these are allowed to accumulate, and so cleanup efforts are important for keeping these problems under control. The current level of effort by Snohomish County appears to be keeping these problems in check and is within budgetary constraints, and so this level should be maintained in the future. Other agencies (cities and state) should also maintain their illegal dumping and litter cleanup programs within their respective jurisdictions.

### Alternative C – Promote Volunteer Efforts for Litter Cleanup

One option to address the scaling back of Ecology litter crews and funds would be to encourage additional volunteer efforts to clean up litter. Some litter cleanup is already being conducted by volunteer groups and private companies. Volunteer efforts are sometimes informal, especially on roads near their homes, or are organized by a group, club, church or other organization. For the private companies, voluntary cleanup efforts are typically conducted in the areas around their businesses or by arranging to have employees maintain an "adopted" section of highway. This alternative could build on these efforts by promoting the concept (reaching out to local groups and businesses) and also informing them of the procedures for adopting a section of highway.

### Alternative D – Explore Implementation of a Disposal and/or Collection District

Chapter 36.58 RCW, Solid Waste Disposal, establishes the counties' rights and responsibilities regarding solid waste management, including the authority to establish solid waste disposal districts. The authority to establish solid waste collection districts is provided in Chapter 36.58A. Either district can include the incorporated areas of a city or town only with the city's consent. A solid waste district (for collection or disposal) could centralize functions that are now handled by a variety of county and city agencies, but it may be difficult to develop a consensus on the formation and jurisdiction of either type of district. Either type of district may be able to alleviate illegal dumping and other problems through the institution of mandatory garbage collection (for a collection district only) and/or different financing structures.

RCW 36.58.040 prohibits counties from operating a solid waste collection system, but the establishment of a solid waste collection district that can act in a similar capacity is allowed by Ch. 36.58A RCW. A collection district can be created following the adoption of a solid waste management plan; however, a collection district does not appear to possess taxing authority. According to RCW 36.58A.040, the revenue-generating authority of a collection district is limited. In Snohomish County, however, there would be no significant advantage to a collection district unless there wasn't a private company willing to provide collection services for a specific area (a highly unlikely scenario).

A solid waste disposal district is a quasi-municipal corporation with taxing authority set up to provide and fund solid waste disposal services. A disposal district has the usual powers of a corporation for public purposes, but it does not have the power of eminent domain. The county legislative authority (i.e., the County Council) would be the governing body of the solid waste disposal district.

RCW 36.58.130 allows the creation of a disposal district to provide for all aspects of solid waste disposal. This includes processing and converting waste into useful products, but specifically does not allow the collection of residential or commercial garbage. A disposal district may enter into contracts with private or public agencies for the operation of disposal facilities, and then levy taxes or issue bonds to cover the disposal costs. Thus, a disposal district established in Snohomish County could assess each resident or business (in incorporated areas only with the city's approval) a pro rata share of the cost of disposal. This could help to discourage illegal dumping by covering at least part of the disposal cost through mandatory payments, so that the additional expense for proper disposal would be lower than it is currently. In other words, the assessment by the disposal district would be paid regardless of where the resident or business dumped the waste or whether it was self-hauled or transported by a commercial hauler, and the latter two options would be less expensive by the amount of disposal costs already paid.

RCW 36.58.140 states that a disposal district may "collect an excise tax on the privilege of living in or operating a business in the solid waste disposal taxing district, provided that any property which is producing commercial garbage shall be exempt if the owner is providing regular collection and disposal." The district has a powerful taxing authority, since it may attach a lien to each parcel of property in the district for delinquent taxes and penalties, and these liens are superior to all other liens and encumbrances except property taxes.

The funds obtained by a disposal district tax may be used "for all aspects of disposing of solid wastes...exclusively for district purposes" (RCW 36.58.130), including:

- Cleanup of roadside litter and solid wastes illegally disposed of on unoccupied properties within the district.
- Public information and education about waste reduction and recycling.
- Defraying a portion of the cost of disposal.
- Subsidizing waste reduction/recycling activities.
- Subsidizing the Moderate Risk Waste Facility and collection events.
- Closure and post-closure costs for the old landfill and for other solid waste facilities.
- Solid waste planning.

Both collection and disposal districts can be very difficult, politically and technically, to develop and implement. Once adopted, significant amounts of education and enforcement may be necessary to ensure the proper operation of a district.

### Alternative E – Periodically Review Solid Waste Division Activities

Periodically reviewing the activities and programs of the Snohomish County Solid Waste Division (SWD) could be a useful tool for uncovering improvements in the manner that programs and facilities are operated. This review could take the form of a series of questions, such as:

- Are there solutions/approaches that prevent waste?
- Are there solutions/ approaches that increase recycling?
- Are there other solutions and approaches that are more beneficial than disposal?
- Are there solutions/approaches that are more significant regarding GHG emissions?
- Are there solutions/approaches that are more significant in overall sustainability?

This type of review could be conducted every few years, and could potentially be conducted by involving the SWAC and/or others (through an open invitation). The review could also be coordinated with Comprehensive Plan reviews and updates.

Alternatively, work plans could be prepared by the Solid Waste Division each year during the annual budget process that describe the recommended programs and actions to be implemented in the upcoming fiscal year for County Council consideration. The work plans could include an assessment of how the program or action would address the questions above in addition to including the estimated staff resources, budget required, and any rate impacts for implementation and the projected results of the program.

Further efforts to plan for realistic and effective programs and improvements could also be part of an annual process for tracking progress in implementing this Plan's recommendations. An annual report could be prepared by the Solid Waste Division and presented to the County Council. This annual report could include the following:

- Prior year's goals and accomplishments
- Quantitative / measurable results
- Upcoming year's goals and expected results
- Recommendations for any Plan updates or modifications over the next 5 years

### Evaluation of Alternatives

The alternatives are compared with respect to the evaluation criteria below. The evaluation of cost-effectiveness is based on a qualitative assessment by Solid Waste Division staff, County Solid Waste Advisory Committee members and the Plan's consultants based on professional knowledge and experience in other jurisdictions.

**Consistency with Solid Waste Planning Objectives**: All of these objectives support the goal of providing efficient customer services while providing adequate administrative support and complying with regulatory requirements. Alternative A could increase the future stability of funding sources, while Alternative B would increase the effectiveness of actions that reduce and remedy the effects of illegal dumping.

**Consistency with Other Regional Plans**: None of these alternatives are inconsistent with other regional plans.

**Cost Effectiveness**: Alternatives B and C could be quite cost-effective if these programs help reduce the amount of illegal dumping and litter in the future. Alternatives A and D do not affect total costs as much as these alternatives simply shift costs to other funding sources, although a collection or disposal district will likely create a small amount of additional administrative overhead costs. Alternative D could reduce public sector expenditures by shifting costs to the private sector, but may not reduce overall costs. Alternative E could potentially improve the cost-effectiveness of several programs.

Preparing a cost-benefit analysis as part of more detailed planning for any of these alternatives is recommended to determine the value and effectiveness of each prior to implementation.

**Rating of Alternatives**

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

**Table 2**
**Summary Rating of the Regulation and Administration Alternatives**

| | Alternative | Consistency with SW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Explore alternative funding sources | H | H | H | H |
| B | Maintain support for illegal dumping enforcement and litter cleanup | H | M | H | H |
| C | Promote volunteer litter cleanup | H | M | H | H |
| D | Explore disposal or collection district | M | M | L | L |
| E | Periodic review of SWD activities | H | M | H | H |

H – High M – Medium L – Low

## RECOMMENDATIONS

The following recommendations are being made for administrative and regulatory programs:

### High-Priority Recommendations

A&R1) Enforcement activities for illegal dumping and litter cleanup programs should be maintained.

A&R2) Volunteer efforts for litter cleanup should be encouraged.

A&R3) Alternative funding sources should be explored to reduce tipping fee surcharges for waste diversion and other non-disposal programs.

A&R4) Snohomish County SWD should review programs and activities annually to explore program modifications that could increase the effectiveness of waste prevention, recycling, greenhouse gas reduction and other programs.

### Low-Priority Recommendations

A&R5) Snohomish County should continue to explore alternatives for a solid waste disposal district. However, this is a low priority given the difficulties of developing and implementing a district. This priority could change if this

option is determined to be more feasible during the course of identifying and evaluating alternative funding sources.

Snohomish County is the administrative and regulatory lead for the solid waste system in the county, in coordination with Federal, State and local agencies. Cities, service groups, haulers and other private companies will operate within these systems.

Recommendation A&R2 could reduce public expenditures, but would require some additional staff time to implement. The other recommendations may also require additional staff time but otherwise do not increase expenses over current levels.

All of the recommendations should be implemented, or continue to be conducted, over the next five to ten years.

## REFERENCES

Ecology 2004. *Financing Solid Waste for the Future*, Publication #04-07-032, Washington State Department of Ecology, November 2004.

WUTC 2001. *Cost Assessment Guidelines for Local Solid Waste Management Planning*, Washington Utilities and Transportation Commission, August 2001.

# ATTACHMENT A
# ALTERNATIVE FUNDING METHODS

## INTRODUCTION

The technical memo for administration and regulation contains a table showing potential funding methods that could be used for solid waste management activities. This appendix provides more information about those funding methods.

## POTENTIAL FUNDING METHODS

This appendix attempts to provide a fairly comprehensive view of the various funding mechanisms that could potentially be used for solid waste management purposes. Some of these methods are being used currently, while others may have varying degrees of practicality or feasibility. The following list is derived from *Financing Solid Waste for the Future* (Ecology 2004, Publication #04-07-032).

The potential funding methods are listed in Table 1 and are described below.

### User Fees, Rates, Surcharges

1. **Cost-of-Service-Based Rates**: A cost-of-service-based rate, which allows for a rate to cover the actual cost of providing a service, is a rate-setting methodology used by the Washington Utilities and Transportation Commission (WUTC) and some cities. Under Chapter 81.77 RCW, the WUTC has established cost-of-service-based rates for regulated solid waste collection from residents and commercial businesses in areas where certificates exist for solid waste collection companies. Under RCW 35.21.130 and 35.21.135, cities and towns may set rates through a solid waste or recyclable materials collection ordinance.

   Both cities and counties can provide for reduced rates as incentives. Cities and towns may provide reduced solid waste collection rates as incentives to residents participating in recycling programs. In WUTC-regulated areas, counties can, by ordinance, provide for reduced solid waste collection rates as incentives to residents participating in recycling programs, subject to WUTC approval.

2. **Other Volume-Based Rates**: This represents an alternative range of pricing options for solid waste collection and disposal services, such as using the rates to provide incentives for reducing wastes and incentives for separating recyclables. An example would be setting a rate where subscribers to two-can

**Table A-1**
**Current Funding Methods for Solid Waste Management**

| Possible Funding Methods | Potential Implementation Agency | | | |
|---|---|---|---|---|
| | City | County | State | Private Sector |
| **User Fees, Rates, Surcharges** | | | | |
| 1. Cost-of-Service-Based Rates | X | X | | X |
| 2. Other Volume-Based Rates | X | | | |
| 3. Fixed Per-Customer Service Rates | X | | | X |
| 4. Collection Rate Surcharges | X | | | |
| 5. Planning Fees | | X | | |
| 6. Weight or Volume-Based Disposal Fees | X | X | | X |
| 7. Fixed Per-Customer Disposal Fees | X | X | | X |
| 8. Disposal Surcharges | X | X | | |
| **Taxes** | | | | |
| 9. MTCA Funds, Hazardous Substance Tax | | (x) | X | |
| 10. State Litter Tax | | (x) | X | |
| 11. Disposal District Excise Tax | | X | | |
| 12. Mandatory Collection | | X | | |
| 13. Franchise Fees | X | | X | |
| **Specialized Fees** | | | | |
| 14. Advance Recovery Fees | | | X | |
| 15. Permitting Fees | | X (HD) | | |
| **Other** | | | | |
| 16. Enforcement Fines/Penalties | | X | | |
| 17. Sales of Recyclable Materials | X | X | | X |
| 18. Recycling Fees/Charges | X | X | | X |
| 19. Sales of Recovered Energy | | X | | X |
| 20. Utility Tax | X | | | |
| 21. General Fund Revenues | X | X | | |
| 22. Bond Financing | | X | | (x) |
| 23. Public Works Assistance Account | X | | | |

X = Implementing authority, (x) = potentially benefits from funding method but cannot implement it, HD = Health District.

service would pay double the rate of one-can subscribers. Specific authority for counties to set such rates does not exist. These types of rates may be problematic under cost-of-service models, as they are currently used to set rates that cover costs.

3. **"Fixed" or "flat" Per-Customer Rates**: Fixed or flat per-customer rates charge each customer the same amount regardless of the volume of service. Very simply, the total costs divided by the number of households equals the rate per household. Some cities use a flat rate for all or some services (garbage,

recycling, and yard waste). The WUTC uses flat rates for mandatory-pay recycling and yard waste services, but not garbage.

4. **Solid Waste/Recycling Collection Rate Surcharges**: As noted, Chapter 35.21 RCW provides authority to cities to set collection and disposal rates, which may include surcharges/fees to cover additional costs of managing the solid waste system beyond actual collection and disposal costs. Similarly, RCW 81.77.160 directs the WUTC to establish collection rates that include "all known and measurable costs related to implementation of the approved county or city comprehensive solid waste management plan."

5. **Planning Fees**: RCW 36.58.045 authorizes counties to impose a fee on collection services in the unincorporated areas to pay for "the administration and planning expenses that may be incurred by the county in complying with the requirements in RCW 70.95.090."

6. **Weight or Volume Based Disposal Fees**: Both cities (RCW 35.21.120 and 35.21.152) and counties (RCW 36.58.040) are authorized to develop solid waste disposal sites and set user fees. Weight/volume based fees involve per-ton or per-cubic yard fees charged for disposal of solid waste at a transfer facility, landfill, or incinerator; these fees may also apply to moderate-risk waste drop-off, vactor waste separation and treatment, and other similar services. The basic premise is that the user pays for the service according to the amount of material disposed.

7. **"Fixed" or "flat" Per-Customer Disposal Fees**: Both cities (RCW 35.21.120 and 35.21.152) and counties (RCW 36.58.040) are authorized to develop solid waste disposal sites and set user fees. These fees may be set on a per-customer or per-trip basis instead of the more common weight or disposal basis.

8. **Disposal Surcharges**: Chapter 35.21 RCW provides authority to cities to set collection and disposal rates, and those rates may include surcharges to cover additional costs of managing the solid waste system over and above the costs calculated to cover actual collection and disposal. RCW 36.58.040 allows counties to set rates and charges for solid waste disposal, which includes the ability to impose disposal fee surcharges.

**Taxes**

9. **Model Toxics Control Act Funds - Hazardous Substance Tax**: Also referred to as a "pollution tax," this tax is established by Chapter 82.21 RCW and is imposed on persons who first possess, in Washington State, hazardous substances. The substances subject to this tax include those defined under federal law (CERCLA), registered pesticides, petroleum products, and any other substance that Ecology determines by rule to present a threat to human health or the environment if released into the environment. Revenues collected from this

tax go into the Toxic Control Accounts (RCW 70.105D.070). Both a state toxics control account and a local toxics control account were established, and monies deposited into those accounts are to be used for a broad array of hazardous waste and solid waste activities and programs at the state and local government levels.

All counties are eligible to receive biennial Coordinated Prevention Grants (CPG), which come from the local toxics control account. The CPG funding is based in large part on population. Some portions of CPG monies go to local health authorities for inspection and enforcement activities. The other main use of the toxics control account monies is for Remedial Action Grants (RAG), given to local jurisdictions for cleanup activities, such as landfill closures. CPG grants require local matching dollars, which are typically paid for with disposal revenues.

10. **State Litter Tax**: The Waste Reduction, Recycling and Model Litter Control Account (WRRMLCA), imposed through Chapter 82.19 RCW, is funded by a tax collected from manufacturers, wholesalers, and retailers of items or packaging deemed to contribute to roadside litter. Chapter 70.93 RCW directs that the WRRMLCA be used for litter cleanup and prevention, and also for waste reduction and recycling efforts at both the state government and local community levels.

11. **Disposal District Excise Tax**: RCW 36.58.100-150 authorizes counties with populations of less than one million to create one or more disposal districts in unincorporated areas, which become junior taxing districts. Excise taxes may be levied upon citizens and businesses within a district (again, unincorporated areas only, unless city approval allows districts to expand into incorporated areas). A disposal district is potentially in competition for taxing authority with other junior taxing districts, including ports, fire districts and utility districts.

12. **Mandatory Collection**: Collection districts in unincorporated areas may be formed by counties under the authority of RCW 36.58A. Collection districts do not directly raise revenues, however. They can impose mandatory collection service at minimum levels for all unincorporated areas, which provides the structure for a service-area wide fee to be included in collection rates.

13. **Franchise Fees/Gross Receipt Taxes**: Some cities charge franchise fees or taxes on gross receipts upon solid waste collection companies for the privilege of entering into a contract with or doing business within a city. These fees sometimes fund solid waste-related activities. The WUTC assesses a regulatory fee on gross solid waste collection revenues of regulated solid waste collection companies.

**Specialized Fees**

14. **Advance Recovery Fees (Voluntary or Mandatory)**: Advance recovery fees (ARFs) are a front-end financing method whereby some or all costs for end-of-life management of products are paid/collected when the product is sold. ARFs may be voluntary or mandated, visible or invisible. Invisible fees occur when manufacturers include the end-of-life collection, recycling, and disposal costs in the price of the product. This is called cost internalization, and examples include programs operated by the Rechargeable Battery Recycling Corporation (RBRC), Thermostat Recycling Corporation, Office Depot and Hewlett Packard.

    ARFs can be used to pay for manufacturer-funded programs or can be used to pay for the costs incurred by other parties such as governments, haulers, or recyclers. Some forms of ARFs provide incentives to manufacturers to increase recyclability and reduce toxicity of their products, thereby reducing program costs for other entities.

15. **Permitting Fees**: Permits are required for legal solid waste management facilities. Fees for permitting activities are imposed and collected by jurisdictional health departments. These monies are used for the health department's operating expenses (RCW 70.95.180; WAC 173-350-700 and 710).

**Other Methods**

16. **Enforcement Infractions/Fines/Penalties**: Fees collected through enforcement actions taken against solid waste facilities are nearly always paid into a jurisdiction's general fund. However, they are not necessarily directed to help pay for the jurisdiction's enforcement or other solid waste management activities.

17. **Sales of Recyclable Materials**: Revenues from selling collected recyclable materials can be used to help pay for solid waste programs. Prices for recyclables fluctuate widely.

18. **Fees/Charges for Recycling**: Public and private recycling entities may charge fees to cover the costs of recovering or recycling a variety of discarded products.

19. **Sales of Recovered Energy**: Some solid waste facilities, such as waste-to-energy facilities and landfills, are able to recover energy from the waste materials. Some landfills create energy by burning landfill gas. Sales of this energy can be used to help pay for solid waste programs.

20. **Government-Collected Funds from Private Sector Activities ("Utility Taxes")**: In some instances, pursuant to RCW 81.77.020, cities contract with private parties to provide various solid waste collection services but retain the billing function. Revenues received above the amount remitted to the contractor

can be directed to other solid-waste-related programs and activities by the applicable municipality.

21. **General Fund Revenue Sources**: Governments may use general fund revenues to pay for solid waste activities, and some do rely to some extent on such funding.

22. **Bond Financing**: RCW 36.67.010 authorizes counties to sell bonds to pay for major solid waste projects. Bonding is used for capital projects (landfills, transfer stations, etc.) or large landfill remediation efforts. It is not used for regular operating expenses. Bonds can be general obligation (GO) or revenue bonds. Typically, the debt service for a bond is paid with disposal fees.

23. **Public Works Assistance Account**: A statewide solid waste collection tax has been in place since 1989. Chapter 82.18 RCW imposes a 3.6% "solid waste collection tax" on all persons using such service. Revenues collected via this tax go into the Public Works Assistance Account, which is used to provide loans and financial guarantees to local governments for public works projects, including solid waste and recycling infrastructure. This tax replaced an earlier "refuse collection tax," and that name continues to be applied to the new tax. These funds are to be used to make loans or give financial guarantees to local governments for public works projects.

# GLOSSARY

The following definitions are provided for various terms used in the *Snohomish County Solid Waste Management Plan*. Items marked with an asterisk (*****) are those whose definitions were modified in 2011 by Amended Ordinance No. 11-002 that amended Chapters 7.35 and 7.41 of the Snohomish County Code.

ACRC: Ag Container Recycling Council, a non-profit organization that collects and recycles plastic agricultural crop protection product (pesticide) containers.

Anaerobic digester: a facility that processes livestock manure, biosolids, and/or other organics, using microorganisms in a decomposition process within a closed, oxygen-free vessel to produce methane and residual solids.

ARTS: Airport Road Recycling and Transfer Station, one of the transfer stations owned and operated by Snohomish County (see also "CWRTS," "NCRTS" and "SWRTS").

Biodiesel: a type of diesel fuel derived from vegetable oils or animal fats rather than petroleum, used in vehicles and other compression-ignition engines.

Biomedical waste: infectious and potentially injurious waste originating from a medical, veterinary, or intermediate care facility, or from home use.

Biosafety level 4 disease waste: includes wastes contaminated with blood, excretions, exudates, or secretions from humans or animals who are isolated to protect others from highly communicable infectious diseases that are identified as viruses assigned to Biosafety Level 4 by the Centers for Disease Control.

Biosolids: includes sludge from the treatment of sewage at a wastewater treatment plant and semisolid waste pumped from a septic system that has been treated to meet standards for beneficial use.

BSE: Bovine Spongiform Encephalopathy, more commonly known as mad cow disease. BSE belongs to a family of incurable and fatal diseases characterized by dementia and caused by prions, a type of mutated protein. It is believed that humans can contract a similar disease by eating infected beef.

Buy-back recycling center: a facility that pays for recyclable materials.

BW IWP: Beyond Waste Implementation Working Group.

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act.

CESQG: see conditionally exempt small quantity generators.

CFC: chlorofluorocarbon, a chemical used in refrigerators and similar appliances.

*Commercial: a category of solid waste brought to a Snohomish County solid waste disposal system facility for disposal by a company, corporation, business, firm, association, sole proprietorship, partnership, municipality, political subdivision, or government entity.

Commingled: recyclable materials that have been collected separately from garbage by the generator, but the recyclable materials have been mixed together in the same container (see also single stream and source-separated).

*Composting: the controlled microbial degradation of organic waste, yielding a nuisance-free soil amendment product.

Conditionally exempt small quantity generators (CESQGs): a dangerous waste generator whose dangerous wastes are not subject to regulation under chapter 70.105 RCW, Hazardous waste management, solely because the waste is generated or accumulated in quantities below the threshold for regulation and meets the conditions prescribed in WAC 173-303-070 (8)(b).

*Construction, demolition and land-clearing waste (CDL waste): any recyclable or non-recyclable waste that results from construction, remodeling, repair or demolition of buildings, roads, or other structures, or from land-clearing for development, and that is removed from the site of construction, demolition or land clearing.

Corrugated cardboard (OCC): recyclable kraft liner cartons with corrugated inner liners, as typically used to ship materials. This generally does not include waxed cardboard or paperboard (cereal boxes, microwave and similar food boxes, etc.), but kraft grocery bags are included.

CPG: Coordinated Prevention Grants, a grant program administered by the Washington State Department of Ecology.

CPI: Consumer Price Index.

Curbside recycling: the act of collecting recyclable materials directly from residential generators, usually after the recyclable materials have been placed at the curb (or at the side of the street if no curb exists in the area) by the residents.

CWRTS: Cathcart Way Recycling and Transfer Station, the fourth transfer station in Snohomish County, is opened to accept waste only when one of the other stations is temporarily closed for maintenance or repair.

*Disposal site: an approved site or sites where any final treatment, utilization, processing or deposition of solid waste is permitted and occurs. This includes, but is not limited to, transfer stations and intermodal facilities (included as part of the disposal system of the county), sanitary landfills, incinerators, composting plants, and the location of a facility for the recovery of energy resources from solid wastes or the conversion of the energy in such wastes to more useful forms or combinations thereof.

Ecology: the Washington State Department of Ecology (also "WDOE").

EfW: energy from waste; typically, steam or electricity derived from burning waste.

EPA: the United States Environmental Protection Agency; the federal agency responsible for promulgation and enforcement of federal environmental regulations.

EPR: extended producer responsibility (see also "product stewardship").

E-Waste: electronics, including TVs, computers and monitors.

Ferrous metals: materials that are predominantly (over 75% by weight) made of iron. Includes cans and various iron and steel alloys that contain enough iron such that they adhere to magnets. For recycling purposes, this generally does not include paint cans or other containers that may contain hazardous residues.

GHG: greenhouse gases, including carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Green building: methods for designing and constructing buildings so as to reduce energy and water consumption, to reduce materials consumed in the construction process, and to provide other environmental benefits.

Groundwater: water present in subsurface geological deposits (aquifers).

HDPE: high-density polyethylene, a type of plastic commonly used in milk, detergent, and bleach bottles and other containers. Also used for membrane products used to line or cap landfills.

Hog fuel: wood waste that is reduced in size to facilitate burning.

Household hazardous waste (HHW): wastes that would be classified as hazardous due to their nature or characteristics, except that the amount is too small to be regulated. Includes solvents, some paints, cleaners, pesticides, herbicides, oil, car batteries and other materials.

IMEX: Industrial Materials Exchange, an on-line and catalog service designed to help businesses find markets for industrial by-products, surplus materials and waste.

Incentive rates: a rate structure for certificate (franchise) areas that incorporates the cost of recycling into the cost of garbage collection, such that customers who recycle can then be charged a lower monthly fee as an incentive.

Incineration: the controlled combustion of solid waste that yields satisfactory nonputrescible residues and air effluents.

*Industrial waste: waste by-products of manufacturing and/or processing operations. (Does not include hazardous wastes generated by these industries).

*Inert wastes: material meeting the criteria for inert waste in WAC 173-350-990, (including glass, concrete, rocks, gravel, and bricks).

*Intermodal container: any fully enclosed or open-top container designed and destined for rail shipment that is closed and sealed with a security identification tag and is not opened during transit or at the intermodal facility.

*Intermodal facility: any facility at which intermodal containers of waste are transferred from trucks for rail shipment and at which the containers are not opened for further treatment, processing or consolidation of the waste prior to final disposal. Any intermodal facility currently in use by Snohomish County or hereafter created or contracted by it, is part of the Snohomish County solid waste disposal system.

IWG: Implementation Work Group.

Leachate: water or other liquid within a solid waste handling unit that has been contaminated by dissolved or suspended materials due to contact with solid waste or gases.

LEED: Leadership in Energy and Environmental Design, a standard applied to green building projects.

Mixed paper: all other types of recyclable paper not included in newspaper, cardboard or high-grade papers. Includes materials such as “junk mail,” magazines, books, paperboard (non-corrugated cardboard), and colored printing and writing papers.

*Moderate risk waste (MRW): a) hazardous waste that is generated in smaller quantities than those regulated by the department of Ecology under the Dangerous Waste Regulations (Chapter 173-303 WAC); less than 2.2 pounds (1 kg) of extremely hazardous waste per month, and less than 220 pounds (100 kg) of dangerous waste per month; and/or b) any household-generated hazardous waste, such as oil-based paints, solvents, thinners, pesticides, corrosives, cleaners, auto maintenance products and cosmetics.

MRW: see moderate risk waste, above.

MSDS: Materials Safety Data Sheets.

MSW: municipal solid waste (see also “solid waste”).

Mulching: 1) leaving grass clippings on the lawn when mowing; 2) placing yard debris, compost, wood chips or other materials on the ground in gardens or around trees and shrubs to discourage weeds and retain moisture.

NCRTS: North County Recycling and Transfer Station, one of the transfer stations in Snohomish County (see also “ARTS,” CWRTS and “SWRTS”).

Non-ferrous metals: materials predominantly made of copper, lead, brass, tin, aluminum, and other metals except iron.

NRDC: Neighborhood Recycling & Disposal Centers. These serve a similar function as transfer stations, but are smaller and serve mainly self-haul customers in rural areas.

NWPSC: Northwest Product Stewardship Council.

PBTs: persistent, bioaccumulative toxins are chemicals that pose a unique threat to human health and the environment in Washington State. They remain in the environment for long periods of time, are hazardous to the health of humans and wildlife, can build up in the food chain, can be transported long distances and readily move between air, land and water media.

PCS: petroleum contaminated soils.

PET: polyethylene terephthalate, a type of plastic. Commonly used to refer to 2-liter beverage bottles, although other containers are also increasingly being made from this material, including containers for liquid and solid materials such as cooking oil, liquor, peanut butter, and many other food and household products.

Product stewardship: also known as “producer responsibility” or “extended producer responsibility” (EPR), product stewardship is a strategy designed to address the environmental impacts of products through their entire lifecycle, including end-of-life management (prevention, reuse, recycling and disposal).

Public education: a broad effort to present and distribute public information materials.

Public information: the development of educational materials for the public, including brochures, videos, and public service announcements.

Puget Sound Clean Air Agency: the Puget Sound Clean Air Agency is an agency with regulatory and enforcement authority for air pollution issues in King, Kitsap, Pierce and Snohomish Counties.

Rechargeable Battery Recycling Corporation (RCBC): RBRC broadcasts on their website, in retail stores and on mass media to promote the collection and recycling of rechargeable batteries.

RCRA: Resource Conservation and Recovery Act.

RCW: Revised Code of Washington.

RDC: Regional Disposal Company, a subsidiary of Allied Waste Services, a Republic Services company.

*Recycling: the transformation or remanufacturing of recyclable waste materials into usable or marketable materials for use other than landfill disposal, alternative daily (landfill) cover, industrial waste stabilizer or incineration.

*Reclamation: the process conducted at a reclamation site which consists of hand and/or mechanical segregation of source separated recyclable solid waste for sale and reuse. Materials which can be removed through reclamation include but are not limited to paper, metal, glass, plastics, aggregates and wood waste processed for feedstock for new products or as hog fuel and used for energy recovery. Reclamation does not include combustion of solid waste, preparation of a fuel from solid waste (other than hog fuel), use of solid waste as alternative daily cover or use of solid waste as an industrial boiler fuel.

*Reclamation site: a facility compliant with local, state and federal regulation used for the processing or the storage of reclaimed material. Reclamation sites do not include locations or facilities where wastes are initially generated, such as businesses, construction sites or demolition sites.

*Recyclable materials: those solid wastes that are separated from other wastes for anaerobic digestion, composting, recycling or reuse, including but not limited to papers, metals, glass, plastics, aggregates, fabrics, yard debris, food waste, manures, wood waste and other materials that are identified as recyclable material in the Snohomish County comprehensive solid waste management plan, and are recycled. Wood waste processed as hog fuel and used for energy recovery shall be considered a recyclable material for purposes of this chapter.

*Recycling: the transformation or remanufacturing of recyclable waste materials into usable or marketable materials for use other than landfill disposal, alternative daily cover, industrial waste stabilizer or incineration.

Recycling bins: the small household containers used to set out materials for curbside collection.

Reusable items: items that may be reused (or easily repaired), including things such as small electronic goods, household items such as dishes, and furniture.

Self-haul waste: waste that is brought to a landfill or transfer station by the person (residential self-haul) or company (non-residential or commercial self-haul) that created the waste.

SEPA: State Environmental Policy Act.

Septage: a semisolid waste consisting of settled sewage solids combined with varying amounts of water and dissolved materials. This waste is pumped from septic tanks.

Sewage sludge: the concentrated solids derived from the treatment of sewage at a municipal wastewater treatment plant (see also "biosolids").

SHD: Snohomish Health District.

Single stream: refers to the practice of placing all recyclable materials together in one container for curbside collection. This is similar to "commingled" except that glass bottles may or may not be included in a commingled mixture whereas glass bottles are definitely mixed with the other materials in single stream collection programs.

*Small quantity generator (SQG): a business which generates less than 220 pounds of hazardous waste or 2.2 pounds of extremely hazardous waste per month and does not accumulate more than 2,200 pounds of hazardous waste (see also conditionally exempt small quantity generators).

*Solid waste: all putrescible and non-putrescible wastes, whether in solid or in liquid form, except liquid-carried industrial wastes and sewage, and including garbage, rubbish, ashes, industrial wastes, swill, construction, demolition and land-clearing wastes, abandoned vehicles or parts thereof, discarded home and industrial appliances, manure, digested sludge, vegetable or animal solid and semi-solid wastes, dead animals, and other discarded solid and semi-solid materials. Municipal solid waste (MSW), a subset of solid waste, refers to wastes normally collected from residential households, commercial businesses, and containers.

*Solid waste disposal system facility: a facility owned and operated by the solid waste division or a facility operated under contract with the solid waste division which performs activities identified as being part of the solid waste disposal system in the Snohomish County comprehensive solid waste management plan, which includes, but is not limited to, county owned and operated transfer stations and neighborhood recycling and disposal centers (drop boxes) and the county's contracted intermodal facilities.

Solid Waste Advisory Committee (SWAC): a group assisting Snohomish County with the development of this solid waste management plan, composed of representatives from the general public, private industry, and the cities.

*Source-separation: the segregation of recyclable materials from other solid waste for the purpose of recycling, conducted by or for the generator of the materials on the premises at which they were generated. Source separation does not require that different types of recyclable materials be separated from each other.

*Special wastes: those solid wastes which require special handling either due to their posing a potential health hazard, or due to their bulky or abrasive nature which could damage transfer equipment, and which are designated as "special wastes" by the authorized designee.

SWAC: see Solid Waste Advisory Committee.

SWRTS: Southwest Recycling and Transfer Station, one of four large transfer stations in Snohomish County (see also "ARTS," CWRTS and "NCRTS").

*Transfer station: a staffed, fixed, supplemental, collection/transportation/disposal facility, used by collection agents, or other persons or route collection vehicles to deposit solid wastes into the larger transfer vehicle for transport to a disposal site. This does not include a detachable container or solid waste drop box. Any transfer station currently in use by Snohomish County, or hereafter created by it, is part of the Snohomish County solid waste disposal system.

UGA: Urban Growth Area, see the Snohomish County Comprehensive Plan for more details.

WAC: Washington Administrative Code.

WARM: the EPA's Waste Reduction Model.

Waste reduction or waste prevention: reducing the amount or type of solid waste that is generated. Also defined by state rules to include reducing the toxicity of wastes.

WDOE: Washington State Department of Ecology.

*Wood waste: a by-product resulting from the handling and processing of wood including, but not limited to, hog fuel, sawdust, shavings, chips, bark, small pieces of wood, stumps, limbs, or any other material composed largely of wood which has no significant commercial value at the time in question, but shall not include slash developed from logging operations unless disposed of on a different site.

WSDA: Washington State Department of Agriculture.

WTE: waste-to-energy.

WUTC: Washington Utilities and Transportation Commission.

Yard debris: includes leaves, grass clippings, brush and branches.

# MODERATE RISK WASTE PLAN

## SUMMARY

This document is the updated plan for moderate risk waste (MRW) management in Snohomish County.

This *MRW Plan* provides several recommendations for the MRW management system in Snohomish County, including both new activities as well as refinements to existing programs. New activities being recommended include additional product stewardship programs, a possible user fee at the MRW Facility, and a waste generation survey. Recommendations for existing activities include refinements to public education efforts, financing methods, and purchasing practices.

## INTRODUCTION

This *Moderate Risk Waste Plan* (MRW Plan) has been prepared to provide an update of Snohomish County's plans and programs for MRW. This MRW Plan was prepared as part of the update of the *Snohomish County Solid Waste Management Plan*. As part of the solid waste plan, some of the basic requirements for this MRW Plan are fulfilled by parts of the solid waste plan, including information on the general background of the planning area, the identification and approvals by participating jurisdictions, the public participation process, and compliance with the State Environmental Policy Act (SEPA).

### Definition of Moderate Risk Waste

Moderate risk waste (MRW) refers to waste materials that have the characteristics of and pose the same risks as hazardous wastes, but are generated in relatively small quantities by individual households and in small quantities by businesses. In other words, these wastes are flammable, corrosive, toxic, reactive, and/or persistent (RCW 70.105, WAC 173-303-070). Federal law does not currently regulate these wastes as hazardous, but each state can adopt stricter regulations for hazardous waste from households and small quantity generators.

Washington State has chosen to regulate these materials. The Washington State Department of Ecology (Ecology) created a waste classification called MRW that includes household hazardous waste (which is generated by residential sources) and Conditionally Exempt Small Quantity Generator waste (which is generated by businesses, but in quantities below the current threshold for hazardous waste regulations). A State law adopted in 1991 also added used oil to the list of materials to be addressed by MRW programs.

Snohomish County Code (SCC 7.41.050) bans MRW from solid waste disposal systems.

**Household Hazardous Waste (HHW)**: The Hazardous Household Substances List developed by the Department of Ecology is shown in Table 1 (Ecology 2010a). When generated in a residence, these products may become household hazardous wastes when they are discarded, if they are flammable, corrosive, toxic, reactive, or persistent. (NOTE: Table 1 is not all-inclusive as there are other wastes not on the list that may also be HHW.)

**Conditionally Exempt Small Quantity Generator (CESQG) Waste**: Many businesses and institutions produce small quantities of hazardous wastes. The list of these hazardous wastes is the same as for HHW (see Table 1). Conditionally exempt small quantity generators (CESQGs) may produce hazardous waste at rates less than 220 pounds per month or per batch (or 2.2 pounds per month or per batch of acutely or extremely hazardous waste) and accumulate less than 2,200 pounds of hazardous waste on-site (or 2.2 pounds of acutely or extremely hazardous waste). Extremely hazardous wastes include specific pesticides and other poisons that are more toxic or persistent than other hazardous wastes. At amounts above these limits, the businesses become medium or large-quantity generators and must comply with the reporting and other requirements for hazardous waste management and disposal. CESQGs are conditionally exempt from State and Federal regulation, meaning that they are exempt only as long as they generate less waste than the threshold amounts and properly manage and dispose of their wastes.

**Used Oil**: Washington State law (RCW 70.95I) requires that local governments manage used oil in conjunction with their MRW programs and submit annual reports to Ecology.

## Goals and Policies for MRW

**Current Goals and Policies**: Current goals and policies specific to MRW include:

- Goal 2: Ensure efficient services for a growing and changing customer base.
- Policy 2-8: Continue efforts to reduce the generation and toxicity of moderate risk waste, and to ensure that convenient, cost effective and sustainable options for its safe management are available.
- Related policies from technical memorandums in the solid waste plan include:
    - Policy 1-3, Product Stewardship: Continue to be a leader in product stewardship initiatives and legislation.
    - Policy 1-4, Waste Prevention: Continue to offer and develop programs that encourage waste prevention.
    - Policy 2-1, Recycling: Continue to offer and develop programs that encourage recycling.

***Beyond Waste Plan* Goals for MRW**: Ecology is required by law (RCW 70.105 and 70.95) to develop and update the statewide hazardous waste and solid waste plans. In 2004, Ecology simultaneously updated the *1994 State Hazardous Waste Management*

**Table 1**
**Hazardous Household Substances List**

| Substance or Class of Substance | Flammable | Toxic | Corrosive | Reactive |
|---|---|---|---|---|
| ***Group 1: Repair and Remodeling*** | | | | |
| Adhesives, Glues, Cements | X | X | | |
| Roof Coatings, Sealants | | X | | |
| Caulking and Sealants | | X | | |
| Epoxy Resins | X | X | | X |
| Solvent Based Paints | X | X | | |
| Solvents and Thinners | X | X | X | X |
| Paint Removers and Strippers | | X | X | |
| ***Group 2: Cleaning Agents*** | | | | |
| Oven Cleaners | | X | X | |
| Degreasers and Spot Removers | X | X | X | |
| Toilet, Drain and Septic Cleaners | | X | X | |
| Polishes, Waxes and Strippers | X | X | X | |
| Deck, Patio, and Chimney Cleaners | X | X | X | |
| Solvent Cleaning Fluid | X | X | X | X |
| Household Bleach | | | X | |
| ***Group 3: Pesticides*** | | | | |
| Insecticides | X | X | | |
| Fungicides | | X | | |
| Rodenticides | | X | | |
| Molluscides | | X | | |
| Wood Preservatives | | X | | |
| Moss Retardants | | X | X | |
| Herbicides | | X | | |
| Fertilizers | | X | X | X |
| ***Group 4: Auto, Boat, and Equipment Maintenance*** | | | | |
| Batteries | | X | X | X |
| Waxes and Cleaners | X | X | X | |
| Paints, Solvents, and Cleaners | X | X | X | X |
| Additives | X | X | X | X |
| Gasoline | X | X | X | X |
| Flushes | X | X | X | X |
| Auto Repair Materials | X | X | | |
| Motor Oil | | X | | |
| Diesel Oil | X | X | | |
| Antifreeze | | X | | |
| ***Group 5: Hobby and Recreation*** | | | | |
| Paints, Thinners, and Solvents | X | X | X | X |
| Pool/Sauna Chemicals | X | X | X | X |
| Photo Processing Chemicals | X | X | X | X |
| Glues and Cements | X | X | X | |
| Inks and Dyes | X | X | | |
| Glazes | | X | | |
| Chemistry Sets | X | X | X | X |
| Pressurized Bottled Gas | X | X | | X |
| White Gas | X | X | | X |
| Charcoal Lighter Fluid | X | X | | |
| Batteries | | X | X | X |

| Table 1: Hazardous Household Substances List, Continued | | | | |
|---|---|---|---|---|
| **Substance or Class of Substance** | **Flammable** | **Toxic** | **Corrosive** | **Reactive** |
| ***Group 6: Persistent Bioaccumulative Toxins (PBTs)*** | | | | |
| **Mercury** | | | | |
| CFLs and Fluorescent Tubes | | | | |
| Auto Switches | | | | |
| Thermometers | | X (all) | X (all) | |
| Barometers | | | | |
| Thermostats | | | | |
| Button Cell Batteries | | | | |
| **Lead** | | | | |
| Lead-Acid Car Batteries | | | | |
| Fishing Weights | | | | |
| Unused Lead Shot | | X (all) | | |
| Unused Traffic Paint | | | | |
| Unused Art Supplies (for stained glass and lead pottery glaze) | | | | |
| **Polybrominated Diphenyl Ether (PBDEs)** | | | | |
| Televisions | | | | |
| Computers | | X (all) | | |
| Other Electronic Products | | | | |
| **Polycyclic Aromatic Hydrocarbons (PAHs)** | | | | |
| Roofing Sealant | | | | |
| Pavement Sealant | | X (all) | | |
| Used Motor Oil | | | | |
| **Polychlorinated Biphenyl (PCBs)** | | | | |
| Caulking (manufactured prior to 1979) | | X (all) | | |
| Light Ballasts (manufactured prior to 1979) | | | | |
| ***Group 7: Miscellaneous*** | | | | |
| Ammunition | X | X | X | X |
| Asbestos | | X | | |
| Fireworks | X | X | X | X |
| Marine Aerial Flares | X | X | | |
| Pharmaceuticals | | X | | |
| Non-Controlled Substances | | X | | |
| Sharps | | | | |
| Personal Care Products | X | X | X | |

Source: *Guidelines for Developing and Updating Local Hazardous Waste Plans*, prepared by the Washington State Department of Ecology, Appendix F, February 2010.

*Plan* and the *1991 State Solid Waste Management Plan*. The updated plans were published together as the *Beyond Waste Plan* in November 2004. An updated version of the *Beyond Waste Plan*, which shows recommendations and milestones for the next five years, became available at the end of 2009.

The *Beyond Waste Plan's* 30-year vision 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." The *Beyond Waste Plan* recognizes that "waste generation in Washington continues to

increase, and that toxic substances are more prevalent in our everyday lives now than they were just few years ago." It explains why it is important to move beyond waste and concludes "to lower the risks to people and the environment, Washington needs to shift to an approach that will significantly reduce wastes and toxic substances over time."

The *Beyond Waste Plan* adopted five initiatives as starting points for reducing solid and toxic wastes in Washington. One of these initiatives is "reducing small-volume hazardous materials and wastes." This initiative addresses products and substances commonly used in households and in relatively small quantities by businesses. Ecology included this initiative in the *Beyond Waste Plan* for three reasons:

1. The *Beyond Waste Plan* assumes that MRW affects everyone. A major premise of the *Beyond Waste Plan* is that small-volume hazardous materials and wastes are everywhere and that people come into contact with them daily. As a result, chronic and acute exposure to hazardous chemicals in homes and businesses can be a significant health risk, which can be very costly to businesses and society due to health care costs, environmental degradation, insurance and liability.
2. The *Beyond Waste Plan* also assumes that the current management system is not sustainable over the long term. Government funds pay for special collections, fixed facilities, and treatment and disposal programs to keep MRW out of municipal solid waste landfills and away from illegal disposal, but currently only a portion of all MRW is actually captured. Achieving Beyond Waste goals in the future will require a better approach, including safer alternatives, product stewardship, waste reduction, recycling and convenient collection opportunities that do not rely primarily on public systems and finances.
3. Finally, the *Beyond Waste Plan* assumes that great strides are possible, and that many opportunities exist to reduce and eliminate risks associated with MRW. This is based in part on the idea that consumer demand is building for less harmful products, as well as for more reuse and recycling. Several regional and national initiatives are already underway, such as E-Cycle, the Take-it-Back Network and fluorescent lamp recycling, which lend credence to these ideas.

The *Beyond Waste Plan* identifies the following recommendations for the small volume hazardous materials initiative to succeed (Ecology 2009):

1. Eliminate or minimize groups of the most toxic chemicals as part of Ecology's Reducing Toxic Threats program.
2. Reduce threats from mercury.
3. Reduce threats from PBTs (Persistent Bioaccumulative Toxins).
4. Develop a more comprehensive list of covered electronics through a product stewardship infrastructure.
5. Reduce the use of high-risk pesticides, emphasize proper use, and encourage effective alternatives.
6. Reduce and manage all architectural paint wastes.

7. Implement and promote Environmentally Preferable Purchasing at state and local governments and in institutional settings, with Ecology leading by example. Support the Climate Action Team proposals and other initiatives.
8. Ensure MRW and hazardous substances are regulated and managed according to hazards, toxicity and risk.
9. Support full implementation of local hazardous waste plans.
10. Ensure businesses and facilities handling MRW comply with environmental laws and regulations. Encourage as much reuse and recycling of MRW as possible.
11. Educate the public and businesses on prevention, proper use, storage, and disposal of hazardous products and wastes. Encourage safer alternatives to minimize toxic threats, especially to vulnerable populations.
12. Develop and implement a strategy for a more regionally focused MRW program by evaluating the most significant threats and effective approaches, including safer alternatives, to reducing those threats.

The *Beyond Waste Plan* adopted "five-year milestones" for these recommendations.

**Regulations for MRW**

MRW is regulated by local, State and Federal laws that govern proper handling and disposal of these wastes.

**Federal Regulations**: The primary Federal laws relating to hazardous waste are the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Hazardous Materials Transportation Security Act. Other Federal legislation such as the Universal Waste Rule and the Mercury-Containing and Rechargeable Battery Management Act establish rules for specific types of hazardous waste. Asbestos and a few other materials are regulated via the Toxic Substances Control Act.

a. **Resource Conservation and Recovery Act (42 U.S.C. s/s 6901 et seq.)**: The Resource Conservation and Recovery Act (RCRA) establishes responsibility and authority for managing hazardous waste. Subtitle C of the law establishes requirements for generators, transporters, and operators of hazardous waste treatment, storage and disposal facilities. Hazardous wastes must be tracked from the time they are generated until the time they are disposed using a manifest system. Subtitle D of RCRA establishes minimum requirements for construction and operation of solid waste disposal facilities. It seeks to ensure that landfills receiving household hazardous waste and small quantity generator waste meet minimum design and construction standards. Ecology has been delegated the authority to enforce the provisions of RCRA.

b. **Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. s/s 9601 et seq.)**: CERCLA, also known as the Superfund act, provides the Environmental Protection Agency with the authority to clean up disposal sites contaminated with hazardous waste. The legislation enables the agency to identify responsible parties and assess liability for cleaning up individual sites. The Superfund Amendments and Reauthorization Act establishes requirements related to emergency response planning and community notification of chemical releases.

c. **Toxic Substances Control Act**: The Toxic Substances Control Act of 1976 (TSCA) provides EPA with authority to require reporting, record keeping and testing, and establishes restrictions relating to chemical substances and/or mixtures. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, and lead-based paint. Certain substances are generally excluded from TSCA, such as food, drugs, cosmetics and pesticides.

d. **Hazardous Materials Transportation Law (HM-181)**: In 1974, the Hazardous Materials Transportation Act gave the Department of Transportation (DOT) the authority to regulate the movement of substances that pose a threat to human health and safety, property, or the environment. In 1990, the Transportation Uniform Safety Act became law. The goal of this act was to create a uniform system for transporting hazardous materials and to make U.S. regulations on hazardous material packaging and transportation consistent with United Nations standards. This law led to promulgation of the Hazardous Material Regulation 181 (HM-181). This regulation governs the packing, shipping, and labeling of hazardous materials and waste in transportation. This law also has requirements for generator and shipper training.

e. **Enhancing Hazardous Materials Transportation Security (HM-232)**: HM-232, which went into effect March 25, 2003, amended the hazardous materials transportation rules to require that persons who transport, or offer for transportation, certain types of hazardous materials develop and implement a security plan. This rule also requires that employees be provided with security awareness training. This rule applies to Snohomish County's MRW Facility due to the types and quantities of wastes collected and shipped. The intent of the security plan is to prevent theft of flammable or explosive materials that could be used in acts of terrorism.

f. **Occupational Safety & Health Administration (OSHA)**: Various OSHA rules provide for worker safety protection in activities related to hazardous waste management. One of the primary rules is contained in 29 CFR Part 1910. Subpart H (Part 1910.120) of this rule addresses requirements for training and safety for workers in RCRA facilities, and also for workers involved in clean-up and emergency response activities.

**State Regulations**: One of the primary State laws that directly affects MRW is the Hazardous Waste Management Act (RCW 70.105) and the associated rules (Chapter 173-303 WAC and 173-350-360). A few of the more significant State laws are summarized below.

a. **Hazardous Waste Management Act (Chapter 70.105 RCW)**: The Hazardous Waste Management Act requires state and local hazardous waste management plans, rules for hazardous waste generation and handling, criteria for siting hazardous waste management facilities, and local zoning designations that permit hazardous waste management facilities. The Hazardous Waste Management Act also establishes waste management priorities for hazardous wastes. In order of decreasing priority, the management priorities are:

   - waste reduction
   - waste recycling
   - physical, chemical, and biological treatment
   - incineration
   - solidification/stabilization/treatment
   - landfill

   This waste hierarchy is a key element in determining the compliance of this *MRW Plan* with State requirements.

b. **Dangerous Waste Regulations:** Rules implementing the Hazardous Waste Management Act are codified in the Dangerous Waste Regulations (Chapter 173-303 WAC). This regulation defines dangerous waste materials and establishes minimum handling requirements. State rules specifically exclude household hazardous waste and conditionally exempt small quantity generator wastes from the Dangerous Waste Regulations. The Dangerous Waste Regulations have been amended several times over the years, most recently in 2005 and 2009. The 2005 amendments allow mercury-containing equipment to be managed as a universal waste, require recyclers and used oil processors to develop closure plans and meet financial responsibility requirements, and provide several other changes and updates. The 2009 amendments were largely "housekeeping" issues (modifications to paperwork and definitions).

c. **Ban on Disposal of Automobile Batteries:** The Solid Waste Management Act (Chapter 70.95) prohibits the disposal of automobile batteries and requires retail vendors to accept used batteries for recycling.

d. **Ban on Disposal of Mercury Lighting:** Legislation passed in 2010 (SB 5543) prohibits the disposal of mercury lighting.

**Local Regulations**: Local regulations can be more stringent than current Federal and State regulations. Many jurisdictions, including Snohomish County, have adopted local regulations that are more stringent. The following local regulations pertain to MRW.

a. **Snohomish Health District Sanitary Code Chapter 3.1, Solid Waste Handling Regulations:** The Snohomish Health District (Health District) Sanitary Code section pertaining to MRW handling (Chapter 3.1 XXI) prohibits HHW or CESQG waste from

being placed into the solid waste collection system. This regulation allows for the disposal of MRW at permitted facilities and product take-back centers.

b. **Snohomish Health District Sanitary Code Chapter 3.2:**
The Health District has also fully incorporated Washington's Solid Waste Handling Standards (Chapter 173-350 WAC) into their Sanitary Code, as Chapter 3.2. WAC 173-350-360 provides handling and management standards related to MRW facilities.

c. **Snohomish County Code 7.41.050:** The Snohomish County Code (SCC) includes definitions and restrictions regarding Hazardous Waste, Moderate Risk Wastes and Household Hazardous Wastes. SCC 7.41.050, Types of Wastes that are Unacceptable, also prohibits the disposal of pharmaceutical wastes including expired, unused or contaminated drugs and vaccines at any solid waste disposal site.

d. **Snohomish County Public Works Solid Waste Division Waste Acceptance Policy:** The Waste Acceptance Policy does not allow for the disposal as garbage of the following: household hazardous waste, business-generated hazardous waste, computer monitors, televisions, computers, cell phones, separated circuit boards and other cathode ray tube devices, pressurized canisters and tanks, appliances that use CFCs, asbestos, automotive motor oil, antifreeze, oil filters, mercury lighting and other mercury-containing devices, and other dangerous materials.

## EXISTING PROGRAM ELEMENTS

### Evaluation of Current MRW and Oil Programs

**1. HHW Collection Program**: Snohomish County operates a facility to collect and properly dispose of household hazardous wastes. The MRW Facility is located in Everett. The County also offers limited community roundup events in local communities for the collection of household hazardous waste. Households may bring accepted items free of charge to the MRW Facility or to the roundup events. Many additional locations for the collection and proper disposal/recycling of select materials are also provided by retailers, manufacturers and other businesses throughout the County. The primary collection methods are described further below:

a. **MRW Collection Facility**: The MRW Facility accepts a wide variety of hazardous waste, and a complete list of the currently-acceptable items is shown on Snohomish County's website. As of June 28, 2009, the MRW Facility no longer accepts latex paint due to the expense of handling this non-hazardous material. In 2010, the MRW Facility served 10,048 residential customers and collected 918,599 pounds (459.3 tons) of materials (including some non-hazardous materials but not including oil, oil filters and antifreeze). The MRW Facility also accepts waste from small businesses, but for a fee and only by appointment (see later section for more details). Table 2 provides more details about the wastes collected.

b. **Hazardous Waste Roundup Events**: Households may bring hazardous waste items to scheduled roundup events for free. No business waste is accepted at the roundups. In 2010, roundups were held in Darrington and Sultan. These events served a total of 308 residential customers in 2009, ranging from 45 in Darrington to

**Table 2**
**MRW Quantities Collected by Snohomish County in 2010 (pounds)**

| Waste Type | HHW | SQG | Roundups | Totals | Disposal Method |
|---|---|---|---|---|---|
| Batteries; | | | | | |
| Household | 31,555 | 2,679 | 264 | 34,498 | SW disposal |
| Automotive | 231,307 | 73 | 3,207 | 234,587 | Recycled |
| Ni-Cd | 7,093 | 469 | | 7,562 | Recycled |
| Flammable Liquids | 103,423 | 29,904 | 889 | 134,216 | Energy recovery |
| Fluorescent Tubes and CFLs | 82,302 | 19,129 | 157 | 101,588 | Recycled |
| Paint; | | | | | |
| Latex[1] | 35,881 | 13,527 | 573 | 49,981 | Recycled or disposed |
| Oil Based | 176,004 | 22,335 | 1,819 | 200,158 | Energy recovery |
| Other Hazardous Wastes | 48,659 | 13,927 | 632 | 63,218 | Varies |
| Waste Oil and Related Materials; | | | | | |
| Used Oil | 677,729 | | | 677,729 | Energy recovery |
| Used Oil Filters | 43,458 | | | 43,458 | Recycled |
| Antifreeze | 81,360 | | | 81,360 | Recycled |
| **Total Hazardous Wastes** | **716,224 (1,518,771 with oil and antifreeze)** | **102,043** | **7,541** | **1,628,355 pounds, or 814 tons** | |
| **Non-Hazardous Materials:** | | | | | |
| Non-Regulated Liquids | 6,274 | 1,325 | | 7,599 | Haz. waste disposal |
| Non-Regulated Solids | 1,475 | 0 | | 1,475 | Haz. waste disposal |
| Used Cooking Oil (Biodiesel) | 29,981 | | | 29,981 | Energy recovery |
| Propane Tanks | 75,802 | | 1,260 | 77,062 | Recycled |
| Other Materials Recycled, Reused | 88,843 | 302 | | 89,145 | Recycled |
| **Total Non-Hazardous** | **202,375** | **1,627** | **1,260** | **205,262** | |
| **Grand Totals, All Materials** | **1,721,146 (with oil and antifreeze)** | **103,670 pounds** | **8,801 pounds** | **1,833,617 pounds, or 916.8 tons** | |

Notes: 1. The MRW Facility and roundups no longer accept latex paint because it is not hazardous, but small amounts are still accepted because the paint is contaminated or for other reasons.
The above data is from the annual reports to Ecology prepared by Snohomish County.

177 in Sultan. The total amount of waste collected at these events in 2010 was 8,801 pounds (see also Table 2 for more details on the types of wastes collected).

c. **Snohomish County Transfer Stations**: Limited quantities of certain hazardous wastes are accepted for recycling from households, free of charge, at Snohomish County transfer stations. These items currently include antifreeze, batteries, fluorescent tubes and compact fluorescent bulbs, motor oil, oil filters, and propane tanks.

d. **E-Cycle Washington**: Free electronics collection has been established for collection of computers, laptops, televisions, and monitors at over 20 business and charity locations within Snohomish County through the E-Cycle WA program. In 2010, this program collected 3,203 tons of electronics from Snohomish County residents, small businesses, schools and small governments. This amounts to 9.0 pounds per person, one of the highest per capita rates in the nation.

e. **Take-Back Services**: Many retailers, manufacturers and other businesses offer take-back services for products they sell or handle. The Division works to encourage expansion and use of these services. Take-back programs are a product stewardship approach that uses existing customer/retailer/producer relationships to help the environment and provide more convenient options for customers than what can be provided by local governments (and taxpayers). For instance, the Rechargeable Battery Recycling Corporation runs a program for the collection of rechargeable batteries and cell phones with over 55 locations in Snohomish County. Items such as automotive products, mercury thermostats, mercury switches, batteries, tires, cell phones, and electronics are just a few of the items collected in take-back services. More details can be found at the County's Take-It-Back website.

f. **Pharmaceuticals**: Residents can take prescription drugs, including narcotic painkillers and prescribed "controlled substances," to a law enforcement location. As of mid-2011, there were 28 of these locations in Snohomish County. In addition, prescription drugs, except narcotic painkillers and prescribed controlled substances, can be taken to some pharmacy-based drop-off locations. As of mid-2011, there were 14 pharmacy-based sites in Snohomish County. Current collection locations for pharmaceuticals can be found on the County's website for the Take It Back network.

**2. Public Education**: The County conducts several activities to educate residents about proper handling and disposal of HHW. These include production and distribution of a series of brochures that address household hazardous wastes in general, and also waste prevention, batteries, electronics, oil, and pharmaceuticals. The County has also worked with local haulers to help provide clear MRW management instructions to customers through signage, distributed curbside instructions, and websites.

**3. Small Business Technical Assistance**: Many of the activities conducted by Snohomish County to educate residents about HHW also serve to educate businesses about CESQG wastes. There are also specific activities that target businesses, such as

a brochure called “Fluorescent Bulb Disposal,” and links to other sources of information on Snohomish County’s website.

If a business accumulates more than the eligible CESQG amounts, the business may become a fully-regulated generator of hazardous waste. Snohomish County Solid Waste staff can provide other hazardous waste management and disposal options, including a list of vendors who will pick up hazardous wastes from the business.

**4. Small Business Collections**: State and Federal law requires businesses to properly manage and dispose of chemical waste. Business hazardous wastes include items such as dyes, paints, inks, thinners, sludges, solvents, pesticides, chemicals, acids, and caustics. If a business accumulates small amounts, or needs one-time disposal of these items, they can contact the MRW Facility. The MRW Facility is open to businesses by appointment only. A fee is charged for the service. Businesses must have their Material Safety Data Sheets (MSDS) and be ready to identify the class of hazardous wastes they are disposing. Businesses may qualify:

- if the business generates less than 220 pounds of hazardous waste per month or accumulates less than 2,200 pounds of hazardous waste at one time.
- if the business generates less than 2.2 pounds of acutely or extremely hazardous waste per month, or accumulates less than that amount at any one time.

In 2010, the MRW Facility served 522 CESQGs and collected a total of 103,670 pounds (51.8 tons) from these generators (not including oil, oil filters and antifreeze). See Table 2 for details on the types of wastes collected.

**5. Enforcement**: The Snohomish Health District is the lead agency for the enforcement of solid waste and MRW management issues in Snohomish County. They enforce MRW regulations via complaint investigations and via permitting of MRW facilities. Many of these complaints involve illegal dumping or improper storage and disposal of wastes, such as batteries, used oil, gasoline, paint and paint-related chemicals.

While the Health District serves as the lead enforcement agency, they also work cooperatively with the Division to provide various education and outreach programs dealing with MRW management. Additionally, the Health District provides public education to homeowners and CESQGs. Homeowner education is delivered as part of their complaint investigation process and via school-based presentations, neighborhood association meetings, and local fairs and events (i.e. Naval Station Everett Earth Day Fair, Boeing Employees Health & Safety Fair, etc.) CESQG technical assistance is also conducted as part of their complaint investigation process. In addition, a business-oriented Local Source Control program focuses on solid and hazardous waste management, pollution prevention, and storm water issues.

To accomplish specific regulatory and public outreach objectives, the Health District created a grant-funded program. Accomplishments include adoption of countywide MRW regulations; educational outreach intended to reduce the amount of MRW generated; and outreach geared toward proper handling and disposal of MRW. For example, the Health District has a program that permits and inspects MRW collection facilities to ensure that there is no threat to public health or the environment. Permitted MRW facilities, as of mid-2012, include the Port of Edmonds, Pristine Environmental Services (processors of dental amalgam), and the Snohomish County MRW Facility.

In the case of illicit disposal, Ecology may manage spills or releases through WAC 173-303-050, -145, and/or -960.

**6. Used Oil and Automotive Fluids Collection and Education**: Automotive fluids and batteries cannot be disposed as garbage and must be handled properly. These materials must be taken to a proper handler, such as the County's MRW Facility or a reputable business. Many private businesses such as auto parts stores or service stations provide recycling services for car batteries, used motor oil, oil filters, and antifreeze. Battery retailers will take car batteries and some tire retailers will accept tires back from customers and the public.

**7. Other Program Elements**: Other important aspects of the MRW program include various activities and issues:

**a. Toxicity Reduction and Waste Prevention**: Reducing or eliminating toxicity in products or the use and disposal of toxic products is not only important to protect human health and the environment, but it can save manufacturers, customers, rate payers and the County significant costs for managing hazardous materials. For instance, reformulation of latex paint products to eliminate toxic materials allowed the County to discontinue collection of latex paint in 2009 as a hazardous waste, thus reducing vendor costs by over $200,000 per year. While there are other reasons to collect and recycle latex paint, toxicity is no longer one of them. When able, the County participates in state and nationally convened processes to address toxicity reduction. The County distributes brochures encouraging residents and businesses to avoid the use of toxic products or, if possible, to use up such products (to avoid unnecessary disposal of the unused portion). The County has also provided information to school science labs related to reducing the toxicity of chemicals.

**b. Financing the MRW Program**: The cost of operating the MRW Facility is covered by Coordinated Prevention Grant (CPG) funds from Ecology, with a minimum of 25% matching funds provided by Snohomish County. Fees charged to CESQGs defray a small portion of the cost of disposing of their waste. Product stewardship programs provide funds for handling some MRW at other locations and offset some costs that would otherwise be incurred by the Division.

c. **Governance Structure**: The Snohomish County Solid Waste Division is the lead agency for collection and education programs for MRW, and operates a facility to collect and properly dispose of MRW. The Snohomish Health District (SHD) is the lead agency for the enforcement and compliance activities for solid waste and MRW management issues in Snohomish County, and also conducts some education for MRW.

d. **Agricultural Waste Collection**: The Washington State Department of Agriculture (WSDA) conducts agricultural chemical waste collections annually, but none have been held in Snohomish County recently. Locations for events are determined by the number of requests. The closest event in the two past years (2010 and 2011) has been in Seattle. Other events in 2011 were held in Prosser, Spokane and Walla Walla. Participants must sign up in advance to bring wastes to these collection events, but there is no cost to participate.

e. **Mercury Auto Switch Collection**: The Department of Ecology has taken the lead in working with local auto wrecking yards to establish mercury switch collection and to provide a "bounty" for each collected switch. The County has coordinated with Ecology in this effort.

**Evaluation of the Current Program Effectiveness**

One possible method to assess the effectiveness of current programs for MRW is to look at the results of those programs in terms of the quantity of various materials that are being improperly disposed in the garbage. Table 3 shows the amount of MRW that is being disposed with solid wastes (Snohomish County 2009). The figures do not include MRW that is being stored, illegally dumped, burned, or handled through means other than disposal with solid waste. As such, this method is not accurate for all MRW materials for determining the actual recovery rate (although it may be fairly close for materials that cannot be easily poured out or burned, such as car batteries and oil filters), but this approach does indicate the amount of diversion from solid waste disposal. Table 3 also shows the quantities of specific types of MRW recovered through the County's MRW Facility and the roundup events (in 2009) and from other sources (based on Ecology's annual recycling survey for 2009).

The data in Table 3 can also be examined to determine the proportion of waste that is collected by County programs (primarily the MRW Facility) versus private and other efforts. For the materials listed in Table 3 (which are not all of the materials collected by either the MRW Facility or by other collection programs), a total of 1,220.4 tons of MRW was collected by Snohomish County versus 11,266.6 tons collected by others. In other words, the MRW Facility collected 9.8% of the diverted materials listed in Table 3.

Another method to evaluate the effectiveness of MRW collection programs is to look at per capita disposal rates (see the bottom row of Table 3). Calculating the per capita rates allows easy comparison of Snohomish County data to other areas.

**Table 3**
**Landfill Diversion Rates for MRW (2009)**

| Material | Disposed with Solid Waste, TPY[1] | | | Recycled or Treated, TPY | | Landfill Diversion Rate[4] |
|---|---|---|---|---|---|---|
| | Residential | Non-Residential | Total | County[2] | Other[3] | |
| Motor Oil | 0 | 18.6 | 18.6 | 366.8 | 7,991.6 | 99.8% |
| Oil Filters | 18.4 | 18.4 | 36.8 | 22.1 | 331.05 | 90.6% |
| Antifreeze | 0 | 0 | 0 | 46.1 | 487.6 | 100.0% |
| Car Batteries | 0 | 0 | 0 | 166.9 | 2,383.6 | 100.0% |
| Household Batteries[5] | 380.6 | 71.0 | 451.6 | 14.0 | 72.8 | 16.1% |
| Pesticides, Herbicides | 172.5 | 0 | 172.5 | 13.3 | NA | 7.1% |
| Latex Paint[5] | 97.9 | 113.7 | 211.6 | 239.2[6] | NA | 53.1% |
| Oil-Based Paint | 28.1 | 15.7 | 43.8 | 189.6 | NA | 81.2% |
| Other Hazardous Wastes | 79.7 | 119.6 | 199.3 | 162.5 | NA | 44.9% |
| **Totals** | **777.2** | **357.0** | **1,134.2** | **1,220.4** | **11,266.6** | **91.7%** |
| Pounds Per Capita[7] | 2.19 pounds per person | 2.95 pounds per employee | 3.19 pounds per person | 3.43 pounds per person | 31.69 pounds per person | |

Notes: TPY = tons per year.

1. Figures are from the 2009 Snohomish County Waste Composition Study (Snohomish County 2009).
2. See Table 2 for more information about County MRW tonnages.
3. "Other" tonnages are from Ecology's annual survey for 2009 (not all of the same categories are tracked by Ecology's survey).
4. Landfill Diversion Rate = (Tons Recycled or Treated) divided by (Tons Disposed with Solid Waste + Tons Recycled or Treated). These figures do not include alternative disposal practices (such as unreported burning and illegal dumping).
5. Household batteries and latex paint are not classified as hazardous wastes.
6. The MRW Facility stopped accepting latex paint on June 28, 2009, so this figure and the landfill diversion rate would be higher if they had continued to collect it.
7. Pounds per capita figures are based on a projected 2010 population of 711,100 people (OFM 2010). The disposal rate for non-residential wastes is based on 241,807 employees (ESD 2010).

NA = not available.

Other methods for assessing the effectiveness of the current MRW collection programs could include methods designed to improve the generation estimate (thus allowing a more precise calculation of the recovery rate) and also surveys designed to gather more precise information about the amounts handled through alternative (improper) disposal options. The first of these methods, to provide a better waste generation estimate, would require a substantial amount of data collection to determine the amounts of each product sold, and then a series of assumptions or additional data-gathering (such as surveys) to determine the amount of each type of product that would become waste. This approach should be done on a statewide level by the state or a product stewardship program, as it would be expensive and difficult to conduct on a county level (especially in regards to getting sales data on a local level for specific products).

The other option for assessing the amount of alternative disposal practices, surveying residents and businesses, would be a more direct method for collecting this information and could also potentially provide additional useful information about the reasons for this behavior. This type of survey has been successfully done in other areas, such as a recent survey conducted in Kitsap County.

### Inventory of Generators and Facilities

RCW 70.105.220(1)(a) requires MRW plans to contain an assessment of the quantities, types, generators and fate of MRW in each jurisdiction. Not all of the necessary data to conduct a complete assessment is currently available, but the data that is available on the number of potential generators is summarized in Table 4. At first glance, the data in Table 4 may appear to indicate that only a low number of MRW generators (3.6% of the residential households and 3.0% of the potential non-residential generators) bring their wastes to the MRW Facility or to the roundups. That conclusion would actually be incorrect, however, due to several factors:

- Not every household and business is an MRW generator, or at least not in every year. For residential sources especially, products may be stored for several years before the resident does a “clean-up” or determines that the material is no longer useful and is thus an MRW.
- An unknown number of households and businesses use other product stewardship, take-back or drop-off sites for the more common wastes (electronics, oil, batteries, antifreeze, mercury lighting and devices, and other automotive wastes).
- An unknown number of CESQGs and large-quantity generators use the services of private collection companies for their hazardous wastes instead of the MRW Facility.

### Hazardous Waste Inventory

Ecology’s guidelines for MRW plans require that the following pieces of information be addressed (Ecology 2010a). The following information helps provide a full inventory of hazardous waste management in a community, by addressing dangerous waste generators (i.e., large-quantity generators), contaminated sites, transporters and processing facilities, and locations where hazardous waste facilities are allowed to be

**Table 4**
**Characteristics of MRW Generators**

| | Residential Generators | Businesses and Institutions | Comments |
|---|---|---|---|
| Number of Households or Businesses | 283,495[1] | 17,250[2] | Not all residents and businesses are generators of MRW. |
| Number of Customers using the MRW Facility and Roundups in 2009 | 10,270 | 522 | These figures are not adjusted for multiple trips to the MRW Facility or Roundups by the same customer. |
| Number of Participants for Other Programs | Unknown | Unknown | An unknown number of people are recycling electronics, oil, batteries, mercury lighting, and other MRW materials through various other product stewardship, take-back and drop-off programs, and an unknown number of businesses are disposing of wastes through that and private collection services. |

Notes:
1. The number of households (2010) includes one-unit dwellings (189,193), two+ units (74,766) and mobile homes/special units (19,536) (source: Washington State Office of Financial Management).
2. The number of businesses is a 2010 average figure from the Washington State Employment Security Department's web page (http://www.workforceexplorer.com/cgi/dataanalysis/?PAGEID=94).

sited ("zone designations"). For most of the following items, however, the actual information is both lengthy and subject to change. Rather than attempt to show all of the information here, the following provides a summary and also sources for updated information.

**Dangerous Waste Generators**: Ecology's records (Ecology 2010b) show that the following numbers of businesses and institutions in Snohomish County are registered as hazardous waste generators as of June 2011:

- 39 large-quantity generators
- 50 medium-quantity generators
- 148 small-quantity generators[1]
- 85 non-generating sites and transporters with active EPA or state identification numbers, but who did not generate waste in the most recent year.

[1] This figure includes only those small-quantity generators that have chosen to get an EPA identification number (which is not required for SQGs), and the actual number of SQGs (or CESQGs) is much higher than this figure.

**Remedial Action Sites**: Ecology's list of confirmed and suspected contaminated sites in Snohomish County can be found at https://fortress.wa.gov/ecy/tcpwebreporting/Default.aspx. The sites are listed in five categories (figures shown are current as of August 15, 2011):

1. **Brownfield Sites** – 6 sites. Brownfield sites are abandoned or under-utilized properties where potential liability due to environmental contamination and clean-up costs complicate redevelopment.

2. **Environmental Covenants Register** – 17 sites. This registry is a list of sites that have residual contamination after the clean-up has been completed. These sites have environmental covenants or deed restrictions limiting the types of uses on the property.

3. **Leaking Underground Storage Tanks** – 398 records. This report contains information on Underground Storage Tank facilities that require clean-up and their clean-up history.

4. **State Cleanup Sites**:

a) Cleanup Site Details – 942 records.

b) Confirmed and Contaminated Sites Report – 445 records. This report contains information about sites that are undergoing clean-up and sites that are awaiting further investigation and/or clean-up.

c) No Further Action Sites – 385 records. This data set contains information about sites previously on the Confirmed and Suspected Contaminated Site list (above) that have received a No Further Action decision. These sites may have deed restrictions or environmental covenants.

5. **Regulated Underground Storage Tanks** – 3,797 records. Washington State regulates active storage tanks on different properties, including gas stations, industries, commercial properties, and governmental entities.

**Hazardous Waste Services (Transporters and Facilities)**: A large number of private companies provide transportation and disposal services for a wide range of materials. According to recent data from Ecology, there are 293 companies registered in Washington as hazardous waste transporters (Ecology 2010b).

**Zone Designations**: As part of the development of the original MRW plans, local jurisdictions were required by State law (RCW 70.105.225) to designate zones within their borders where hazardous waste facilities would be permitted to operate and to notify Ecology of those designations. In Snohomish County, that was done as part of the 1993 plan and those designations are presumed to be in effect still. Cities that have been incorporated since that time, however, may not be in compliance with this requirement.

## PLANNING ISSUES

The existing service gaps and other issues connected to the specific components that are required to be addressed by local moderate risk waste management programs are addressed below.

### HHW Collection Program

Most of the MRW collected in Snohomish County is handled through product stewardship, take-back, or other business-provided services. The materials with the highest rates of diversion from solid waste disposal are those materials for which there are many widespread collection opportunities. Developing similar programs for a wider range of MRW would help increase the diversion of these wastes from disposal.

### Public Education

Current and ongoing efforts to inform the public about opportunities for proper disposal of certain wastes appear to be adequate based on the diversion rates and quantity of materials being collected. Education regarding pesticides and other household hazardous wastes with relatively low diversion rates may not be adequate, especially considering that these materials are banned from disposal yet significant quantities continue to be disposed. However, education may not be the key factor in the lower diversion rates and access to convenient services may be more important. More education may also be needed for latex paint disposal options (the MRW Facility stopped accepting latex paint in 2009).

### Small Business Technical Assistance

The County provides informational brochures and assistance (as requested) in finding proper disposal options for businesses, but otherwise is not providing much technical assistance to businesses at this time. The Health District conducts site visits for their Local Source Control program related to Puget Sound pollution prevention, and provides educational outreach to businesses. Additional technical assistance (more in-depth assistance for waste prevention and substitution of less toxic materials and products) could be provided by County or Health District staff in the future, but the level of expertise required to effectively assist specific business sectors would require significant amounts of training for those specific types of businesses. The development of sector-specific educational materials might be better handled at the state level with distribution provided at the state and local level.

### Small Business Collection

Business collection services are currently being provided through the MRW Facility and other opportunities, including private contractors. These programs appear to be working well for many of the materials, but significant improvement could be made for some types of waste (see Table 3). In addition, as with residential generators, regular reminders about disposal requirements and opportunities are helpful for maintaining the

current level of compliance.

**Compliance and Enforcement**

Compliance and enforcement is currently being conducted on a complaint-based system and there are no known problems with this approach.

**Used Oil**

The recovery rates for used oil, antifreeze and automotive batteries are very good (see Table 3) and few service gaps or other issues appear to exist for these wastes.

**Other Issues**

a. **Toxicity Reduction and Waste Prevention**: Significant improvement has been made in recent years in reducing or eliminating toxicity in products or the use and disposal of toxic products, but more could be done in this area. For example, prior to budget cuts in 2003, the County offered businesses participation in the Envirostars program that recognizes them for pollution prevention and waste reduction practices.

b. **Financing**: The County's current MRW collection activities are funded primarily by the CPG grant program administered by Ecology, and in the long term the MRW program may need an alternative funding source if CPG grants become unavailable.

c. **Product Stewardship Programs**: The increased use of product stewardship programs could help provide new funding methods and address other MRW management issues. A product stewardship program for paint, for instance, would eliminate (or at least provide an alternative funding source for) 14% of the materials currently handled by the MRW Facility (see Table 2). According to the Product Stewardship Institute (PSI 2010), a product stewardship program for paint could save Snohomish County $1,400,867 per year in direct cost savings and no-cost expanded services (based on an estimated 2010 population of 711,100 people and a per capita savings of $1.97 per year).

   As more product stewardship programs are developed, the County will need to determine to what extent, if any, they can and will participate in those programs (through the MRW Facility or other means). As a central location being used for other materials, the MRW Facility (and by extension, the mobile collection events) can provide a good opportunity to collect materials for a product stewardship program. Those programs will, however, need to make sense for the County (i.e., not create unreasonable demands on finances or operations).

## ALTERNATIVES

### Alternative A – Public Education for Household Hazardous Waste

Household hazardous waste education programs focus on identifying household products that contain hazardous ingredients, promoting safer alternatives, and explaining how to dispose unwanted products that contain hazardous substances. Rather than solely continue an independent education program for moderate risk waste, Alternative A attempts to also incorporate the message into other programs that also benefit from proper household hazardous waste management. Other programs that have common objectives include programs that deal with storm water, groundwater, municipal wastewater treatment, and on-site sewage systems. By coordinating the message with other resource protection and waste management programs, the message will be repeated and attention will be focused on the multiple benefits of the higher-priority management practices. Increased coordination could also be used to work with the PUD and other agencies that are promoting products such as fluorescent bulbs, so that the message on how to safely dispose of the bulbs gets out to the consumers of these products. Additional audience targeted education and collaboration could also be undertaken, such as addressing lead fishing weights and alternatives with local sports groups.

### Alternative B – Technical Assistance for Conditionally Exempt Small Quantity Generators

Current programs do a good job of informing generators about proper handling and disposal practices for MRW. Some business sectors have been addressed by the Health District's Local Source Control program (auto body shops, auto repair and detailers, dry cleaners, etc.). However, more technical assistance could be provided to assist other CESQG sectors, such as schools, agricultural generators, medical/dental clinics, etc. This assistance would include customized information pertaining to safer alternatives, waste designation, and proper waste handling and disposal methods. . The development of sector-specific business educational materials might be better handled at the state level with distribution provided at the state and local level.

### Alternative C – Financing Methods

The MRW program is currently funded primarily by CPG funds collected by the State and administered by Ecology. The recent economic challenges and State budget crisis have threatened the stability of the CPG program and have underscored the need for alternative funding sources for facilities, programs and material specific collection programs. Snohomish County staff could investigate possible options themselves, collaborate with others, or monitor the progress made by others. Ecology staff and others continue to explore this question for solid waste and recycling activities in general, and may be able to provide ideas on funding options in the next few years.

### Alternative D – Product Stewardship and Take-Back

The E-Cycle program has been very successful at addressing electronic wastes and demonstrates that other materials could potentially be handled by manufacturer-funded programs. Retailer-based programs, such as the oil and vehicle battery take-back programs, have also proven very successful for ensuring proper handling of toxic wastes. These and similar approaches could be used to address additional materials that are being generated in large volumes, such as paint, or that are highly toxic, such as pesticides. Rather than address each material individually, one option would be for the State to adopt framework legislation, while voluntary take-back programs could continue to be encouraged.

**Alternative E – Business Recognition Program**

Ecology guidelines suggest providing recognition as an incentive for businesses to properly manage their wastes. Businesses could be awarded recognition in a variety of categories:

1) Minimizing the quantity of waste generated.
2) Demonstration of best management practices.
3) Sponsorship of hazardous waste inspections of businesses.
4) Promotion of product stewardship efforts.
5) Publicizing management companies and facilities.
6) Publicizing technologies for onsite management.

This alternative could involve reinstating an EnviroStars program (which was discontinued in 2003) or using another approach to provide a recognition program.

**Alternative F – List of Targeted Materials**

The list of materials targeted for collection through Snohomish County facilities and events could be broadened to encompass a greater variety of materials and would then collect a greater amount of hazardous wastes. Some materials are difficult and expensive to handle at County facilities, however, and instead would be best addressed through a statewide program and/or a product stewardship approach. Therefore, this alternative proposes that the list of HHW and CESQG wastes to be collected by Snohomish County should be the same as the list shown in Table 1, but without e-waste, which is being collected through a separate statewide program, and also without the materials shown in Group 7. Group 7 materials should be handled in other ways, such as delivering asbestos directly to the landfill, ammunition being taken by the Sheriff's office, and the bomb squad handling fireworks. Pharmaceuticals also pose a security risk at County facilities and need to be handled through a different program. Consideration should also be given to focusing collection efforts on materials being disposed in larger quantities and/or that are more toxic or more dangerous in other ways.

### Alternative G – Increased Distribution of CESQG Standards

The standards promulgated by the Department of Ecology and enforced by the Health District are already available to CESQGs, but more thorough distribution of these standards could increase compliance and improve handling/disposal practices in general. These standards could be made more readily available to businesses through mailings and/or clearer links to the websites for Snohomish County Solid Waste and the Health District. This information could also be made available to people applying for business licenses at the cities (for those cities that conduct business licensing) or the County (for permitted activities).

### Alternative H – User Fees at the MRW Facility

A nominal fee could be charged, such as $5.00 per visit or a fee per item, for the use of the MRW Facility or mobile collection events. Similar fees are charged in many areas of the state, such as $0.50 for a fluorescent bulb and $20 for a refrigerator at the City of North Bend special recycling events. The CESQGs using the MRW Facility already pay a fee, so this alternative applies only to the residential customers at that facility (and at the mobile collection events).

### Alternative I – Packaging and Shelf Labels

Education at the point of sale can be a powerful tool for informing people as to the proper disposal methods for some products. This could be accomplished by marking packages to indicate those materials that can be brought to the MRW Facility for disposal. Labels on the shelves over the products could also be used instead of, or in addition to, marking packages.

This alternative could be implemented through a cooperative program between the county and store managers, possibly using volunteers to distribute and apply labels for packaging or shelves. Similar projects have been coordinated with Master Recyclers in the past, or other groups could also be helpful. In Thurston County in the late nineties, for instance, “shelf talkers” were placed on shelves near products that were made from recycled products. This “Buy Recycled” program was implemented with the assistance of Master Recyclers.

Labeling the shelves could be a better long-term strategy, since package labels would need to be applied much more frequently. Another consideration is that it would be easier to convince a store manager to participate if the use of a product is encouraged. More challenges exist in trying to discourage the use of a product than if the labels are promoting it, and so rather than discourage the use of more toxic products the shelf labels could be used to highlight products that are less toxic. Shelf labels could also be used for the more toxic products to note that disposal at the MRW Facility would be necessary for any leftover amounts.

### Alternative J – Increased Promotion of MRW Facility

Use of the MRW Facility could be increased by publicizing it more, and by emphasizing the importance of proper disposal of even a small amount of toxic material. Any publicity should target specific audiences or issues. Target audiences should include those types of people that may be generating MRW but that aren't using the facility as much as other groups. Once a target audience is defined (residential and/or commercial, specific gender and age groups, etc.), a variety of methods could be implemented to increase the awareness of the MRW Facility.

The County could also review the possible barriers and benefits for potential users of the MRW Facility. Some barriers could include that they do not find it convenient, they do not know the hours or location, they do not want to spend any money or do not know that it is free (for residential users), they do not want to transport just a small quantity of toxics, they do not know how to transport their waste products, or there are language barriers. The County could get a measure of the magnitude of these barriers by conducting a brief survey of people in the target audience to ask them what prevents them from using the MRW Facility. Once the barriers are assessed, the County could promote an appropriate message via a variety of methods:

- tokens, coupons, or vouchers, distributed by direct mail or utility bill inserts (although already free to residential users, this could be an effective way to get some people's attention).
- posting MRW facility information at local libraries, schools, universities, city halls, county offices, transfer stations, public facilities, and locations serving other ethnic groups.
- more promotion of the MRW facility on the Snohomish County and other websites.
- radio ads.
- press releases.

The preferred strategy will depend in part on the target audience and the nature of the participation barriers.

### Alternative K – Environmentally Preferable Purchasing

The Division could collaborate with Facilities Management, the Purchasing Department, Parks, and other County sustainability efforts to reduce the toxicity, use and disposal of toxic materials by County agencies. This effort could be combined with the recommendation for broadening and upgrading procurement policies (WP2 in the Waste Prevention Technical Memorandum). The recommendation includes encouraging other local governments to do the same. Factors beyond toxicity would be included such as recycled content, energy efficiency and water conservation.

### Alternative L – Conduct Survey to Develop Accurate Generation Rate

The Division could conduct a survey to determine waste disposal practices for key wastes such as oil, fluorescent bulbs, e-waste and other materials, in order to determine with greater accuracy the actual recovery rate for these materials. The goal of such a survey would be to determine factors such as how much oil is being handled through means that are hard to measure. Such a survey could also be used to find out more about barriers to recycling and proper handling of MRW.

## Evaluation of Alternatives

The alternatives are evaluated according to specific criteria below.

**Consistency with Moderate Risk Waste Planning Objectives**: All of the alternatives are consistent with the County's MRW goals and policies.

**Consistency with Other Regional Plans**: Alternative D, product stewardship, ranks high in consistency with regional plans, as several other counties are also interested in developing more product stewardship programs. Alternative I, packaging or shelf labels, may not be consistent with other regional plans. All of the other alternatives are consistent with other regional plans, although many of the alternatives do not directly impact regional plans.

**Cost Effectiveness**: Public education, technical assistance, business recognition programs and surveys (Alternatives A, B, E, J and L) are difficult to measure in terms of cost-effectiveness. Alternative C presumes that a more stable (but also cost-effective) funding method could be found. Alternative D would be very cost-effective for the County and also would be cost-effective in the sense that manufacturers and/or retailers that profit from the production and sale of specific products would bear the cost of disposal for those products. Alternative H would help increase the cost-effectiveness of the current collection system (unless it discouraged participation significantly). Alternative K should be cost-effective if a combined purchasing system was used. Alternatives F, G, and I are largely neutral with respect to cost-effectiveness.

## Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in Table 6.

## RECOMMENDATIONS

The following recommendations are being made for MRW programs:

### High-Priority Recommendations

MRW1) Public education programs for household hazardous wastes will be conducted through collaboration with other agencies and groups.

MRW2) Research alternative financing methods for MRW programs.

MRW3) Additional product stewardship programs will be implemented through a combination of voluntary and mandatory methods, and possibly including framework legislation on a statewide level.

MRW4) The list of materials shown in Table 1 (the Hazardous Household Substances List) will be collected at the MRW Facility from residential and commercial (CESQG) sources, with the exception of e-waste and the materials shown in Group 7.

MRW5) CESQG standards and requirements will be more widely distributed through a combination of additional locations and regular communications.

MRW6) Explore user fees for residential customers of the MRW Facility and mobile collection events.

**Table 6**
**Summary Rating of the MRW Alternatives**

| | Alternative | Consistency with MRW Planning Objectives | Consistency with Other Regional Plans | Cost Effective-ness | Overall Rating |
|---|---|---|---|---|---|
| A | Public education for household hazardous waste | H | H | M | H |
| B | Technical assistance for CESQGs | H | M | M | M |
| C | Financing methods | H | M | H | H |
| D | Product stewardship | H | H | H | H |
| E | Business recognition programs | H | M | M | M |
| F | List of targeted materials | H | H | M | H |
| G | Distribution of CESQG standards | H | H | M | H |
| H | User fees at MRW Facility | H | M | H | H |

| | | | | | |
|---|---|---|---|---|---|
| I | Packaging and shelf labels | H | M | M | M |
| J | Increase promotion for MRW Facility | H | H | M | H |
| K | Environmentally preferable purchasing | H | H | M | H |
| L | Conduct survey to determine accurate generation rate | H | H | M | H |

H – High M – Medium L – Low

MRW7) A promotional campaign will be implemented to identify and address barriers that are preventing greater usage of the MRW Facility.

MRW8) An environmentally-preferable purchasing program will be implemented to reduce the use of toxic materials by County agencies and cities.

MRW9) A survey will be conducted by Snohomish County to determine waste disposal practices for key MRW materials.

**Medium-Priority Recommendations**

MRW10) Development of sector-specific business educational materials should be handled at the state level with distribution provided at the state and local level.

MRW11) An Envirostars or similar program will be resumed to provide recognition to businesses that are properly managing their wastes.

MRW12) A labeling program will be implemented in cooperation with retail outlets to highlight less-toxic products and to mark products that need to be disposed at the MRW Facility.

Snohomish County is the lead agency for most of the above recommendations, with the exception of MRW10, although several of the recommendations also depend on collaboration with other departments and agencies or with the private sector.

None of the recommendations require new capital investments, and the costs for most are limited to additional staff time and some expenses for outreach materials. There would be a cost for an outside survey consultant for MRW9. For the schedule, most of the recommendations can and should be implemented over the next five years.

More information about the lead agencies, budget and schedule for the above recommendations are shown in the following implementation plan.

# IMPLEMENTATION PLAN

## Schedule and Financing for Implementation

The proposed implementation schedule and agency with the primary responsibility for each recommendation is shown in Table 7. The entities shown as having responsibility for implementation are the primary agencies responsible for this, but it should be understood that these agencies will need assistance from others (especially the municipalities and private companies such as waste collection firms). Some recommendations shown in Tables 7 and 8 have been abbreviated slightly due to space constraints.

Table 8 shows the approximate budget for recommendations that incur additional costs above and beyond current programs.

Because this *MRW Plan* is being updated during an economic downturn and the timing and extent of the economic recovery are currently unknown, it is particularly difficult to project waste generation and the resultant need for additional facilities and programs. Ongoing monitoring of various developments and possible future amendments will allow this *MRW Plan* to continue to serve Snohomish County beyond the next five or six years if desired.

## Monitoring Future Performance

Moderate risk waste management in Snohomish County will continue to evolve based on changes in population , and other demographic factors; the local, state, and national

**Table 7**
**Six-Year Implementation Schedule**

| Recommendation | Implementation Responsibility | Year of Implementation | | | | | |
|---|---|---|---|---|---|---|---|
| **High-Priority Recommendations** | | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| MRW1) Public education programs for HHW will be conducted through collaboration with other agencies and groups. | SWD, other county departments, and SHD | Ongoing | | | | | |
| MRW2) Research alternative financing methods. | SWD | X | X | X | | | |
| MRW3) Additional product stewardship programs will be implemented through voluntary and mandatory methods, possibly including framework legislation. | SWD and Ecology | Ongoing | | | | | |
| MRW4) Materials shown in Table 1 (the Haz. Household Substances List) will be collected at the MRW Facility, except e-waste and materials shown in Group 7. | SWD | Ongoing | | | | | |
| MRW5) CESQG standards and requirements will be more widely distributed. | SWD and SHD | Ongoing | | | | | |
| MRW6) Explore user fees for residential customers of the MRW Facility and mobile collection events. | SWD | X | X | | | | |
| MRW7) A promotional campaign will be implemented to address barriers that are preventing greater use of the MRW Facility. | SWD | X | X | | | | |
| MRW8) An environmentally-preferable purchasing program will be implemented to reduce the use of toxic materials by County agencies. | SWD and other county departments | Ongoing | | | | | |
| MRW9) A survey will be conducted to determine waste disposal practices for key MRW materials. | SWD | | X | | | | |
| **Medium-Priority Recommendations** | | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| MRW10) Development of sector-specific business educational materials should be handled at the state level with distribution provided at the state and local level. | Ecology, SWD, and SHD | Ongoing | | | | | |
| MRW11) An Envirostars or similar program will be resumed to provide recognition to businesses. | SWD | | X | | | | |
| MRW12) A labeling program will be implemented in cooperation with retail outlets. | SWD | | X | X | X | X | X |

Notes: SWD = Snohomish County Solid Waste Division, SHD = Snohomish Health District.
The wording of the recommendations above has been abbreviated due to space constraints.

## Table 8
## Six-Year Implementation Budget for Additional Costs (in $1,000's)

| Recommendation | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Funding Source |
|---|---|---|---|---|---|---|---|
| **High-Priority Recommendations** | | | | | | | |
| MRW1) Public education programs for HHW will be conducted through collaboration with other agencies and groups. | Existing costs plus small amount of additional staff for coordination with others. | | | | | | Existing funding |
| MRW2) Research alternative financing methods. | Staff time | | | | | | Existing funding |
| MRW3) Additional product stewardship programs will be implemented through a combination of voluntary and mandatory methods, possibly including framework legislation. | Existing costs plus small amount of additional staff for coordination with others. | | | | | | Existing funding |
| MRW4) Materials shown in Table 1 (the Hazardous Household Substances List) will be collected at the MRW Facility, except e-waste and the materials shown in Group 7. | 0 | | | | | | NA |
| MRW5) CESQG standards and requirements will be more widely distributed. | Existing costs plus small amount of additional staff for coordination with others. | | | | | | Existing funding |
| MRW6) Explore user fees for residential customers of the MRW Facility and mobile collection events. | Staff time | | | | | | NA |
| MRW7) A promotional campaign will be implemented to identify and address barriers that are preventing greater use of the MRW Facility. | 15 | 15 | | | | | Solid Waste Tipping Fees |
| MRW8) An environmentally-preferable purchasing program will be implemented to reduce the use of toxic materials by County agencies. | Staff time | | | | | | NA |
| MRW9) A survey will be conducted to determine waste disposal practices for key MRW materials. | | 25 | | | | | Solid Waste Tipping Fees |
| **Medium-Priority Recommendations** | | | | | | | |
| MRW10) Development of sector-specific business educational materials should be handled at the state level with distribution provided at the state and local level. | NA | | | | | | Ecology funds |
| MRW11) An Envirostars or similar program will be resumed to provide recognition to businesses. | | 10 | 5 | 5 | 5 | 5 | Solid Waste Tipping Fees |
| MRW12) A labeling program will be implemented in cooperation with retail outlets. | | 5 | 5 | 5 | 5 | 5 | Solid Waste Tipping Fees |
| **Total Additional Costs** | **15** | **55** | **10** | **10** | **10** | **10** | |

Notes: All figures are in thousands of dollars. The wording of the recommendations has been abbreviated due to space constraints.
NA = Not applicable.

economy; regulations; and advancements in waste handling and recycling. Snohomish County staff will continue to monitor these factors and other changes that may occur, with the intent of developing new programs or changing existing programs to meet the needs of the county's residents and businesses. This monitoring will take place largely through involvement in local, regional and national groups that address topics such as product stewardship and climate change. Snohomish County staff will also continue to stay informed on new regulations being developed on the state and national levels. New developments will be shared and discussed with the SWAC, as appropriate. Significant changes in MRW programs will be addressed through amendments to this *MRW Plan*.

Snohomish County staff will also monitor the tonnages of wastes collected at the MRW Facility and through other methods (using the annual data collected by Ecology and other sources as available) as indicators of the effectiveness of collection programs. Any large increases or decreases in specific wastes or collection tonnages will be investigated if those changes cannot be easily explained by program changes or other known factors.

**Future Amendments to MRW Plan**

As part of the *Solid Waste Management Plan*, the schedule and approach for amending this *MRW Plan* should be the same as the *Solid Waste Management Plan*. This does not, however, prevent the following steps from being taken:

- This *MRW Plan* could be separated from the *Solid Waste Management Plan* in the future if this was deemed advantageous.
- This *MRW Plan* could be amended separately in the future if necessary. For instance, the implementation section of this plan could be amended to reflect changes in plans, funding or priorities, or changes that occur for reasons outside of the County's control.

Implicit in the development and adoption of this plan is the understanding that emergency actions may need to be taken by the County in the future for various reasons, and that these actions can be undertaken without needing to amend this plan beforehand. In this case, Snohomish County staff will endeavor to inform the SWAC and other key stakeholders as soon as feasibly possible, but not necessarily before new actions are implemented. If an emergency results in permanent and significant changes to the Snohomish County waste management system, an amendment to this plan will be prepared. If, however, the emergency actions are only undertaken on a temporary or short-term basis, an amendment will not be considered necessary. Any questions about what actions may be considered "temporary" or "significant" will be brought to the SWAC for their advice. If emergency actions have temporary or significant budget or service impacts, the County Council will be advised. Any future modifications to the list of materials handled by the MRW Facility and by the roundups, as well as the frequency

(including cancellation altogether) and locations of the roundups, are not considered sufficiently significant to require an amendment to this *MRW Plan*.

## REFERENCES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# SOLID WASTE FACILITY SITING

## INTRODUCTION

Solid Waste Management Plans (SWMP's) approved by the Department of Ecology (Ecology) for Washington State typically have included background information related to siting solid waste facilities. Historically, this dates back to the late 1980s when there was considerable concern about the proper siting of new state-of-the-art solid waste landfills to replace old, unlined landfills and dumps. Information about a county's geography, geology, soils, slopes, seismic hazard areas, groundwater, surface water (rivers, creeks, and lakes), flooding, land use, and air emissions was previously included in a SWMP because these conditions are most relevant to siting a new landfill. Some of these factors would also be relevant to other types of solid waste facilities such as transfer stations, inert waste landfills, construction and demolition (C&D) waste processing facilities, recycling facilities, composting facilities, and energy from waste (EfW) facilities.

Snohomish County currently sends the county's municipal solid waste (MSW) to a privately owned and operated landfill in central Washington, and has no immediate plans to develop an MSW landfill in the county. It is equally unlikely that a private entity would wish to construct a solid waste landfill in Snohomish County, in part because there are already three very large, privately owned regional MSW landfills in Washington and Oregon. These three landfills are in low-rainfall areas that are better suited for landfills than Snohomish County, and together provide sufficient economic competition such that there would be little economic motivation for either the County or a private entity to consider siting an MSW landfill within Snohomish County.

## SOLID WASTE FACILITY SITING PROCESS

New or improved technology or materials markets may motivate the proposed development of other types of solid waste facilities such as inert waste landfills, recycling or C&D processing facilities, solid waste transfer stations or other facilities.

### State Regulations

If the County or a private entity were to propose development of a solid waste facility, it would be evaluated using Washington state rules such as the Solid Waste Handling Standards (Chapter 173-350 WAC) and the Criteria for Municipal Solid Waste Landfills (Ch. 173-351 WAC).

### Snohomish County Regulations

Snohomish County standards such as the County Code and the Comprehensive Plan, as well as municipal, zoning, and land use codes, would apply. All of these provide a

more up-to-date source for information about siting factors and considerations (and hence are hereby incorporated by reference).

The 2005 Snohomish County Comprehensive Plan serves as a guide to the county's future growth and development through 2025. The Comprehensive Plan includes the following five sections:

- General Policy Plan
- Future Land Use Map
- Transportation Element
- Capital Facilities Plan
- Park and Recreation Comprehensive Plan

Appendix B of the General Policy Plan describes the process for siting essential public facilities of a countywide or statewide nature (including solid waste facilities). The following criteria will be utilized by all county and city review authorities in evaluating siting proposals made by sponsoring agencies seeking to site an essential public facility in Snohomish County. The sponsor shall provide the information needed for the reviewing body to evaluate site(s) and make a recommendation or decision on a specific proposal. These criteria encompass an evaluation of regional need and local site suitability for the proposed and designated Essential Public Facility (EPF). Findings concerning the proposal's conformance with each criterion shall be included in the documentation of the local authority's decision.

1. Documentation of Need. Project sponsors must demonstrate the need for their proposed EPFs. Included in the analysis of need should be the projected service population, an inventory of existing and planned comparable facilities and projected demand for this type of essential public facility.
2. Consistency with Sponsor's Plans. The proposed project should be consistent with the sponsor's own long-range plans for facilities and operations.
3. Consistency with Other Plans. The proposal must demonstrate the relationship of the project to local, regional and state plans. The proposal should be consistent with the comprehensive plan and other adopted plans of the prospective host community. In evaluating this consistency, consideration shall be given to: urban growth area designations, critical area designations, population and employment holding capacities and targets, and the land use, capital facilities and utilities elements of these adopted plans.
4. Relationship of Service Area to Population. The facility's service area population should include a significant share of the host community's population, and the proposed site should be able to reasonably serve its over-all service area population. [Note: linear transmission facilities are exempt from this criterion]
5. Minimum Site Requirements. Sponsors shall submit documentation showing the minimum siting requirements for the proposed facility. Site requirements may be determined by the following factors: minimum size of the facility, access, support facilities, topography, geology, and mitigation needs. The sponsor shall also identify future expansion needs of the facility.

6. Alternative Site Selection. In general, the project sponsor should search for and investigate alternative sites before submitting a proposal for siting review. Additionally, the proposal should indicate whether any alternative sites have been identified that meet the minimum site requirements of the facility. The sponsor's site selection methodology will also be reviewed. Where a proposal involves expansion of an existing facility, the documentation should indicate why relocation of the facility to another site would be infeasible.
7. Concentration of Essential Public Facilities. In considering a proposal, the local review agency will examine the overall concentration of essential public facilities within Snohomish County to avoid placing an undue burden on any one community.
8. Public Participation. Sponsors should encourage local public participation, particularly from any affected parties outside of the host community's corporate limits, in the development of the proposal, including mitigation measures. Sponsors should conduct local outreach efforts with early notification to prospective neighbors to inform them about the project and to engage local residents in site planning and mitigation design prior to the initiation of formal hearings. The sponsor's efforts in this regard should be evaluated.
9. Consistency with Local Land Use Regulations. The proposed facility must conform to local land use and zoning regulations that are consistent with the Countywide Planning Policies. Compliance with other applicable local regulations shall also be required.
10. Compatibility with Surrounding Land Uses. The sponsor's documentation should demonstrate that the site, as developed for the proposed project, will be compatible with surrounding land uses.
11. Proposed Impact Mitigation. The proposal must include adequate and appropriate mitigation measures for the impacted area(s) and community(ies). Mitigation measures may include, but are not limited to, natural features that will be preserved or created to serve as buffers, other site design elements used in the development plan, and/or operational or other programmatic measures contained in the proposal. The proposed measures should be adequate to substantially reduce or compensate for anticipated adverse impacts on the local environment.

**Summary of Siting Process Steps**

In general, the siting process for a solid waste facility would include the following steps:

1. **Site Identification**: For a public facility, the process of identifying sites may include soliciting nominations from citizens and interested parties, identification of major landholders and City/County properties, and other activities to initially identify as many sites as practical. For a private site, the site selection process may consist primarily of an inventory of sites currently owned or available for purchase.

2. **Broad Site Screening**: This step typically involves evaluating potential sites for "fatal flaws", such as unsuitable neighboring land use, distance from the point of

waste generation, site size, steep slopes, floodplain area, wetlands, surface water or shorelines. For a public site, the goal should be to retain up to 12 sites after this step is completed. For a private facility or other cases where there may be only a few sites to begin with, only one or two sites need to survive this evaluation.

3. **Detailed Site Ranking**: After sites with fatal flaws have been eliminated, the remaining sites should be evaluated against more detailed criteria such as the availability of utilities (water, sewer, electricity), traffic impacts and road access, and other factors affecting the ability to develop and use the site. For a public effort, no more than four sites should remain after this step is completed.

4. **Detailed Site Evaluation**: The final step in evaluating potential sites involves a detailed investigation to assess environmental impacts, in accordance with the State Environmental Policy Act (SEPA). This includes significant public involvement to ensure that stakeholders and citizens have sufficient input to the process. This step should result in the recommendation of a preferred site.

5. **Siting Decision**: Finally, the decision to proceed with a recommended site should be based on environmental, engineering, financial and political factors, and then more detailed plans can be developed and the permitting process can begin.

# WASTE QUANTITIES AND COMPOSITION

## SUMMARY

This appendix provides information on waste disposal amounts, waste generation rates (current and projected), waste composition, and recovery rates for recycled materials. This data is used in the *Snohomish County Solid Waste Management Plan* to assess the need for new programs or determining the impact of a proposed new program.

## INTRODUCTION

Data provided in this appendix is used throughout the *Snohomish County Solid Waste Management Plan* (Plan) in various ways, but primarily to assess the potential impact of new or expanded programs. The data in this appendix is organized chronologically:

- past disposal amounts
- current data on recycling levels, waste composition and recovery rates
- projected future amounts of garbage and recycling

One reason for organizing the data in this manner is the change in waste disposal amounts that occurred in the past few years, which is apparently the result of a change in consumption levels and business activities caused by the economic recession of 2008 - 2010. Whereas normally future disposal and generation figures could be projected based on current and historical data, this sudden shift raises significant questions about what can be expected in the future.

## PAST DISPOSAL QUANTITIES

### Historical Disposal Amounts

The amounts of wastes disposed in the past ten years in Snohomish County are shown in Table 1. The waste tonnage figures shown are only for municipal solid waste (MSW) brought to County facilities.

### Population and Waste Disposal Rates

Current and future population levels are an important factor to consider for solid waste management plans. People create solid waste and in general, the more people there are (now and in the future), the more waste is created. The amount of waste disposed is also influenced by employment levels, other economic factors and recycling rates, all of which are very difficult to predict. Hence, population data is also shown in Table 1, and this data is used to calculate a waste disposal rate. This rate should not be

**Table 1**
**Historical Waste Disposal Amounts**

| Year | Waste Tonnage | Population | Waste Disposal Rate, tpy/person |
|---|---|---|---|
| 1998 | 397,461 | 576,165 | 0.69 |
| 1999 | 419,741 | 591,590 | 0.71 |
| 2000 | 434,754 | 606,024 | 0.72 |
| 2001 | 438,529 | 618,600 | 0.71 |
| 2002 | 440,007 | 628,000 | 0.70 |
| 2003 | 422,852 | 637,500 | 0.66 |
| 2004 | 443,964 | 644,800 | 0.69 |
| 2005 | 462,955 | 655,800 | 0.71 |
| 2006 | 507,122 | 671,800 | 0.75 |
| 2007 | 518,820 | 686,300 | 0.76 |
| 2008 | 456,744 | 696,600 | 0.66 |
| 2009 | 419,130 | 704,300 | 0.60 |
| 2010 | 408,422 | 711,100 | 0.57 |

Sources: Waste tonnage data is from Snohomish County records, and includes only the wastes handled by county facilities. Population data is from the Office of Financial Management, http://www.ofm.wa.gov/pop/april1/default.asp (OFM 2009). Waste disposal rates are expressed in terms of tons per year (tpy) per person.

confused with a waste generation rate (which is addressed later in this appendix). The waste generation rate is actually a better measure of the amount of waste produced, since it takes into account all of the wastes produced (regardless of whether the waste materials are recycled or disposed).

## CURRENT RECYCLING AND DISPOSAL DATA

### Current Recycling Rate

The most recent recycling survey conducted by Ecology shows that 48.8% of Snohomish County's waste stream was recycled or composted in 2009. This figure is generally called a "recycling rate", although it includes composting and some reuse as well. The figure is based on 416,114 tons reported as being recycled and composted in 2009, versus a total of 853,215 tons of MSW generated (see Table 2).

The second part of Table 2 shows materials that are not defined as recycling and so cannot be included in the calculation of the recycling rate. These "diverted" materials, which include materials burned for energy recovery and other materials such as

**Table 2**
**Recycled and Diverted Materials (2009)**

| Recycled Materials | Annual Tons |
|---|---|
| Aluminum Cans | 1,548 |
| Cardboard | 42,189 |
| Electronics | 1,232 |
| Ferrous Metals | 42,264 |
| Fluorescent Light Bulbs | 134 |
| Food Waste | 14,011 |
| Glass | 13,996 |
| Grease and Other Rendering | 1,605 |
| Gypsum | 3,532 |
| HDPE Bottles | 1,030 |
| High Grade Paper | 3,718 |
| LDPE Bottles | 694 |
| Mixed Waste Paper | 28,223 |
| Newspaper | 26,617 |
| Nonferrous Metals | 8,233 |
| Other Plastics | 772 |
| PET Bottles | 1,185 |
| Tin Cans | 3,289 |
| Used Oil | 8,358 |
| Vehicle Batteries | 2,539 |
| White Goods | 399 |
| Wood | 75,830 |
| Yard Debris | 130,531 |
| Other Materials[1] | 4,185 |
| Tons Recycled/Composted | 416,114 |
| Total Tons Generated (MSW only) | 853,215 |
| Recycling Rate | 48.8% |
| **Diverted Materials** | |
| Antifreeze | 534 |
| Asphalt/Concrete | 182,734 |
| Construction and Demolition Wastes | 74,486 |
| Household Batteries | 99 |
| Land Clearing Debris | 31,591 |
| Oil Filters | 353 |
| Other Organics | 8,846 |
| Reuse | 2,956 |
| Tires (energy recovery, baled, reuse) | 1,452 |
| Wood (energy recovery) | 36,768 |
| Other Materials[1] | 350 |
| Tons Diverted | 340,169 |
| Tons Diverted and Recycled | 756,283 |
| Tons Disposed, MSW | 437,101 |
| Other Wastes Disposed | 322,826 |
| Total Tons Generated | 1,516,210 |
| Overall Diversion Rate | 49.9% |

Source: Ecology Annual Survey (Ecology 2010a).
Notes: 1. "Other Materials" reported under recycled materials and under diverted materials are combined tonnages for materials that cannot be shown because those materials had only one or two respondents (in other words, figures were combined to protect the confidentiality of the data).

construction debris, are still being put to a beneficial use but simply do not count as recycling as defined by Washington State. For instance, in 2009 a large amount of asphalt and concrete was crushed for reuse. These materials are not included in the calculation of the recycling rate but can be included in the calculation of a diversion rate. If these diverted materials are included in the calculation of a diversion rate, however, then an additional 322,826 tons of other solid wastes (other than MSW) must also be included, with the net effect being that the diversion rate (49.9%) is not that much higher than the recycling rate (48.8%), despite the added tonnages.

There is little data available on the current levels of waste diverted by most forms of waste reduction, although a few categories of reuse (especially textiles and building materials) are at least partially tracked. If all waste reduction activities and the missing recycling tonnages could be accounted for, the County's current recycling or diversion rate would be significantly greater.

**Composition of Waste Disposed**

Composition data is useful for designing solid waste handling and disposal programs. A waste composition study was conducted for Snohomish County in 2008 and 2009 (Snohomish County 2009). This study divided the waste stream into five categories based on source of waste (see below) and into 81 categories of materials. A summary of the results of this study is shown in Table 3.

This study was conducted at the County's three main transfer stations (ARTS, SWRTS and NCRTS). Construction and demolition (C&D) wastes and other special wastes are included in the results only to the extent that these materials were disposed at the County facilities (in other words, the study does not include wastes disposed at C&D or inert landfills). Recycled and diverted materials are not included in these figures since the study only sampled wastes brought to the three main transfer stations for disposal purposes.

The specific types of generators examined by the waste composition study included:

- **Single-Family**: waste collected by garbage haulers from single-family homes.
- **Multi-Family**: waste collected by garbage haulers from apartment buildings.
- **Residential Self-Haul**: waste brought in by the homeowners and renters who generated it, typically using a car or pickup truck.
- **Non-Residential Self-Haul**: waste from businesses and institutions (government offices, churches, schools, etc.) which was brought to the disposal facility by an employee of that business or institution. A substantial amount of this waste stream consisted of loads of construction and demolition wastes.
- **General Non-Residential**: waste from all types of non-residential sources (commercial, industrial, or institutional) which was delivered by someone other than an employee (such as a garbage hauling company or municipality).

**Table 3**
**Solid Waste Composition in Snohomish County**

| Type of Material | Annual Average by Waste Generator, % by Weight | | | | | Total Waste Stream |
|---|---|---|---|---|---|---|
| | Single-Family | Multi-Family | Res. Self-Haul | Non-Res. Self-Haul | General Non-Res. | |
| Recyclable Paper | 10.4 | 18.9 | 9.7 | 3.1 | 11.7 | 11.3 |
| Compostable Paper | 5.7 | 4.2 | 1.1 | 0.1 | 7.7 | 4.9 |
| Other Paper | 2.2 | 1.2 | 1.5 | 1.3 | 3.2 | 2.2 |
| Plastic Bottles | 1.7 | 2.5 | 1.0 | 0.2 | 1.4 | 1.4 |
| Plastic Bags, Film | 6.0 | 4.7 | 1.9 | 1.3 | 7.0 | 5.0 |
| Other Plastics | 5.1 | 4.4 | 6.3 | 3.7 | 10.5 | 7.0 |
| Metals | 7.0 | 5.2 | 11.8 | 4.9 | 6.0 | 7.2 |
| Recyclable Glass | 2.1 | 4.9 | 2.9 | 0.2 | 1.9 | 2.4 |
| Other Glass | 0.4 | 1.1 | 2.5 | 3.3 | 0.8 | 1.2 |
| Food Waste | 26.2 | 17.7 | 5.5 | 0.6 | 13.1 | 14.6 |
| Yard Debris | 2.2 | 3.6 | 1.5 | 2.3 | 2.3 | 2.3 |
| Disposable Diapers | 5.7 | 4.5 | 1.4 | 0 | 0.6 | 2.5 |
| Textiles | 3.8 | 4.2 | 2.9 | 0.3 | 5.0 | 3.8 |
| Furniture | 0.8 | 1.3 | 6.6 | 8.0 | 0.4 | 2.4 |
| Wood Waste | 1.2 | 6.8 | 26.0 | 29.8 | 15.3 | 13.8 |
| Const./Demolition | 0.6 | 1.2 | 7.8 | 30.1 | 3.7 | 5.4 |
| Animal Excrement | 7.2 | 2.8 | 2.3 | 0 | 0.3 | 2.7 |
| Other Special Wastes | 0.9 | 2.2 | 1.9 | 0.2 | 1.0 | 1.2 |
| Other Materials | 10.9 | 8.6 | 5.5 | 10.7 | 8.1 | 8.6 |
| **Totals** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| **Recyclable Materials Subtotal** | **33.1** | **44.0** | **31.6** | **12.2** | **35.3** | **33.4** |

Source: From Table E–2 of the "*Snohomish County Waste Composition Study*" (Snohomish County 2009).
Notes: All figures are percentages by weight.
The recyclable materials subtotal includes recyclable paper, plastic bottles, plastic film and bags, metals, glass bottles, yard debris and textiles.

The composition of the waste stream can be expected to change in the future due to changes in consumption patterns, packaging methods, disposal habits, and other factors. These changes are very difficult to predict in the long term.

### Current Recovery Rates

The recycling and waste composition data can be combined to calculate the current recovery rates for specific materials (see Table 4). E-waste is not shown because it has changed dramatically since 2009, and not all of the other recyclable materials from

Table 2 can be analyzed in this way because some of the material categories are different for the recycling and disposal data.

The analysis shown in Table 4 may also be skewed to the extent that some materials were being handled outside of the county's waste disposal system in 2009. This is especially a problem for construction and demolition materials, so the actual recovery rates for wood and gypsum may be substantially lower than what is shown in Table 4 (in other words, more of these materials were disposed than what is reflected by the waste composition figures).

**Table 4**
**Recovery Rates for Specific Materials**

| Recycled and Diverted Material | Snohomish County Data (2009) | | | Statewide Recovery Rate [3] |
|---|---|---|---|---|
| | Recycled or Diverted, tons [1] | Disposed, tons [2] | Recovery Rate | |
| Aluminum Cans | 1,548 | 1,750 | 46.9% | 47.8% |
| Glass Containers | 13,996 | 10,040 | 58.2% | 59.6% |
| Cardboard | 42,189 | 15,500 | 73.1% | 72.2% |
| Ferrous and Mixed Metals | 42,264 | 20,300 | 67.6% | 79.6% |
| Food Waste | 14,011 | 61,300 | 18.6% | 7.8% |
| Gypsum | 3,532 | 5,450 | 39.3% | 22.7% |
| HDPE Bottles | 1,030 | 2,450 | 29.6% | 32.0% |
| Mixed Waste and High-Grade Paper | 28,223 | 24,880 | 53.1% | 51.2% |
| Newspaper | 26,617 | 5,130 | 83.8% | 76.4% |
| Nonferrous Metals | 8,233 | 840 | 90.7% | 95.8% |
| PET Bottles | 1,185 | 3,350 | 26.1% | 33.5% |
| Tin Cans | 3,289 | 3,070 | 51.7% | 29.8% |
| Tires (recycled and energy recovery) | 1,452 | 230 | 86.3% | 80.3% |
| Used Oil (recycled and energy recovery) | 8,358 | 17 | 99.8% | 99.5% |
| Vehicle Batteries | 2,539 | 0 | 100.0% | 93.6% |
| Wood (recycled and energy recovery) | 75,830 | 57,630 | 56.8% | 65.0% |
| Yard Debris (and compost furnish) | 130,531 | 9,580 | 93.2% | 74.6% |

Notes: 1. Recycled and diverted figures for Snohomish County are from Table 2, and the figures shown are tons per year.
2. Disposed figures for Snohomish County are based on percentages shown in Tables 5 and 8 of the *Snohomish County Waste Composition Study* (Snohomish County 2009), and the 2009 waste tonnage of 419,130 tons. Figures shown are tons per year.
3. The statewide recovery rate is based on recycling tonnages from the annual recycling survey (Ecology 2010a) and disposal figures from the *2009 Washington Statewide Waste Characterization Study* (Ecology 2010b).

The percentage figures for the recovery rates in Snohomish County and Statewide are in terms of percent by weight.

### Historical Waste Generation Rates

Table 5 shows the waste generation rates for the period 2006 through 2009 (2009 is the most recent year for which recycling data is available). The figures used in this table include all types of materials recycled and wastes disposed.

**Table 5**
**Previous Waste Generation Rates**

| | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|
| **Recycled/Diverted Amounts;** | | | | |
| Recycled | 362,621 | 424,941 | 413,545 | 416,114 |
| Waste Diversion | 292,308 | 264,559 | 233,929 | 340,169 |
| Total Recovery | 654,929 | 689,500 | 647,474 | 756,283 |
| **Solid Waste Amounts;** | | | | |
| MSW, at County Facilities | 507,122 | 518,820 | 456,744 | 419,130 |
| Other MSW | 18,935 | 22,875 | 22,950 | 17,971 |
| C&D | 109,207 | 127,878 | 35,672 | 36,375 |
| Other Wastes | 694,818 | 474,739 | 386,740 | 286,451 |
| Total | 1,330,082 | 1,144,312 | 902,106 | 759,927 |
| **Total Waste Generation;** | | | | |
| Total Recycled/Diverted | 654,929 | 689,500 | 647,474 | 756,283 |
| Total Solid Waste | 1,330,082 | 1,144,312 | 902,106 | 759,927 |
| Total Waste Generated | 1,985,011 | 1,833,812 | 1,549,580 | 1,516,210 |
| **Recovery Rate;** | | | | |
| Recycling Rate (Recycling and MSW only) | 40.8% | 44.0% | 46.3% | 48.8% |
| Diversion Rate (Total Recovery and Total Solid Waste) | 33.0% | 37.6% | 45.1% | 49.9% |
| **Population** | 671,800 | 686,300 | 696,600 | 704,300 |
| **Total Waste Generation Rate**, tons per year per person | 2.95 | 2.67 | 2.22 | 2.15 |

Notes: Figures for MSW handled at County facilities are from Snohomish County records (see Table 1), all other tonnage figures are from Ecology's records. All figures (except the percentages) are tons per year.

## PROJECTED FUTURE WASTE QUANTITIES

### Future MSW Generation Rate

Projecting future amounts of solid waste is a necessary part of planning for proper solid waste management. Projections for the future amounts of solid waste are an important starting point for ensuring that there will be adequate collection, transfer and disposal capacity for that waste, and also provides the basis for designing recycling and other

waste diversion programs. That said, this is an interesting time for attempting to predict future quantities of waste. The sudden decrease in waste amounts associated with the economic downturn has shown previous projections to be nearly worthless. The other aspect of this decrease in waste amounts is the uncertainty as to whether (or to what extent) people will return to previous consumption and garbage generation levels.

The question concerning future consumption levels and waste generation rates can at least be explored by examining the differences between past and current generation rates. Table 6 compares the 2007 waste generation rate to the current rate (2009) rate, and the two rates can be used in different scenarios for future waste generation (see the next section of this appendix). This comparison is for MSW only (i.e., does not include other solid wastes or "diverted" materials).

**Table 6**
**MSW Waste Generation Rates**

| | 2007 Amount | 2009 Amount |
|---|---|---|
| **Waste Amounts;** | | |
| MSW | 539,142 | 437,101 |
| Recycled | 424,941 | 416,114 |
| Total | 964,083 | 853,215 |
| **Population** | 686,300 | 704,300 |
| **MSW Waste Generation Rate**, tons per year per person | 1.40 | 1.21 |
| **Change in Waste Generation Rate** | | -14% |

Notes: The 2007 tonnages are from Ecology's records, which includes 22,875 tons of MSW handled at non-County facilities. The MSW figure for 2009 includes MSW disposed at County and non-County facilities.

Another uncertainty regarding future waste projections is the question about the "other solid wastes" that are not currently handled as part of the county's system. Data from Ecology (see Table 5) shows that almost as much solid waste was handled by facilities outside of the county solid waste system (340,797 tons) as was handled by County facilities (419,130 tons) in 2009. Some of these wastes are being handled by other disposal systems due to the nature or source of the waste, but a significant amount of these wastes should in fact be handled by the county solid waste system. One estimate indicates that approximately 130,000 tons per year of these wastes should be handled through the county system.[1] If some or all of these wastes are brought into the county solid waste system, any projections based on current transfer station tonnages would immediately become obsolete.

[1] The estimate of 130,000 tons per year is based on 2008 disposal data from Ecology showing 22,154 tons of MSW, 35,675 tons of C&D, 43,522 tons of industrial wastes, 26,616 tons of asphalt, and 4,031 tons of other materials being delivered to non-county disposal facilities.

## Future Waste Generation Amounts

Consumption levels and waste generation rates as well as recycling and waste diversion rates will influence the future amount of waste generated. The overall goal of this Plan is to achieve a substantially higher amount of recycling and composting in the future. As can be seen in Tables 3 and 4, there are still significant amounts of recyclable materials in the wastes that are disposed. Hence, future increases in the recycling rate could be accomplished by increasing the recovery rate for materials currently collected for recycling. The recycling and composting rate can also be increased by targeting new materials, which is a topic for other parts of this Plan. This appendix focuses instead on the possibilities presented by existing programs (but assuming incentives or other provisions that could lead to greater recovery of existing recyclables and organics).

Six different scenarios have been developed for the purpose of illustrating a range of possible waste generation patterns in the future:

1a. Waste tonnages increase with population growth at the same waste generation rate as in 2009 (1.21 tons per person per year), and at the same recycling rate as in 2009 (48.8%).

1b. Waste tonnages increase with population growth at the same waste generation rate as in 2009, with an increasing recycling rate that eventually reaches 90% capture of all traditional recyclables by 2030. With the current recycling rate of 48.8% and 33.4% recyclables remaining in the waste stream (see Table 3), the total amount of recyclables is 65.9% of the waste generated, so a 90% recovery rate of all recyclables would lead to a 59.3% recycling rate.

1c. Same as 1b, but with increased recovery of food waste, which eventually reaches 80% recovery by 2030. With the 14,011 tons of food waste recycled in 2009 and another 67,370 tons of food waste in the waste stream (see Table 8 of the *Snohomish County Waste Composition Study*), an 80% recovery rate translates to an additional diversion of 6.0% of the total waste generated.

2a. Waste tonnages increase with population, but with waste generated at the old (2007) rate and the recycling rate stays the same as in 2009 (48.8%). This scenario shows an immediate recovery from the economic downturn, with waste generation returning to the previous (2007) rate in 2010. This of course, didn't actually happen in 2010, so this series of scenarios should be viewed more for longer-term trends than for near-term figures.

2b. Same as 2a, but with recovery of recyclables eventually reaching 90% by 2030.

2c. Same as 2b, but with increased recovery of food waste, which eventually reaches 80% recovery by 2030.

The waste tonnages associated with each of these scenarios are shown in Table 7. Figures 1 through 6 show the projected results for each scenario.

**Table 7**
**Future Waste Generation**

| Scenario | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|
| **Population** | 786,500 | 844,500 | 898,700 | 950,100 |
| **Scenario 1a; Waste generation rate same as in 2009 (1.21 TPY/person) and recycling level same as in 2009:** | | | | |
| Total, at 1.21 tpy/person | 951,640 | 1,021,900 | 1,087,450 | 1,149,580 |
| Recycling Rate | 48.8% | 48.8% | 48.8% | 48.8% |
| Recycled Amount | 464,400 | 498,690 | 530,670 | 561,000 |
| MSW, disposed amount | 487,240 | 523,210 | 556,770 | 588,590 |
| **Scenario 1b; Waste generation rate same as in 2009 and 90% recovery of recyclables by 2030:** | | | | |
| Total, at 1.21 tpy/person | 951,640 | 1,021,900 | 1,087,450 | 1,149,580 |
| Recycling Rate | 51.8% | 54.3% | 56.8% | 59.3% |
| Recycled Amount | 492,950 | 554,890 | 617,670 | 681,700 |
| MSW, disposed amount | 458,690 | 467,010 | 469,780 | 467,880 |
| **Scenario 1c; Same as 1b, but with 80% recovery of food waste by 2030:** | | | | |
| Total, at 1.21 tpy/person | 951,640 | 1,021,900 | 1,087,450 | 1,149,580 |
| Recycling Rate | 53.5% | 57.4% | 61.4% | 65.3% |
| Recycled Amount | 509,260 | 587,010 | 667,380 | 750,680 |
| MSW, disposed amount | 442,380 | 434,890 | 420,070 | 398,900 |
| **Scenario 2a; Waste generation rate same as in 2007 (1.4 TPY/person) and recycling rate same as in 2009:** | | | | |
| Total, at 1.40 tpy/person | 1,101,070 | 1,182,360 | 1,258,200 | 1,330,090 |
| Recycling Rate | 48.8% | 48.8% | 48.8% | 48.8% |
| Recycled Amount | 537,320 | 576,990 | 614,000 | 649,090 |
| MSW, disposed amount | 563,750 | 605,370 | 644,200 | 681,010 |
| **Scenario 2b; Same as 2a, but with 90% recovery of recyclables:** | | | | |
| Total, at 1.40 tpy/person | 1,101,070 | 1,182,360 | 1,258,200 | 1,330,090 |
| Recycling Rate | 51.8% | 54.3% | 56.8% | 59.3% |
| Recycled Amount | 570,350 | 642,020 | 714,660 | 788,745 |
| MSW, disposed amount | 530,710 | 520,340 | 543,540 | 541,350 |
| **Scenario 2c; Same as 2b, but with 80% recovery of food waste by 2030:** | | | | |
| Total, at 1.40 tpy/person | 1,101,070 | 1,182,360 | 1,258,200 | 1,330,090 |
| Recycling Rate | 53.5% | 57.4% | 61.4% | 65.3% |
| Recycled Amount | 589,230 | 679,180 | 772,180 | 868,550 |
| MSW, disposed amount | 511,840 | 503,180 | 486,030 | 461,540 |

Notes: Population figures are from the Office of Financial Management (OFM 2007) and can be found at http://www.ofm.wa.gov/pop/gma/projections07.asp.

**Figure 1**
**Scenario 1a: 2009 Waste Generation Recycling Rates**

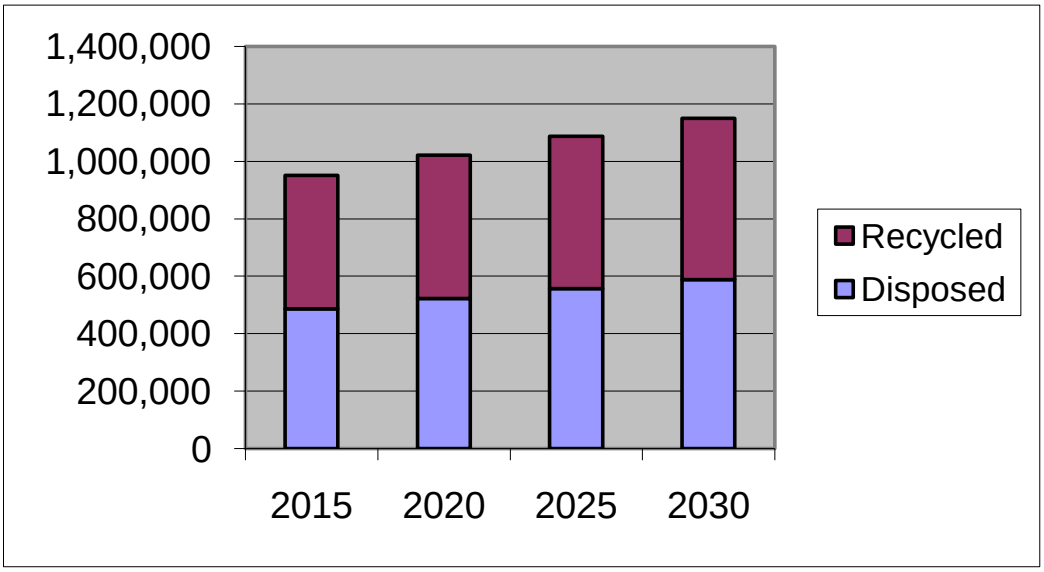



**Figure 2**
**Scenario 1b: 2009 Waste Generation Rate and 90% Recovery of Recyclables by 2030**

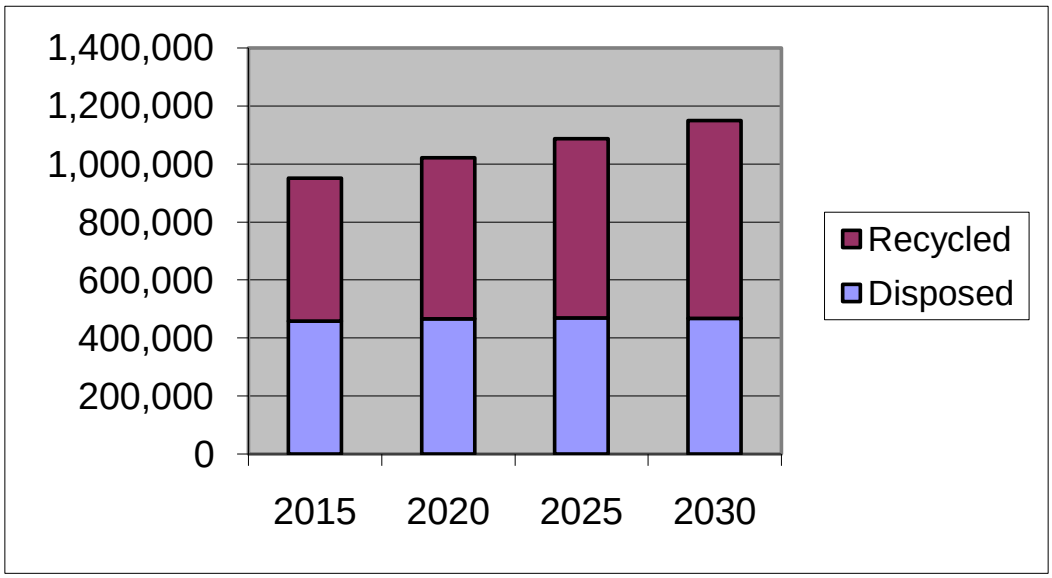


**Figure 3**
**Scenario 1c: 2009 Waste Generation Rate with 90% Recovery of Recyclables and 80% Recovery of Food Waste by 2030**

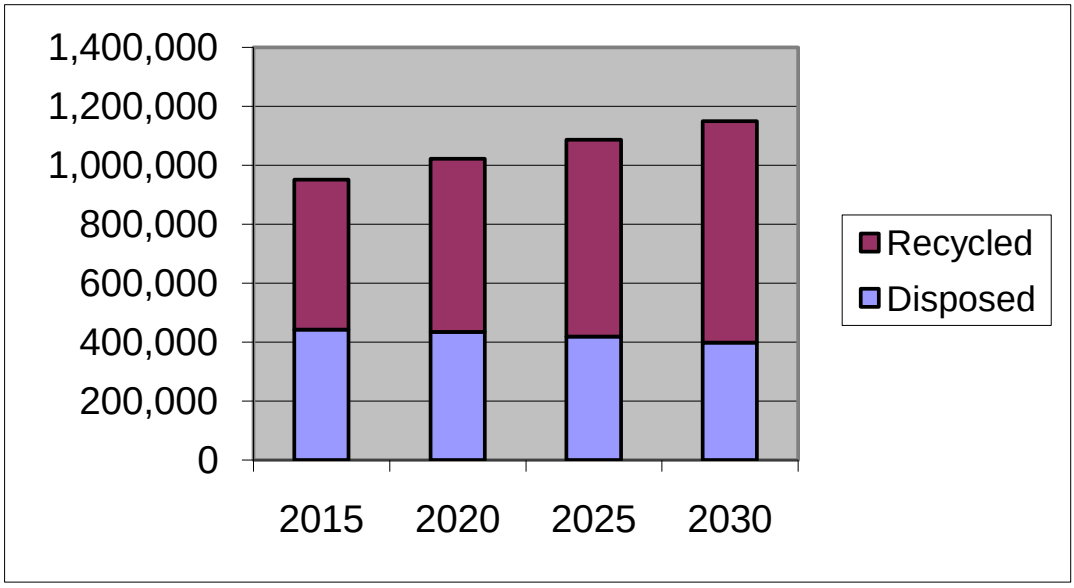



**Figure 4**
**Scenario 2a: 2007 Waste Generation Rate and 2009 Recycling Rate (48.8%)**

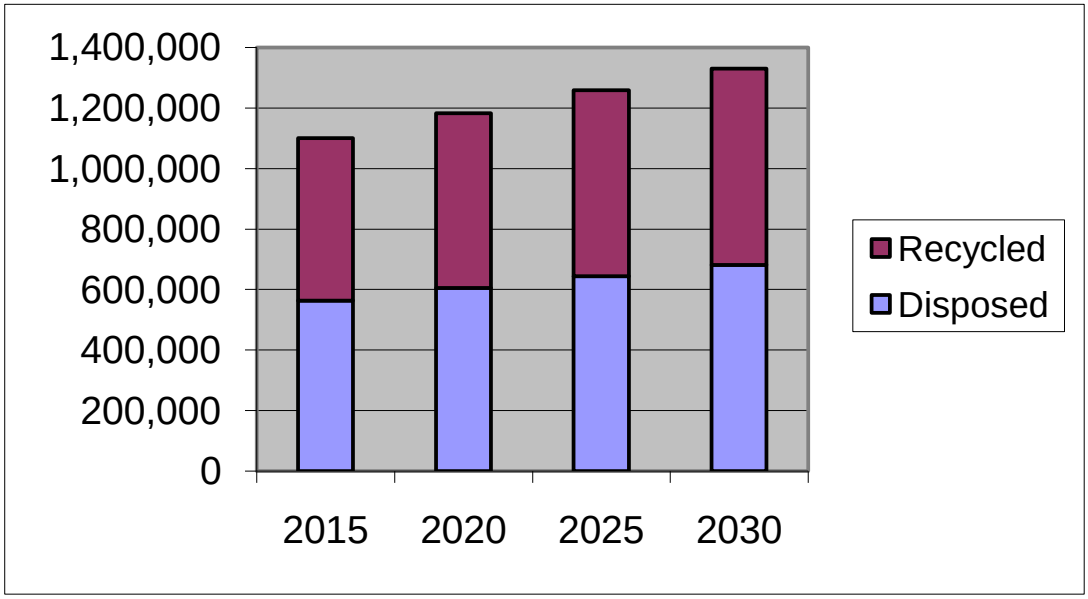


**Figure 5**
**Scenario 2b: 2007 Waste Generation Rate, with 90% Recovery of Recyclables**

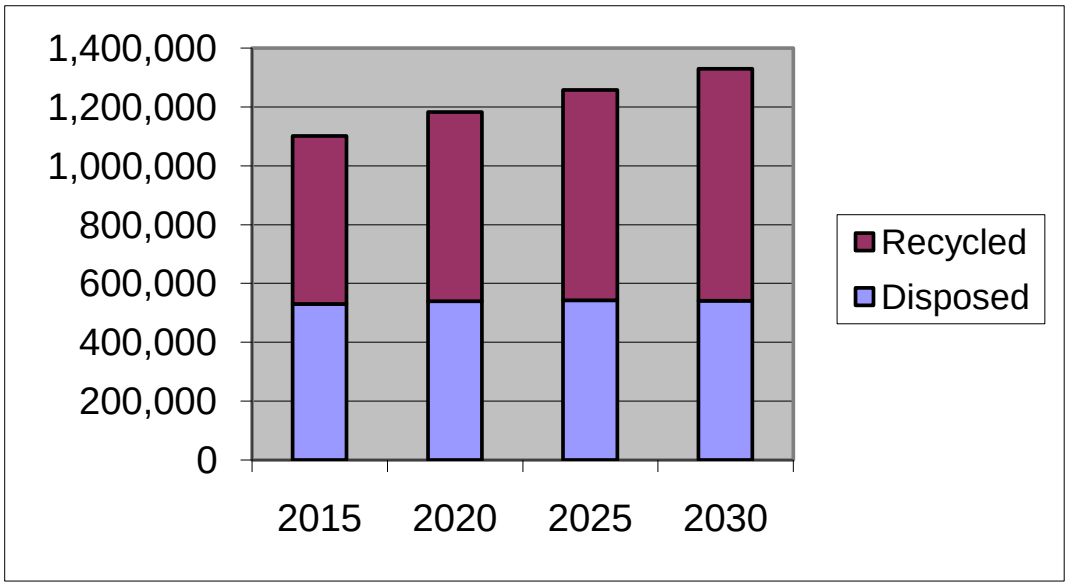
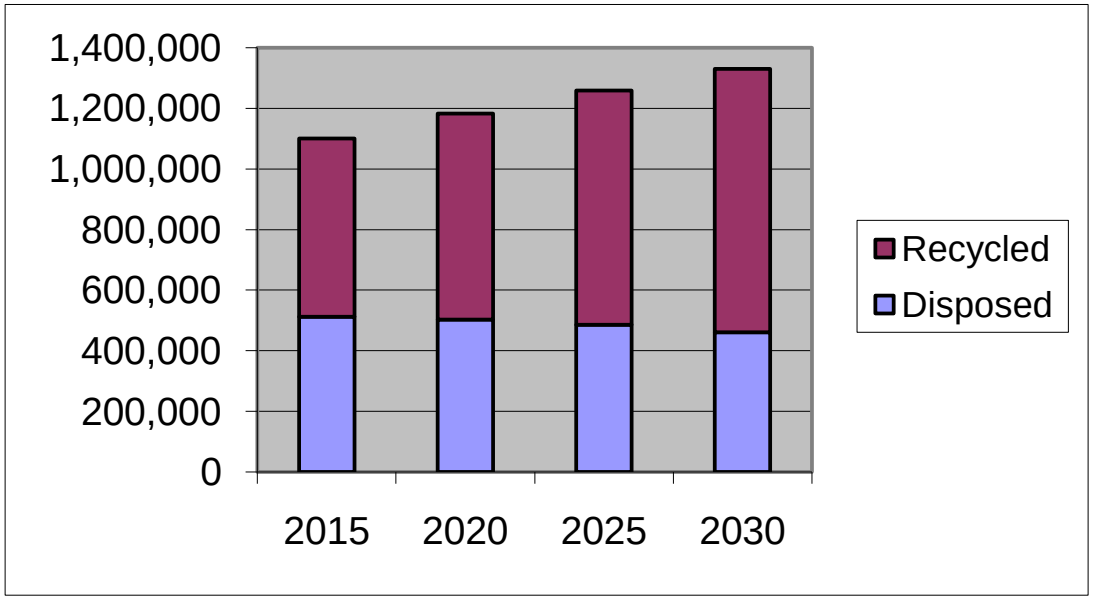



**Figure 6**
**Scenario 2c: 2007 Waste Generation Rate, with 90% Recovery of Recyclables and 80% Recovery of Food Waste by 2030**



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OFM 2009. April 1 *Intercensal Population Estimates for the State, Counties, and Cities and Towns* (http://www.ofm.wa.gov/pop/april1/default.asp), Office of Financial Management, June 2009.

Snohomish County 2009. *Snohomish County Waste Composition Study.* Prepared by Green Solutions, April 2009.

# WUTC COST ASSESSMENT QUESTIONNAIRE

## INTRODUCTION

State law (RCW 70.95.090) requires solid waste management plans to include:

> "an assessment of the plan's impact on the costs of solid waste collection. The assessment shall be prepared in conformance with guidelines established by the Utilities and Transportation Commission (WUTC or Commission). The Commission shall cooperate with the Washington state association of counties and the association of Washington cities in establishing such guidelines."

The following cost assessment has been prepared in accordance with the guidelines prepared by the WUTC (see http://www.wutc.wa.gov/ for more information). The purpose of this cost assessment is not only to allow an assessment of the impact of proposed activities on current garbage collection and disposal rates, but to allow projections of future rate impacts as well. The WUTC needs this information to review the plan's impacts to the waste haulers that it regulates. For these haulers, the WUTC is responsible for setting collection rates and approving proposed rate changes. Hence, the WUTC will review this cost assessment to determine if it provides adequate information for rate-setting purposes, and will advise Snohomish County as to the probable collection rate impacts of proposed programs. Consistent with this purpose, the cost assessment focuses primarily on those programs (implemented or recommended) with potential rate impacts.

# COST ASSESSMENT QUESTIONNAIRE

**PLAN PREPARED FOR THE COUNTY OF:** **Snohomish**

**PREPARED BY:** **Rick Hlavka, Green Solutions**

CONTACT TELEPHONE: 360-897-9533 DATE: August 31, 2011

**DEFINITIONS**

Throughout this document: Year (YR.) 1 refers to **2012.**
YR. 3 refers to **2014.**
YR. 6 refers to **2017.**

Each year refers to a **calendar year** (January 1 - December 31).

1. **DEMOGRAPHICS:** To assess the generation, recycling and disposal rates of an area, it is necessary to have population data.

**1.1 Population**

1.1.1 The **total** population of the County is:

YR.1 750,443 YR.3 774,621 YR.6 809,765

1.1.2 The population of the area of the county's jurisdiction is the same as above (in other words, no cities are choosing to develop their own solid waste management system).

**1.2 References and Assumptions**

Population estimates are from the OFM (the 2007 projections, medium series).

**2. WASTE STREAM GENERATION**

**2.1 Tonnage Recycled**

2.1.1 The total tonnage **recycled** in the base year (2012), and projections for years three and six are:

YR.1 443,120 YR.3 457,400 YR.6 478,150

## 2.2 Tonnage Disposed

2.2.1 The total tonnage **disposed** in the base year, and projections for years three and six are.

YR.1 400,000 YR.3 479,890 YR.6 501,670

## 2.3 References and Assumptions

The projected recycled and disposed figures shown above are based on Scenario 1a, which assumes the same waste generation rate (1.21 tons per person per year) as in 2009 and the same recycling rate (48.8%) as in 2008 (see the Waste Projections appendix for more information).

**3. SYSTEM COMPONENT COSTS:** This section describes the anticipated costs of the program(s) for each component of the solid waste system (i.e., waste reduction, recycling, composting, disposal, etc.), the assumptions used in estimating the costs, and the funding mechanisms to be used to pay for it.

## 3.1 Waste Reduction Programs

3.1.1 The following lists the major waste reduction programs, current and proposed:

IMPLEMENTED

Existing education and outreach waste reduction programs implemented by Snohomish County and detailed in the Waste Prevention tech memo include:

- Promoting reuse
- Promoting backyard composting
- Other public education

There are also significant waste prevention activities being conducted by the cities, schools, and private sector in Snohomish County.

PROPOSED

Proposed new or expanded waste prevention activities include:

- Promoting smart shopping
- Evaluating additional volume-based garbage collection fees and every-other-week collection
- Upgrading procurement policies for the county and cities
- Encouraging businesses to engage in more waste prevention

- Encouraging more backyard composting
- Targeting specific products for waste prevention
- Promoting waste exchanges
- Monitoring waste prevention results

3.1.2 The costs, including capital costs and operating costs, for waste reduction programs that are implemented and proposed are:

IMPLEMENTED

YR.1 $NA YR.3 $NA YR.6 $NA

PROPOSED

YR.1 $0 YR.3 $0 YR.6 $0

3.1.3 The funding mechanism(s) that will pay the cost of the programs shown in 3.1.2 are.

IMPLEMENTED

YR.1: Tipping fees and grants
YR.3: Tipping fees and grants
YR.6: Tipping fees and grants

PROPOSED

YR.1: Tipping fees and grants
YR.3: Tipping fees and grants
YR.6: Tipping fees and grants

See the Waste Prevention technical memo for more details.

## 3.2 Recycling Programs

3.2.1 The following lists the major recycling programs, current and proposed, and the costs and the proposed funding mechanism:

IMPLEMENTED

| PROGRAM | COST | FUNDING |
|---|---|---|
| Various public and private recycling and composting programs are currently implemented. | NA | Tipping fees, CPG, and private funds |

PROPOSED

| RECYCLING RECOMMENDATIONS | COST | FUNDING |
|---|---|---|
| R1) Cities, haulers increase multi-family outreach | Unk | City, private funds |
| R2) More education on contaminants | Unk | City, private funds |
| R3) More consistency with neighboring jurisdictions | NA | NA |
| R4) Develop alternative markets for glass | NA | NA |
| R5) Increase residential recycling | NA | NA |
| R6) Increase commercial recycling | NA | NA |
| R7) Increase C&D recycling | NA | NA |
| R8) Assess MRF performance periodically | Unk | Tipping fees |
| R9) Support local markets | NA | NA |
| R10) Consider product bans | NA | NA |

| ORGANICS RECOMMENDATIONS | COST | FUNDING |
|---|---|---|
| O1) Regional education program for food waste | NA | NA |
| O2) Consider transfer system for organics | Unk | Tipping fees |
| O3) Promote use of compost | NA | NA |
| O4) Working group to coordinate permitting | NA | NA |
| O5) Change collection schedules | Unk | Private funds |
| O6) Continue “alternatives to burning” program | Unk. | Tipping fees |
| O7) Increase wood waste diversion | NA | NA |
| O8) Explore methods to increase food donations | NA | NA |

See the Recycling and Organics technical memos for more details.

## 3.3 Solid Waste Collection Programs

The following table provides information about the customer base of the WUTC-regulated collection companies in Snohomish County as well as the non-regulated, municipal collection systems.

| Allied Waste, Permit #G-12 | | | |
|---|---|---|---|
| | 2012 | 2014 | 2017 |
| Single Family Customers | 28,510 | 29,430 | 30,770 |
| Residential MSW Tons | 1,695 | 1,749 | 1,829 |
| Multi-Family (MF) Accounts | 591 | 610 | 638 |
| Commercial Customers | 1,664 | 1,720 | 1,800 |
| MF and Comm. MSW Tons | 1,912 | 1,974 | 2,064 |
| | | | |
| Rubatino Refuse Removal, Permit #G-58 | | | |
| | 2012 | 2014 | 2017 |
| Single Family Customers | 17,190 | 17,740 | 18,550 |
| Residential MSW Tons | 1,264 | 1,305 | 1,364 |
| Multi-Family (MF) Accounts | 814 | 840 | 880 |
| Commercial Customers | 1,961 | 2,020 | 2,120 |
| MF and Comm. MSW Tons | 4,544 | 4,691 | 4,903 |

| Sound Disposal, Permit #G-82 | | | |
|---|---|---|---|
| | 2012 | 2014 | 2017 |
| Single Family Customers | 1,660 | 1,710 | 1,790 |
| Residential MSW Tons | 124 | 128 | 134 |
| Multi-Family (MF) Accounts | 153 | 158 | 165 |
| Commercial Customers | 200 | 206 | 215 |
| MF and Comm. MSW Tons | 160 | 165 | 173 |
| | | | |
| Waste Management, Permit #G-237 | | | |
| | 2012 | 2014 | 2017 |
| Single Family Customers | 114,830 | 118,530 | 123,900 |
| Residential MSW Tons | 4,638 | 4,787 | 5,005 |
| Multi-Family (MF) Accounts | 1,590 | 1,641 | 1,716 |
| Commercial Customers | 4,697 | 4,850 | 5,070 |
| MF and Comm. MSW Tons | 7,679 | 7,926 | 8,286 |
| | | | |
| Municipal Collections within Snohomish County | | | |
| | 2012 | 2014 | 2017 |
| **City of Marysville** | | | |
| Single Family Customers | 9,387 | 9,689 | 10,129 |
| Commercial Customers | 644 | 665 | 695 |
| Total MSW Tons | 13,495 | 13,930 | 14,562 |
| | | | |
| **City of Sultan** | | | |
| Single Family Customers | 1,382 | 1,427 | 1,491 |
| Commercial Customers | 89 | 92 | 96 |
| Total MSW Tons | 1,823 | 1,882 | 1,967 |

## 3.4 Energy Recovery & Incineration (ER&I) Programs

NA, no such facilities.

## 3.5 Land Disposal Program

NA, no such facilities.

## 3.6 Administration Program

3.6.1 What is the budgeted cost for administering the solid waste and recycling programs and what are the major funding sources.

Budgeted Cost

YR.1 $1,071,921 YR.3 $1,137,201 YR.6 $1,242,650

Funding Source

Tipping fees.

3.6.2 Which cost components are included in these estimates?

Program administration, education and outreach programs, plus support from other County departments.

3.6.3 Please describe the funding mechanism(s) that will recover the cost of each component.

Existing funding sources will continue to be used.

## 3.7 Other Programs

The County operates a Moderate Risk Waste Facility. The table below details the projected operational costs as well as the two funding sources:

| | Year 1 | Year 3 | Year 6 |
|---|---|---|---|
| MRW Operational Cost | $654,330 | $694,200 | $758,600 |
| Less Fees | $77,250 | $82,000 | $89,600 |
| County Program Cost | $577,080 | $612,200 | $669,000 |

## 3.8 References and Assumptions

For 3.1.2, data is not available for the amount of funds currently being expended on waste prevention efforts. Zero costs are shown for proposed programs because only staff time and a small amount of public outreach expenses are anticipated for these recommendations, and it is expected that these costs can be absorbed into the existing budget (i.e., no budget increases will be needed). The cost for one of the waste prevention recommendations (a new product labeling system) could be substantial but is not included because this would be a federal program.

For the costs of recycling and organics programs shown in 3.2.1, most of the proposed new programs have little or no costs (i.e., can be absorbed into the current budget). Those shown as having an unknown ("unk") cost could have significant costs associated with them, but the activity is not defined well enough at this time to be able to project the cost.

Information for Section 3.3 is from annual reports provided to the county by the haulers, plus additional information from the two cities for the municipal programs. In both cases, the number of single family, multi-family, and commercial accounts

for both the regulated and non-regulated collection programs were projected using the anticipated population growth rate for the period (an average of 1.6% for the six-year period), starting with December 2010 data for the regulated haulers and for the City of Sultan, and June 2011 data for the City of Marysville. Waste tonnages have been projected using the same growth rate (in other words, waste generation rates are assumed to remain flat, and the only growth is due to the increase in number of accounts). Multi-family tonnages are included in the commercial waste tonnages for the regulated haulers because this is the manner in which the data is reported to the county.

For Section 3.6.1, the budgets for 2012 and future years have not been established yet, but administrative costs for future years are assumed to increase 3% annually (using the 2011 budget of $1,040,700 as the base amount). For Section 3.7 (the MRW Facility costs), MRW costs and fees are also assumed to increase by 3% annually over the 2011 budgeted amount.

4. **FUNDING MECHANISMS:** This section shows the funding mechanisms currently in use and the ones that will be implemented to incorporate the recommended programs in the Snohomish County Solid Waste Management Plan. Because the way a program is funded directly relates to the costs a resident or commercial customer will have to pay, this section is crucial to the cost assessment process.

### 4.1 Funding Mechanisms (Summary by Facility)

The following tables provide information on funding sources for programs and activities.

| Table 4.1.1: Facility Inventory | | | | | | |
|---|---|---|---|---|---|---|
| **Facility Name** | **Facility Type** | **Location** | **Final Disposal** | **Tip Fee per Ton** | **MSW Tons (2010)** | **Annual Revenues (2010)** |
| ARTS | Transfer Station | Everett | Roosevelt Regional Landfill | $105/ton | 215,166 | $22,907,367 |
| CWRTS | Transfer Station | Snohomish | Roosevelt Regional Landfill | $105/ton | 418 | $122,891 |
| NCRTS | Transfer Station | Arlington | Roosevelt Regional Landfill | $105/ton | 80,690 | $8,123,251 |
| SWRTS | Transfer Station | Mountlake Terrace | Roosevelt Regional Landfill | $105/ton | 108,462 | $11,526,048 |
| Dubuque Road NRDC | Drop Box | Snohomish | Roosevelt Regional Landfill | $20/cubic yard | 3,817 | $243,979 |
| Granite Falls NRDC | Drop Box | Granite Falls | Roosevelt Regional Landfill | $20/cubic yard | 2,111 | $502,876 |
| Sultan NRDC | Drop Box | Sultan | Roosevelt Regional Landfill | $20/cubic yard | 5,667 | $648,699 |

| Table 4.1.2: Tip Fee Components | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Tip Fee by Facility** | **Surcharge** | **Taxes** | **Trans. and Disposal Cost** | **Operational Cost** | **Admn. Cost** | **Closure Costs** | **All Other** |
| Transfer Stations and Dropboxes | | | $21,521,820 | $16,141,827 | $1,040,700 | $1,000,000 | $7,212,077 |

Based on 2011 budget.

| Table 4.1.3: Funding Mechanism | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Name of Program** | **Bond Name** | **Total Bond Debt** | **Bond Rate** | **Bond Due Date** | **Grant Name** | **Grant Amount** | **Tip Fee** | **Taxes** | **Other** | **Surcharge** |
| Waste Prevention | | | | | CPG | Unk | Remainder | | | |
| Recycling | | | | | CPG | Unk | Remainder | | | |
| Organics | | | | | CPG | Unk | Remainder | | | |
| MRW | | | | | | | $75,000 | | | |

Based on 2011 budget.

| Table 4.1.4: Tip Fee Forecast | | | | | | |
|---|---|---|---|---|---|---|
| **Tip Fee per Ton** | **Year One** | **Year Two** | **Year Three** | **Year Four** | **Year Five** | **Year Six** |
| Transfer Stations | $105/ton | $105/ton | $105/ton | $105/ton | $105/ton | $105/ton |
| Dropbox Sites (NRDCs) | $20/cubic yard | $20/cubic yard | $20/cubic yard | $20/cubic yard | $20/cubic yard | $20/cubic yard |

Based on 2011 tipping fees, see also note in Section 4.3.

**4.2 Funding Mechanisms** summary by percentage: The following tables summarize the way programs will be funded in the key years.

| Table 4.2.1: Funding Mechanism by Percentage – Year One | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Component** | **Tip Fee %** | **Grant %** | **Bond %** | **Coll. Tax, %** | **Rates, Service Fees** | **Other %** | **Total** |
| Waste Prevention | 75% | 25% | | | | | 100% |
| Recycling | 40% | 25% | | | 25% | 10% | 100% |
| Organics | 60% | 15% | | | 25% | | 100% |
| Collection | | | | | 100% | | 100% |
| Transfer | 95% | | 2% | | | 3% | 100% |
| Disposal | 100% | | | | | | 100% |
| MRW | 88% | 12% | | | | | 100% |
| Administration | 95% | 5% | | | | | 100% |
| Other (Vactor Program) | | | | | 100% | | 100% |

| Table 4.2.2: Funding Mechanism by Percentage – Year Three | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Component** | **Tip Fee %** | **Grant %** | **Bond %** | **Coll. Tax, %** | **Rates, Service Fees** | **Other %** | **Total** |
| Waste Prevention | 75% | 25% | | | | | 100% |
| Recycling | 40% | 25% | | | 25% | 10% | 100% |
| Organics | 60% | 15% | | | 25% | | 100% |
| Collection | | | | | 100% | | 100% |
| Transfer | 95% | | 2% | | | 3% | 100% |
| Disposal | 100% | | | | | | 100% |
| MRW | 88% | 12% | | | | | 100% |
| Administration | 95% | 5% | | | | | 100% |
| Other (Vactor Program) | | | | | 100% | | 100% |

| Table 4.2.3: Funding Mechanism by Percentage – Year Six | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Component** | **Tip Fee %** | **Grant %** | **Bond %** | **Coll. Tax, %** | **Rates, Service Fees** | **Other %** | **Total** |
| Waste Prevention | 75% | 25% | | | | | 100% |
| Recycling | 40% | 25% | | | 25% | 10% | 100% |
| Organics | 60% | 15% | | | 25% | | 100% |
| Collection | | | | | 100% | | 100% |
| Transfer | 95% | | 2% | | | 3% | 100% |
| Disposal | 100% | | | | | | 100% |
| MRW | 88% | 12% | | | | | 100% |
| Administration | 95% | 5% | | | | | 100% |
| Other (Vactor Program) | | | | | 100% | | 100% |

## 4.3 References and Assumptions

For Table 4.1.1, figures are based on 2010 data.

For Tables 4.1.2 and 4.1.3, figures are based on 2011 costs and budget.

For Table 4.1.4, there are no plans currently to increase the tipping fee and so the 2011 amount is shown as continuing throughout the six-year period. In reality, the tipping fee will likely change as the result of a new waste export contract in 2013 or due to inflation.

## 4.4 Surplus Funds

Only a small amount of fund balance is maintained from year to year. Contingency funds are also maintained in the capital budget. The 2011 amount of these funds was $454,000, but the goal is to maintain a balance of $300,000 to $350,000 in the capital budget.

Snohomish County
Public Works

**Aaron Reardon**
County Executive

3000 Rockefeller Avenue, M/S 607
Everett, WA 98201-4046

(425) 388-3488
FAX (425) 388-6449

May 10, 2012

**RE: Snohomish County Comprehensive Solid Waste Management Plan**

Dear Reviewer:

Snohomish County Public Works is updating the Comprehensive Solid Waste Management Plan: *Changing Waste for Changing Times.* This plan describes the management of all aspects of solid waste generated by residents and businesses in the county. It will be adopted as both a six-year and twenty-year plan with goals and recommendations for solid waste management throughout Snohomish County.

A Determination of Non-Significance (DNS) has been issued for this plan and is subject to a 40-day comment period. Written comments regarding the Solid Waste Comprehensive Plan may be submitted by **June 29, 2012** by mail or email to: bernard.myers@snoco.org or JR Myers at Snohomish County Public Works, 3000 Rockefeller Avenue M/S 607, Everett, Washington, 98201-4046.

Copies of the Environmental Checklist and DNS are available during normal business hours from Snohomish County Public Works, 3000 Rockefeller Avenue, Robert J. Drewel Building, 2nd Floor, Customer Service Center, Everett, Washington. Please contact me at 425-388-3488 extension 4510 or mary.auld@snoco.org for assistance prior to arriving at the Customer Service Center or for more information. The Environmental Checklist and DNS can also be viewed on the County's website at www.snoco.org, search "2012 Comp Plan."

Sincerely,

Mary Auld, Senior Environmental Planner
Transportation and Environmental Services

**Snohomish County Public Works**

# PUBLIC NOTICE
# DETERMINATION OF NONSIGNIFICANCE (DNS)

**PROJECT NAME:** Snohomish County Comprehensive Solid Waste Management Plan

**PROJECT NUMBER**: RR 8023

**DESCRIPTION OF PROPOSAL:** The proposal is to update the Snohomish County Comprehensive Solid Waste Management Plan: *Changing Waste for Changing Times*. This plan describes the management of all aspects of solid waste generated by residents and businesses in the county. It will be adopted as both a Six-Year and Twenty-Year plan with goals and recommendations for solid waste management within Snohomish County.

**LOCATION OF PROPOSAL:** This plan applies to solid waste management throughout Snohomish County.

**APPLICANT AND LEAD AGENCY:** Snohomish County Solid Waste Management Division

**THRESHOLD DETERMINATION:** The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under the Revised Code of Washington (RCW) 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

The lead agency has determined that the requirements for environmental analysis, protection, and mitigation measures have been adequately addressed in the county's development regulations and comprehensive plan adopted under RCW 36.70A, and in other applicable local, state, or federals laws and rules, as provided by RCW 43.21C.240 and Washington Administrative Code (WAC) 197-11-158. Our agency will not require any additional mitigation measures under Snohomish County Code (SCC) 30.61.

**PUBLIC COMMENT PERIOD:** This DNS is subject to a 40-day comment period. Written comments may be submitted by mail or e-mail to the lead agency's contact person. See name and address below. Comments must be received by 5 p.m., **June 29, 2012.**

**CONTACT PERSON:**

Mary Auld
Senior Environmental Planner
(425) 388-3488, ext. 4510
mary.auld@snoco.org

**RESPONSIBLE OFFICIAL:** Steven E. Thomsen, P.E., Director
Snohomish County Public Works

**ADDRESS:** 3000 Rockefeller Ave., M/S 607
Everett, WA 98201

**DATE OF PUBLICATION:** May 20, 2012

**Signature:** _____ **Date:** 5-10-12

**DISCLAIMER:**
The determination that an environmental impact statement does not have to be filed does not mean there will be no adverse environmental impacts. Snohomish County codes governing noise control, land use performance standards, construction and improvement of county roads, drainage control, building practices will provide substantial mitigation of the aforementioned impacts. The issuance of this Determination of Non-Significance (DNS) should not be interpreted as acceptance or approval of this proposal as presented. Snohomish County reserves the right to deny or approve said proposal subject to conditions if it is determined to be in the best interest of the County and/or necessary to the general health, safety, and welfare of the public to do so.

**DISTRIBUTION LIST:**

***Federal agencies:***
U.S. Army Corps of Engineers; U.S. Fish and Wildlife; U.S. Environmental Protection Agency; U.S. Federal Highway Administration; National Marine Fisheries Service

***Tribal Government:***
Tulalip Tribes; Muckleshoot Tribe; Stillaguamish Tribe

***State Agencies:***
Department of Ecology (Environmental Review Section); Department of Fish and Wildlife; Department of Natural Resources (Natural Heritage Program/Environmental); Department of Transportation; Department of Archaeology and Historic Preservation

***Regional Agencies:***
Puget Sound Clean Air Agency; Puget Sound Water Quality Authority

***County Departments:***
Executive Office; County Council; Planning and Development Services

***Other Agencies:***
Snohomish Health District

***Cities and Towns:***
Arlington; Bothell; Brier; Darrington; Edmonds; Everett; Gold Bar; Granite Falls; Index; Lake Stevens; Lynnwood; Marysville; Mill Creek; Monroe; Mountlake Terrace; Mukilteo; Snohomish; Stanwood; Sultan; Woodway

***Other Counties:***
King County Solid Waste Management; Skagit County Public Works; Island County Public Works; Klickitat County Public Works

***Public Service Organizations:***
Snohomish County PUD #1; Puget Sound Energy

***Libraries:***
Everett, Bothell, Sno-Isle Regional Libraries: Arlington Branch, Darrington Branch, Granite Fall Branch, Lake Stevens Branch, Lynnwood Branch, Marysville Branch, Mill Creek Branch, Monroe Branch, Mukilteo Branch, Snohomish Branch, Stanwood Branch, Sultan Branch

***Community Organizations:***
Cathcart Citizen's Review Board Members; Pilchuck Audubon Society; League of Women Voters Conservation Committee

***Other:***
The Everett Herald

Snohomish County Public Works

# ENVIRONMENTAL CHECKLIST

**Project Number: RR 8023**

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## Purpose of Checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

## SUMMARY

## A. BACKGROUND

1. Name of proposed project:

**Changing Waste for Changing Times**
**Snohomish County Comprehensive Solid Waste Management Plan**

2. Name of applicant:

**Snohomish County Public Works**
**Solid Waste Management Division**

3. Address and phone number of applicant and contact person:

**SEPA contact:**
**Mary Auld, Senior Environmental Planner**
**Transportation and Environmental Services Division**
**3000 Rockefeller Avenue, M/S 607**
**Everett, WA 98201**
**425-388-3488 ext. 4510**
**mary.auld@snoco.org**

**Solid Waste Division contact:**
**JR Myers, Senior Planner**
**Solid Waste Management Division**
**3000 Rockefeller Avenue M/S 607**
**Everett, WA 98201**
**425-388-6489**
**Bernard.Myers@snoco.org**

4. Date checklist prepared:

**May 1, 2012**

5. Agency requesting checklist:

**Snohomish County Public Works**
**Solid Waste Management Division**

6. Proposed timing or schedule (including phasing, if applicable):

**The Snohomish County Solid Waste Comprehensive Plan (Plan) provides recommendations and policies through 2032. The Plan and the SEPA Environmental Checklist will be submitted to the Department of Ecology (DOE) for review in spring 2012. There will be a 30-day public comment period prior to the submittal.**

**If approved by DOE, the Plan will then be submitted to the Snohomish County Council for review. If approved, the Snohomish County Council will adopt the Plan by motion. This process is expected to be completed in summer 2012.**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

**This Plan is written to be a dynamic document. Minor modifications, which do not affect the basic goals of the Plan, may be made throughout the lifetime of this document. If minor modifications are proposed, the County will follow the steps as outlined:**

**a. Explain in writing how the deviation will better contribute to accomplishing one or more of the Plan's goals;**
**b. Notify all cities and towns;**
**c. Notify and give the public an opportunity to comment;**
**d. Notify the Department of Ecology of the proposed modification;**
**e. Discuss the issue with the Solid Waste Advisory Committee;**
**f. Schedule a County Council vote on the modification.**

**Major modifications will require approval by all of the cities and towns participating in the Plan, the Department of Ecology and the County Council.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

**Eleven Technical Memorandums on related topics were prepared as part of this Plan. The memorandums prepared are: Climate Change, Energy from Waste, Product Stewardship, Waste Prevention, Recycling, Organics, Waste Collection, Transfer, Disposal, Outreach and Education, Administration and Regulation. The appendices also include: Moderate Risk Waste Plan; Solid Waste Facility Siting; Waste Quantities and Composition.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

**No applications are pending.**

10. List any government approvals or permits that will be needed for your proposal, if known.

**Washington State regulations require the County to have an approved comprehensive solid waste management plan approved by the Department of Ecology.**

**The Snohomish Health District permits each Solid Waste facility on an annual basis.**

11. Location of proposal:

**This Plan applies to all of unincorporated Snohomish County and 20 cities and towns within the County.**

12. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site.

**The Solid Waste Comprehensive Plan (Plan) describes the policies and programs identified by the Solid Waste Division (Division) to manage all aspects of solid waste, hazardous and toxic waste generated by residents and businesses in Snohomish County.**

**The Plan update provides an opportunity to evaluate and refine existing programs, identify policies to help implement programs and practices and provides direction for handling waste in the future.**

**This Plan is adopted as both a Six-Year Plan and a Twenty-Year Plan with goals and recommendations for solid waste management within Snohomish County.**

## B. ENVIRONMENTAL ELEMENTS

## 1. Earth

a. General description of the site (shown in ***bold*** type): flat, rolling, hilly, steep slopes, mountainous, other.

**This Plan applies to all unincorporated Snohomish County as well as twenty cities and towns. The incorporated areas included are: Arlington, Bothell, Brier, Darrington, Edmonds, Everett, Gold Bar, Granite Falls, Index, Lynnwood, Lake Stevens, Marysville, Mill Creek, Monroe, Mountlake Terrace, Mukilteo, Snohomish, Stanwood, Sultan and Woodway. The county includes a wide variety of terrain types from flat flood plains to steep slopes.**

b. What is the steepest slope on the site (approximate percent slope)?

**Not Applicable.**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

**The Natural Resources Conservation Service identifies many different soil types in the Snohomish County area.**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

**Not applicable.**

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

**No new facilities are planned under this Comprehensive Plan.**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

**No.**

g. About what percent of the site will be covered with impervious surfaces after project construction?

**Not applicable.**

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

**None proposed.**

## 2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

**This Plan will continue programs and policies that will reduce greenhouse gas (GHG) emissions to lessen the impacts of climate change.**

b. Are there any off site sources of emissions or odor that may affect your proposal? If so, generally describe.

**None.**

c. Proposed measures to reduce or control emissions or other impacts to air, if any.

**This Plan recommends several ways to reduce climate change and promote sustainability by the Solid Waste Division. This Plan proposes the following recommendations to reduce GHG emissions:**

- **Establish a baseline for Snohomish County Solid Waste Division greenhouse gas emissions.**
- **Evaluate energy-saving opportunities for new projects and conduct cost benefit analysis for energy conservation measures.**
- **Prepare annual documentation of greenhouse gas reductions based on the county's recycling activities.**

## 3. Water

### a. Surface Water

1) Is there any surface water body on or in the immediate vicinity of the site (including year round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

**There are numerous water bodies in the Snohomish County area including large rivers, streams and saltwater areas of Puget Sound.**

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe.

**No.**

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

**Not Applicable.**

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

**No.**

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

**No.**

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

**Not applicable.**

**b. Groundwater**

1) Will ground water be withdrawn, or will water be discharged to groundwater? If so, describe the type of waste and anticipated volume of discharge.

**No.**

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

**None.**

**c. Water Runoff (including storm water)**

1) Describe the source of runoff (including stormwater) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

**No new buildings or facilities are proposed as part of this Plan.**

2) Could waste materials enter ground or surface waters? If so, generally describe.

**No.**

3) Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

**None proposed.**

## 4. Plants

a. Check types of vegetation found on or in close proximity to the site:

- ☑ deciduous trees: **alder, maple, vine maple, willow**
- ☑ evergreens: **Douglas fir, cedar, pine**
- ☑ shrubs: **a variety of native and non-native shrubs are found throughout the County**
- ☑ grasses: **lawns and pasture grasses**
- ☑ pasture : **pasture is found throughout the agricultural areas of the County**
- ☑ wet soil plants: **wet soil plants are found in wetlands throughout the County**
- ☑ water plants: **water lily, eelgrass, milfoil,**
- ☑ other types of vegetation: **a variety of native and non-native and ornamental plants are found throughout the County**

b. What kind and amount of vegetation will be removed or altered?

**None.**

c. List threatened or endangered plant species known to be on or near the site.

**None.**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation of the site, if any:

**None.**

## 5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

**birds: hawks, heron, eagle, songbirds, other: owls, ducks, woodpeckers**
**mammals: deer, bear, elk, beaver, other: opossum, raccoon, coyote, small rodents,**
**fish: bass, salmon, trout, herring, shellfish, other:**

b. List any threatened or endangered wildlife species known to be on or near the site.

**No.**

c. Is the site part of a migration route? If so, explain.

**Snohomish County is within the Pacific Flyway. Migratory waterfowl can be observed throughout the county.**

d. Proposed measures to preserve or enhance wildlife, if any:

**None proposed.**

## 6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

**None.**

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

**No.**

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

**A major goal of this Plan is to support actions which will reduce climate change and promote sustainability. See section 2. Air.**

**The Plan also recommends that the Division continue to monitor developments and progress in converting Energy from Waste including new technologies, pilot plants, facility procurements and facility operating track records.**

## 7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

**The Division has operated a Moderate Risk Waste collection facility since 1996. This facility offers free disposal of household hazardous waste from Snohomish County residents and commercial businesses that generate small quantities of hazardous waste.**

1) Describe special emergency services that might be required.

**The facility has been designed to contain minor spills if they occur. The staff is trained in emergency procedures. If a major spill or fire occurred staff would contact local emergency services.**

2) Proposed measures to reduce or control environmental health hazards, if any:

**Improving solid waste collection will help reduce environmental health hazards by removing potential risks from the environment.**

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, aircraft, other)?

**Not applicable.**

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

**None.**

3) Proposed measures to reduce or control noise impacts, if any:

**None proposed.**

## 8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

**Not applicable.**

b. Has the site been used for agriculture? If so, describe.

**Not applicable.**

c. Describe any structures on the site.

**Not applicable.**

d. Will any structures be demolished? If so, what?

**No.**

e. What is the current zoning classification of the site?

**Not applicable.**

f. What is the current comprehensive plan designation of the site?

**Not applicable.**

g. If applicable, what is the current shoreline master program designation of the site?

**Not applicable.**

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

**Not applicable.**

i. Approximately how many people would reside or work in the completed project?

**Not applicable.**

j. Approximately how many people would the completed project displace?

**Not applicable.**

k. Proposed measures to avoid or reduce displacement impacts, if any:

**Not applicable.**

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

**Not applicable.**

## 9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle or low-income housing.

**Not applicable.**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

**Not applicable.**

c. Proposed measures to reduce or control housing impacts, if any:

**Not applicable.**

## 10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

**Not applicable.**

b. What view in the immediate vicinity would be altered or obstructed?

**Not applicable.**

c. Proposed measures to reduce or control aesthetic impacts, if any:

**Not applicable.**

## 11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

**Not applicable.**

b. Could light or glare from the finished project be a safety hazard or interfere with views?

**Not applicable.**

c. What existing off-site sources of light or glare may affect your proposal?

**Not applicable.**

d. Proposed measures to reduce or control light and glare impacts, if any:

**Not applicable.**

## 12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

**There are many opportunities for designated recreation throughout Snohomish County.**

b. Would the proposed project displace any existing recreational uses? If so, describe.

**No.**

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

**None proposed.**

## 13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to this site? If so, generally describe.

**There are more than 300 recorded historical sites in Snohomish County. Some of these are listed on, or eligible for, national, state or local preservation registers. The Solid Waste Plan will not directly affect any of these sites.**

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

**Not Applicable.**

c. Proposed measure to reduce or control impacts, if any:

**None proposed.**

## 14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

**Not Applicable.**

b. Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

**Not Applicable.**

c. How many parking spaces would the completed project have? How many would the project eliminate?

**Not Applicable.**

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private)

**Not Applicable.**

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

**Solid waste from Snohomish County is transported by rail to the Roosevelt Regional Landfill in Klickitat County, Washington. This method of transport is anticipated to continue under the proposed Solid Waste Comprehensive Plan.**

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

**Not Applicable.**

g. Proposed measures to reduce or control transportation impacts, if any:

**Not Applicable.**

## 15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

**Not applicable.**

b. Proposed measures to reduce or control direct impacts on public services, if any.

**Not applicable.**

## 16. Utilities

a. Utilities currently available at the site:

**Not Applicable.**

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity, which might be needed.

**Not Applicable.**

## C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:_____ Date: May 1, 2012

**Mary Auld, Senior Environmental Planner**

## D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment. When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

---

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

**The Solid Waste Division is responsible for the environmentally sound and cost effective management of solid waste produced within Snohomish County. The goal of the *Comprehensive Solid Waste Management Plan* is to reduce emissions to water, air and land through the proper collection and disposal of solid and moderate risk waste. The Division is continuing to research new ways to accomplish these goals.**

**However, there are several constraints to implementing the goals and objectives of this Plan. Collection of solid waste is not mandatory in Snohomish County. Citizens may self-haul their waste and recyclables to a transfer station. If self-hauling was eliminated, collection would be more efficient by using less vehicles to haul solid waste to the transfer station. This may reduce green house gas emissions (GHG).**

**Current and potential federal regulations related to GHG emissions could be an additional financial burden to the county as tipping fees barely cover the cost of collection, disposal, recycling, and education associated with operating a solid waste division.**

**As waste reduction and recycling programs become more effective, the amount of revenue generated is reduced. A new economic model may be required in the future to make the handling of solid waste sustainable over the long term.**

Proposed Measures to avoid or reduce such increases are:

**This updated plan focuses on two specific goals:**

**Goal 1: Support actions to reduce climate change and promote sustainability.**
**Goal 2: Ensure efficient services for a growing and changing customer base.**

**Recommendations in the plan to support Goal 1 include:**

**<u>Climate Change:</u>**
**Establishing a baseline for Solid Waste Division green house gas emissions and prepare annual documentation of greenhouse gas reductions. Evaluate energy saving opportunities for new products and conduct cost benefit analysis for energy conservation measures.**

**<u>Energy from Waste</u>**
**Continue to monitor developments and progress in Energy to Waste new technologies, pilot plant facility procurements and facility operating track records.**

**<u>Product Stewardship</u>**
**Continue to pursue and develop product stewardship programs and conduct research into how product stewardship programs could help finance curbside and other recycling/reuse collection services.**

**<u>Waste Prevention</u>**
**Promote activities such as smart shopping, use of durable grocery bags and buying in bulk. The county and cities will implement upgraded procurement policies. Specific products will continue to be targeted for waste reduction. Increased promotion of waste exchanges will be conducted.**

**Recommendations to support Goal 2 include:**

**<u>Transfer Stations</u>**
**The Division's facilities must be able to adapt to a volume shift from waste to recyclables. This could be accomplished by forming partnerships with local commercial haulers and recyclers to find additional and alternative uses for existing solid waste facilities.**

**<u>East County Needs</u>**
**Population continues to grow in the east county urban areas. As the population grows the need to provide more efficient and local collection facilities becomes more urgent. The Division will explore the possibility of using the Cathcart Way Transfer Station for a regional transfer station for commercial haulers serving the eastern parts of the county. This would reduce GHG emissions, reduce transportation times and lower costs for local haulers.**

**<u>Moderate Risk Waste (MRW)</u>**
**The Division will be planning for the acceptance of potentially new products that could be accepted through the MRW plan.**

**<u>Programs</u>**
**The Division will continue to improve existing programs including recycling, education, organic wastes and disaster debris.**

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

**The Plan outlines the continuation of many Solid Waste programs that improve the environment for plant and animal life by reducing waste and treating the waste that is generated in an environmentally and sustainably sound manner.**

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

**The Division owns and operates four transfer stations, three Neighborhood Recycling and Disposal Centers and one Moderate Risk Waste Facility. The operations and maintenance of these facilities contributes to the protection of the county's wildlife and water quality.**

**Hauling waste by rail to eastern Washington reduces the use of fossil fuels per ton-mile compared to trucking and emits fewer GHG emissions per ton.**

**Scrap metal is recovered from unsorted loads at the transfer stations and separated for recycling or reuse. In 2010 the Division diverted 1,667 tons of scrap metal.**

**Multiple programs emphasized in the Plan include measures to protect the environment. These include the continued emphasis on recycling and promoting the collection of yard debris, wood waste and food waste. The Division also operates a Household Hazardous Waste collection service that includes a drop-off center in Everett and periodic household hazardous waste collection events in other areas of the county. These services provide outlets to remove harmful chemicals from residences and safe reuse or dispose of this material.**

**Through its involvement with the non-profit "Product Policy Institute" the Division has helped establish producer responsibility legislation for electronic wastes such as televisions, computers and monitors. In the first 18 months of operation, the E-Cycle program kept 28,781 tons of electronic waste from being landfilled.**

**The Division will continue efforts to reduce the generation and toxicity of moderate risk waste, and ensure that convenient cost effective and sustainable options for its safe management are available.**

3. How would the proposal be likely to deplete energy or natural resources?

**Managing waste requires energy and use of natural resources. Waste must be collected by trucks, hauled by train to the landfill and buried. The landfill must be maintained and monitored for many years. These operations require the use of energy and fossil fuels.**

Proposed measures to protect or conserve energy and natural resources are:

**The goal of this plan is to continue to find ways to reduce the amount of waste generated and to manage the waste that is collected in the most sustainable way possible. Solid waste facilities can also serve as a testing ground for new technologies in alternative energy and energy efficiency. Programs to reduce the amount of greenhouse gases include:**

- **The Biodiesel Initiative**
- **Recycle Right Campaign**
- **Alternatives to Burning Program**

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

**Not applicable.**

Proposed measures to protect such resources or to avoid or reduce impacts are:

**Not applicable.**

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

**All waste generated by the county is disposed of in a permitted landfill. The Solid Waste Division operates and maintains several facilities including a transfer station and closed landfills. No new facilities are proposed in this Plan.**

Proposed measures to avoid or reduce shoreline and land use impacts are:

**None proposed.**

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

**This Plan is not likely to increase demands on transportation, public services or utilities. Hauling solid waste by train to the Klickitat Regional Landfill reduces the demand on roads compared to trucking the waste to the landfill.**

Proposed measures to reduce or respond to such demand(s) are:

**None proposed.**

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

**The Division is required to comply and continually coordinate with regulatory agencies such as the Department of Ecology, Washington Utilities and Transportation Commission and the Snohomish Health District.**
**In addition, the Division coordinates with multiple regional planning entities including Vision 2040, Puget Sound Partnership, Product Stewardship and Beyond Waste.**

[Statutory Authority: RCW 43.21C.110. 84-05-020 (Order DE 83-39), § 197-11-960, filed 2/10/84, effective 4/4/84.]

SNOHOMISH COUNTY COUNCIL
Snohomish County, Washington

ORDINANCE NO. 07-147

RELATING TO MANAGEMENT AND DISPOSAL OF SOLID WASTE, AND APPROVING AN INTERLOCAL AGREEMENT BETWEEN SNOHOMISH COUNTY AND ITS CITIES AND TOWNS REGARDING SOLID WASTE MANAGEMENT PURSUANT TO CHAPTER 7.35 SCC

WHEREAS, in 1990 Snohomish County and the cities and towns located within the County, entered into 20-year interlocal agreements to participate in the County's Comprehensive Solid Waste Management Plan and the County's Solid Waste System, whereby the County would provide disposal sites and the cities and towns would designate those sites for the disposal of solid waste generated within their borders; and

WHEREAS, the Solid Waste System has proven beneficial to residents, businesses, the cities and towns, and the County in providing reliable, economical, and environmentally responsible solid and moderate risk waste recycling and disposal options; and

WHEREAS, the Solid Waste System has been augmented by the construction of a new Airport Road Recycling and Transfer Station and a totally upgraded Southwest Recycling and Transfer Station, and the debts associated with these facilities will not be paid off until 2023; and

WHEREAS, the County Executive has recommended that the County enter into a new 20-year interlocal agreement titled Interlocal Agreement Between Snohomish County and Its Cities and Towns Regarding Solid Waste Management, a copy of which is attached hereto as Exhibit A, to ensure that waste and associated revenues will continue to flow to the Solid Waste System until those debts are paid off;

NOW, THEREFORE, BE IT ORDAINED:

Section 1. The County Council approves and authorizes the Executive to sign the Interlocal Agreement Between Snohomish County and Its Cities and Towns

Regarding Solid Waste Management, substantially in the form attached as Exhibit A, as contemplated by SCC 7.35.030. 7.35.040, and 7.35.050.

PASSED this 16th day of January, 2008.

SNOHOMISH COUNTY COUNCIL
Snohomish County, Washington

Chairperson

ATTEST:

Barbara Ditorski
Clerk of the Council, Asst.

(X) APPROVED

( ) EMERGENCY

( ) VETOED

DATE: 1/25/08

for County Executive

MARK SOINE
Deputy Executive

ATTEST:

Cora E. Palmer

Approved as to form only:

Deputy Prosecuting Attorney

EXHIBIT A

Exhibit A

CONFORMED COPY
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SNOHOMISH COUNTY, WASHINGTON

# INTERLOCAL AGREEMENT BETWEEN SNOHOMISH COUNTY AND ITS CITIES AND TOWNS REGARDING SOLID WASTE MANAGEMENT

WHEREAS, Snohomish County and each of the Cities and Towns executing this Agreement are authorized and directed by Chapter 70.95 RCW to prepare a Comprehensive Solid Waste Management Plan, and are further authorized by Chapter 39.34 RCW to enter into an Interlocal Agreement for the administration and implementation of said Plan; and

WHEREAS, Snohomish County prepared a Comprehensive Solid Waste Management Plan for the County and Cities and Towns of the county in 1990, and updated that Plan with the active involvement of the Cities and Towns in 2001; and

WHEREAS, the 2001 Plan update calls for significant improvements to and replacements for existing waste facilities, and the County has entered into a waste export contract that expires in 2013, and in light of these factors long term financial planning is desirable; and

WHEREAS, providing the most effective and efficient system for managing solid waste generated in Snohomish county, including its Cities and Towns, requires use of the solid waste disposal system established by the County and the Comprehensive Plan of the County to the fullest extent possible;

NOW, THEREFORE, Snohomish County and each of the Cities and Towns signing this Agreement agree as follows:

1. This Interlocal Agreement entirely replaces the previous Interlocal Agreement- Solid Waste Management that the parties entered into in 1990.

2. Definitions. For the purposes of this Interlocal Agreement, the following definitions apply:

2.1."City"/"Town" means a City or Town in Snohomish County, Washington that is a signatory to this Interlocal Agreement Between Snohomish County And Its Cities And Towns Regarding Solid Waste Management.

2.2."Comprehensive Solid Waste Management Plan" or "Comprehensive Plan" means the Snohomish County Comprehensive Solid Waste Management Plan issued in March 2002 and as amended from time to time.

2.3."County" means Snohomish County, Washington.

2.4."Interlocal Agreement" means this Interlocal Agreement Between Snohomish County and Its Cities and Towns Regarding Solid Waste Management.

2.5."Person" means an individual, firm, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever.

2.6. "Solid Waste" means all putrescible and nonputrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, and recyclable materials, with the exception of wastes listed in WAC 173-304-015 as may be amended from time to time.

2.7."Solid Waste Handling" means the management, storage, collection, transportation, treatment, utilization, processing, and final disposal of Solid Wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from such wastes or the conversion of the energy in such wastes to more useful forms or combinations thereof, and as such term may be modified by amendments to RCW 70.95.030 (23).

2.8. "System" means all facilities for Solid Waste Handling owned or operated, or contracted for, by the County, and all administrative activities related thereto.

3. Responsibilities for Waste Disposal and System. For the duration of this Interlocal Agreement, the County shall have the following responsibilities:

3.1.The County shall continue to provide for the efficient disposal of all Solid Waste generated within unincorporated areas of the County and within each of the Cities and Towns signing this Agreement to the extent, in the manner, and by facilities as described in the Comprehensive Solid Waste Management Plan. The County shall not be responsible for disposal of nor claim that this Agreement extends to Solid Waste

that has been eliminated through waste recycling activities in conformity with the Comprehensive Solid Waste Management Plan.

3.2.The County shall provide for the disposal of household hazardous wastes generated by residential households located in jurisdictions party to this Agreement at the System's existing Moderate Risk Waste Facility, or in another reasonable and similarly convenient manner.

3.3.The County shall continue to operate the System in a financially prudent manner, minimize fee increases, and use System revenues only for System purposes.

3.4.The System shall continue to be comprehensive, and include educational and other programs, as defined by the Comprehensive Plan.

4. Comprehensive Plan. For the duration of this Interlocal Agreement, each City and Town shall participate in the Comprehensive Solid Waste Management Plan prepared and periodically reviewed and revised pursuant to chapter 70.95 RCW as may be amended from time to time, provided that any City or Town shall have the right to prepare or maintain its own comprehensive solid waste management plan and to

assess a solid waste fee on its own residents. For the duration of this Interlocal Agreement each City and Town, in conformity with RCW 70.95.080 (3), as may be amended from time to time, authorizes the County to include in the Comprehensive Solid Waste Management Plan provisions for the management of Solid Waste generated within its corporate limits.

5. City Designation of County System for Solid Waste Disposal. Each City and Town shall, to the extent permitted by law, designate the County System for the disposal of all Solid Waste generated within the corporate limits of that City or Town, and within the scope of the Comprehensive Plan, and authorize the County to designate a disposal site or sites for the disposal of such Solid Waste except for recyclable and other materials removed from Solid Waste by waste recycling activities in conformity with the Comprehensive Solid Waste Management Plan. This designation of the County System shall continue in full force until December 31, 2023. The designation of the County in this section shall not reduce or otherwise affect each City or Town's control over solid waste collection as permitted by applicable state law.

6. Enforcement. The County shall be primarily responsible for enforcement of laws and regulations requiring persons to dispose of Solid Waste at sites designated by the

County. Each City and Town shall cooperate with the County in its enforcement efforts, and by ordinance shall provide that any person that disposes of Solid Waste generated within that City or Town at a site other than a site designated by the County will be guilty of a misdemeanor, except where such disposal may be otherwise permitted by state law. To the extent legally possible, the County shall be responsible for bringing enforcement actions against persons violating state statutes or County ordinances relating to the disposal of Solid Waste at sites designated by the County. However, in instances in which the County lacks legal authority to bring an enforcement action, and any City or Town possesses that authority, the County may request that City or Town bring such enforcement action. The City or Town shall comply with any such request, or through the exercise of its authority under Chapter 35.21 RCW as may be amended from time to time, ensure that Solid Waste generated within the City or Town is disposed of at those sites designated by the County. The County shall pay as System costs all reasonable costs incurred by the City or Town in taking such enforcement or other actions that are requested in writing by the County.

7. Indemnifications.

7.1.The County shall indemnify and hold harmless and defend each City and Town against any and all claims by third parties arising out of the County's operations of

the System, and have the right to settle those claims by third parties, recognizing that all costs incurred by the County thereby are System costs which must be satisfied from disposal rates. In providing a defense for Cities or Towns, the County shall exercise good faith in that defense or settlement so as to protect the City's or Town's interests. The County's agreement to indemnify the Cities and Towns for any and all claims arising out of the County's operation of the System extends to all claims caused by the actions of officers or agents of the County, including but not limited to actions which constitute misfeasance, or intentional misconduct or wrongdoing, even if the cost of such claims is held by a court of competent jurisdiction to not be a proper cost to the System. For the purpose of this paragraph, "claims arising out of the County's operations" shall include claims arising out of the ownership, control or maintenance of the System, but shall not include claims arising out of the collection of solid waste within the Cities and Towns prior to its delivery to a disposal site designated by the County or other activities under the control of the Cites or Towns.

7.2.If the County acts to defend a City or Town against a claim, the City or Town shall cooperate with the County.

7.3. The County shall defend any City or Town against any challenge, whether judicially or before an administrative hearings panel, to the Comprehensive Plan elements adopted pursuant to this Interlocal Agreement.

7.4.For purposes of this section, reference to a City or Town and to the County shall be deemed to include the officers, agents and employees of any such party, acting within the scope of their authority.

8. Duration. This Interlocal Agreement shall continue to be in full force and effect until December 31, 2023, unless terminated as described in the following paragraph.

9. Revision, Amendment, Supplementation or Termination. This Interlocal Agreement shall be reviewed by the parties in conjunction with any review of the Comprehensive Solid Waste Management Plan. The terms of the Agreement may be revised, amended or supplemented, or the Agreement as a whole may be terminated only upon the written agreement of all signatories to this Agreement executed with the same formalities as the original. No revision, amendment, supplementation or termination shall be adopted or put into effect if it impairs any contractual obligation of the County.

10. Solid Waste Advisory Committee

Pursuant to RCW 70.95.165 (3) and RCW 39.34.030 (4), and Snohomish County Code section 7.34, a Solid Waste Advisory Committee shall continue operating as specified in Snohomish County Code. Each City or Town entering into this Agreement shall be represented equally on the Committee, and shall have at least one voting member.

11. Miscellaneous.

11.1 No waiver by any party of any term or condition of this Agreement shall be deemed or construed to constitute a waiver of any other term or condition or of any subsequent breach whether of the same or of a different provision of this Agreement.

11.2 This Agreement is not entered into with the intent that it shall benefit any city or town not signing this agreement, and no other person or entity shall be entitled to be treated as a third party beneficiary of this Interlocal Agreement.

12. If any term or condition of this contract or the application thereof to any person(s) or circumstances is held invalid, such invalidity shall not affect other terms, conditions

or applications which can be given effect without the invalid term, condition or application. To this end, the terms and conditions of this contract are declared severable.

13. This Agreement may be executed in counterparts, each of which shall constitute an original, and all of which together shall constitute one and the same document.

14. Each of the individuals signing this Agreement on behalf of a municipality party to this Agreement, certifies that his or her signature has been authorized by appropriate action by ordinance, resolution or otherwise pursuant to the law of that municipality to bind the municipality to the terms of this Agreement.

This Interlocal Agreement has been executed by the parties shown below and is dated as of the _____day of _____, 2004.

| SNOHOMISH COUNTY | CITY OF ARLINGTON |
|---|---|
| _____ | _____ |
| Aaron Reardon<br>County Executive<br>APPROVED BY<br>SNOHOMISH COUNTY<br>ORDINANCE NO. _____ | Title_____<br><br>APPROVED BY<br>MOTION NO. _____<br>Or ORDINANCE NO. _____ |

Approved as to form:

Carol J. Weibel 1-5-04

Carol J. Weibel
Deputy Prosecuting Attorney

or applications which can be given effect without the invalid term, condition or application. To this end, the terms and conditions of this contract are declared severable.

13. This Agreement may be executed in counterparts, each of which shall constitute an original, and all of which together shall constitute one and the same document.

14. Each of the individuals signing this Agreement on behalf of a municipality party to this Agreement, certifies that his or her signature has been authorized by appropriate action by ordinance, resolution or otherwise pursuant to the law of that municipality to bind the municipality to the terms of this Agreement.

This Interlocal Agreement has been executed by the parties shown below and is dated as of the 28th day of January, 2003.

| SNOHOMISH COUNTY | CITY OF ARLINGTON |
|---|---|
| MARK SOINE<br>Deputy Executive<br>for County Executive | Margaret Larson<br><br>Title |
| APPROVED BY<br>SNOHOMISH COUNTY<br>ORDINANCE NO. _____ | APPROVED BY<br>MOTION NO. _____<br>Or ORDINANCE NO. _____ |

COUNCIL USE ONLY
Approved: 1-16-08
Docfile: D-10

CITY OF BRIER

_____

Title Mayor

APPROVED BY

MOTION NO. at Council Mtg. 9-23-03

Or ORDINANCE NO. _____

TOWN OF DARRINGTON

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF EDMONDS

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF EVERETT

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

13. This Agreement may be executed in counterparts, each of which shall constitute an original, and all of which together shall constitute one and the same document.

14. Each of the individuals signing this Agreement on behalf of a municipal party to this Agreement, certifies that his or her signature has been authorized by appropriate action by ordinance, resolution or otherwise pursuant to the law of that municipality to bind the municipality to the terms of this Agreement.

This Interlocal Agreement has been executed by the parties shown below and is dated as of the 28th day of January, 2003.

| | |
|---|---|
| SNOHOMISH COUNTY | BRIER |
| COUNCIL USE ONLY<br>Approved: 1-16-08<br>Docfile: D-10 | EDMONDS |
| | MUKILTEO |
| | SNOHOMISH |
| | WOODWAY |
| | Etc. |
| for MARK SOINE<br>Deputy Executive<br>County Executive | Wayne E. Kastle |
| APPROVED BY | APPROVED BY |
| SNOHOMISH COUNTY | MOTION ~~NO.~~ 9/23/03. Or |
| ORDINANCE NO. 07-147 | ORDINANCE NO. _____ |

CITY OF BRIER

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

TOWN OF DARRINGTON

Joyce A Jones
Title Mayor
APPROVED BY
MOTION NO. 7-14-04
Or ORDINANCE NO. _____

CITY OF EDMONDS

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF EVERETT

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF BRIER

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

TOWN OF DARRINGTON

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF EDMONDS

_____

Title MAYOR

APPROVED BY

MOTION ~~NO~~. ON 1-20-04

Or ORDINANCE NO. _____

CITY OF EVERETT

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF GOLD BAR

Collen Hawkins

Title Mayor

APPROVED BY

MOTION ~~NO.~~ 4/6/04

Or ORDINANCE NO. _____

CITY OF GRANITE FALLS

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

TOWN OF INDEX

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF EDMONDS

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF LAKE STEVENS

_____

Title_____

APPROVED BY

MOTION NO. _____

CITY OF GRANITE FALLS

Lyle Romach

Title Mayor

APPROVED BY

MOTION ~~NO.~~ ON MAY 25, 2005

Or ORDINANCE NO. _____

TOWN OF INDEX

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF EDMONDS

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF LAKE STEVENS

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF GOLD BAR

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF GRANITE FALLS

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

TOWN OF INDEX

_____
Title MAYOR
APPROVED BY
MOTION NO. N/A
Or ORDINANCE NO. N/A

CITY OF EDMONDS

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF LAKE STEVENS

_____
Title_____
APPROVED BY
MOTION NO. _____

13. This Agreement may be executed in counterparts, each of which shall constitute an original, and all of which together shall constitute one and the same document.

14. Each of the individuals signing this Agreement on behalf of a municipal party to this Agreement, certifies that his or her signature has been authorized by appropriate action by ordinance, resolution or otherwise pursuant to the law of that municipality to bind the municipality to the terms of this Agreement.

This Interlocal Agreement has been executed by the parties shown below and is dated as of the 27 day of August, 2003.

| | |
|---|---|
| SNOHOMISH COUNTY | BRIER |
| | EDMONDS |
| | MUKILTEO |
| | SNOHOMISH |
| | WOODWAY |
| | Etc. |

MARK SOINE
Deputy Executive

for
County Executive

1/28/08

MAYOR, TOWN OF INDEX

APPROVED BY
SNOHOMISH COUNTY
ORDINANCE NO. 07-147

COUNCIL USE ONLY
Approved: 1-16-08
Docfile: D-10

APPROVED BY
MOTION NO. N/A. Or
ORDINANCE NO. N/A

CITY OF GOLD BAR

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF GRANITE FALLS

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

TOWN OF INDEX

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF EDMONDS

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF LAKE STEVENS

Lynn E. Walty
Title Mayor
APPROVED BY minutes of 11-10-03
MOTION NO. _____

APPROVED AS TO FORM

LAKE STEVENS CITY ATTORNEY

1

CITY OF LYNNWOOD

9/1/4

Title MAYOR

APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MARYSVILLE

_____
Title _____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MILL CREEK

_____
Title _____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MONROE

_____
Title _____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

2

Or ORDINANCE NO. _____

CITY OF LYNNWOOD

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MARYSVILLE

Dennis L Kendall
Title Mayor
APPROVED BY City Council
~~MOTION NO.~~ June 28, 2004
~~Or ORDINANCE NO.~~ _____

CITY OF MILL CREEK

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MONROE

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

Or ORDINANCE NO. _____

CITY OF LYNNWOOD

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MARYSVILLE

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MILL CREEK

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MONROE

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

Or ORDINANCE NO. _____

CITY OF LYNNWOOD

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MARYSVILLE

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MILL CREEK

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MONROE

Donnetta Walser
Title Mayor 11/05/03
APPROVED BY
MOTION NO. x
Or ORDINANCE NO. _____

CITY OF MOUNTLAKE TERRACE

Connie L. Fessler

Title City Manager

COUNCIL CONSENT CALENDAR
JUNE 16, 2003

CITY OF MUKILTEO

_____

Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF SNOHOMISH

_____

Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF STANWOOD

_____

Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF SULTAN

_____

Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

1

CITY OF MOUNTLAKE TERRACE

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MUKILTEO

Joe Marine
_____
Title JOE MARINE, MAYOR
APPROVED BY 6.26.07
MOTION NO. AB 2007-68
Or ORDINANCE NO. _____

CITY OF SNOHOMISH

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF STANWOOD

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MOUNTLAKE TERRACE

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF MUKILTEO

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF SNOHOMISH

_____

Title City Manager

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF STANWOOD

_____

Title_____

APPROVED BY

MOTION NO. _____

Or ORDINANCE NO. _____

CITY OF SULTAN

_____

Title_____

APPROVED BY

MOTION NO. _____

ATTEST:

By Torchie Corey

Torchie Corey, City Clerk

APPROVED AS TO FORM:

By Grant K. Weed

Grant K. Weed, City Attorney

1

CITY OF MOUNTLAKE TERRACE

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MUKILTEO

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF SNOHOMISH

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF STANWOOD

_____
Title Mayor
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. 791

CITY OF MOUNTLAKE TERRACE

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF MUKILTEO

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF SNOHOMISH

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF STANWOOD

_____
Title_____
APPROVED BY
MOTION NO. _____
Or ORDINANCE NO. _____

CITY OF SULTAN

_____
Title Mayor
APPROVED BY
MOTION NO. 9/17/03

Or ORDINANCE NO. _____

TOWN OF WOODWAY

Carla A. Nichols

Title Mayor

APPROVED BY

MOTION NO. September 2, 2003

Or ORDINANCE NO. _____

1

RETURN NAME & ADDRESS
Snohomish County Council
attn: Barb Sibonski M/S 604
3000 Rockefeller Ave
Everett, WA 98296

200311070859 9 PGS
11-07-2003 02:41pm $0.00
SNOHOMISH COUNTY, WASHINGTON

Please print neatly or type information

Document Title(s)
Interlocal Agreement Between Snohomish County and Everett Regarding Solid Waste Mgmt

Reference Number(s) of related documents:

n/a

Additional Reference #'s on page ___

Grantor(s) (Last, First, and Middle Initial)

City of Everett

Additional Grantors on page ___

Grantee(s) (Last, First, and Middle Initial)

Snohomish County

Additional Grantees on page ___

Legal Description (abbreviated form: i.e. lot, block, plat or section, township, range, quarter/quarter)

n/a

Complete legal on page ___

Assessor's Property Tax Parcel/Account Number

n/a

Additional parcel #'s on page ___

The Auditor/Recorder will rely on the information provided on this form. The responsibility for the accuracy of the indexing information is that of the document preparer.

# INTERLOCAL AGREEMENT BETWEEN SNOHOMISH COUNTY AND EVERETT REGARDING SOLID WASTE MANAGEMENT

WHEREAS, Washington counties, cities and towns are authorized and directed by Chapter 70.95 RCW to prepare a Comprehensive Solid Waste Management Plan, and are further authorized by Chapter 39.34 RCW to enter into an Interlocal Agreement for the administration and implementation of said Plan; and

WHEREAS, Snohomish County prepared a Comprehensive Solid Waste Management Plan for the County and Cities and Towns of the county in 1990, and updated that Plan with the active involvement of the Cities and Towns in 2001; and

WHEREAS, the 2001 Plan update calls for significant improvements to and replacements for existing waste facilities, and the County has entered into a waste export contract that expires in 2013, and in light of these factors long term financial planning is desirable; and

WHEREAS, providing the most effective and efficient system for managing solid waste generated in Snohomish county, including its Cities and Towns, requires use of the solid waste disposal system established by the County and the Comprehensive Plan of the County to the fullest extent possible;

NOW, THEREFORE, Snohomish County and the City of Everett agree as follows:

1. This Interlocal Agreement entirely replaces the previous Interlocal Agreement- Solid Waste Disposal that the parties entered into in 1990.

2. Definitions. For the purposes of this Interlocal Agreement, the following definitions apply:

2.1 "City"/"Town" means a City or Town in Snohomish County, Washington that is a signatory to this Interlocal Agreement or the Interlocal Agreement Between Snohomish County And Its Cities And Towns Regarding Solid Waste Management.

2.2 "Comprehensive Solid Waste Management Plan" or "Comprehensive Plan" means the Snohomish County Comprehensive Solid Waste Management Plan issued in March 2002 and as amended from time to time.

2.3 "County" means Snohomish County, Washington.

2.4 "Interlocal Agreement" means this Interlocal Agreement Between Snohomish County and Everett Regarding Solid Waste Management.

2.5 "Person" means an individual, firm, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever.

2.6 "Solid Waste" means all putrescible and nonputrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned

vehicles or parts thereof, and recyclable materials, with the exception of wastes excluded by WAC 173-304-015.

2.7 "Solid Waste Handling" means the management, storage, collection, transportation, treatment, utilization, processing, transfer, and final disposal of Solid Wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from such wastes or the conversion of the energy in such wastes to more useful forms or combinations thereof, and as such term may be modified by amendments to RCW 70.95.030 (23).

2.8 "System" means all facilities for Solid Waste Handling owned or operated, or contracted for, by the County, and all administrative activities related thereto.

3. Responsibilities for Waste Disposal and System. For the duration of this Interlocal Agreement, the County shall have the following responsibilities:

3.1 The County shall continue to provide for the efficient disposal of all Solid Waste generated within unincorporated areas of the County and within the City of Everett to the extent, in the manner, and by facilities as described in the Comprehensive Solid Waste Management Plan. The County shall not be responsible for disposal of nor claim that this Agreement extends to Solid Waste that has been eliminated through waste recycling activities in conformity with the Comprehensive Solid Waste Management Plan.

3.2 The County shall provide for the disposal of household hazardous wastes by households at the System's existing Moderate Risk Waste Facility, or in another reasonable and similarly convenient manner.

3.3 The County shall continue to provide a comprehensive solid waste management system, including educational programs, as defined by the Comprehensive Plan.

3.4. The County shall continue to operate the System in a financially prudent manner, minimize fee increases, and use System revenues only for System purposes.

4. Comprehensive Plan. For the duration of this Interlocal Agreement, the City of Everett shall participate in the Comprehensive Solid Waste Management Plan prepared and periodically reviewed and revised pursuant to chapter 70.95 RCW, provided that the City shall have the right to maintain its own comprehensive solid waste management plan, applicable only to Everett, and continue to assess a solid waste fee on Everett residents. For the duration of this Interlocal Agreement, the City of Everett authorizes the County to include in the Comprehensive Solid Waste Management Plan provisions for the management of Solid Waste generated in Everett.

5. City Designation of County System for Solid Waste Disposal. Everett shall, to the extent permitted by law, designate the County System for the disposal of all Solid Waste generated within the corporate limits of Everett, and within the scope of the Comprehensive Plan, and authorize the County to designate a disposal site or sites for the disposal of such Solid Waste except for recyclable and other materials removed from Solid Waste by waste recycling activities in conformity with the Comprehensive Solid Waste Management Plan. This designation of the County System shall continue in full force until December

31, 2023. In the event that Everett chooses to maintain its own comprehensive solid waste management plan, that plan shall contain nothing in conflict with this designation of the County System during the term of this Interlocal Agreement. The designation of the County in this section shall not reduce or otherwise affect Everett's control over solid waste collection as permitted by applicable state law.

6. Enforcement. The County shall be primarily responsible for enforcement of laws and regulations requiring persons to dispose of Solid Waste at sites designated by the County. Everett shall cooperate with the County in its enforcement efforts, and shall provide, by ordinance, that any person that disposes of Solid Waste generated within Everett at a site other than a site designated by the County will be guilty of a misdemeanor, except where such disposal may be otherwise permitted by state law. To the extent legally possible, the County shall be responsible for bringing enforcement actions against persons violating state statutes or County ordinances relating to the disposal of Solid Waste at sites designated by the County. However, in instances in which the County lacks legal authority to bring an enforcement action, and Everett possesses that authority, the County may request that Everett bring such enforcement action. Everett shall comply with any such request, or exercise its authority under Chapter 35.21 RCW to ensure, in some other way that Solid Waste generated within Everett is disposed of at those sites designated by the County. The County shall pay as System costs all reasonable costs incurred by Everett in taking such enforcement or other actions that are requested in writing by the County.

7. Indemnifications.

7.1 The County shall indemnify and hold harmless and defend Everett against any and all claims by third parties arising out of the County's operations of the System, and have the right to settle those claims by third parties, recognizing that all costs incurred by the County thereby are System costs which must be satisfied from disposal rates. In providing a defense for Everett, the County shall exercise good faith in that defense or settlement so as to protect Everett's interests. The County's agreement to indemnify Everett for any and all claims arising out of the County's operation of the System extends to all claims caused by the actions of officers or agents of the County, including but not limited to actions which constitute misfeasance, or intentional misconduct or wrongdoing, even if the cost of such claims is held by a court of competent jurisdiction to not be a proper cost to the System. For the purpose of this paragraph, "claims arising out of the County's operations" shall include claims arising out of the ownership, control or maintenance of the System, but shall not include the claims arising out of collection of solid waste within Everett prior to its delivery to a disposal site designated by the County or other activities under the control of Everett.

7.2 If the County acts to defend Everett against a claim, Everett shall cooperate with the County.

7.3 For purposes of this section, reference to a City or Town and to the County shall be deemed to include the officers, agents and employees of any such party, acting within the scope of their authority.

8. Duration. This Interlocal Agreement shall continue to be in full force and effect until December 31, 2023, unless terminated as described in the following paragraph.

9. Revision, Amendment, Supplementation or Termination. This Interlocal Agreement shall be reviewed by the parties in conjunction with any review of the Comprehensive Solid Waste Management Plan. The terms of the Agreement may be revised, amended or supplemented, or the Agreement as a whole may be terminated only upon the written agreement of both the County and Everett executed with the same formalities as the original. No revision, amendment, supplementation or termination shall be adopted or put into effect if it impairs any contractual obligation of the County.

10. Solid Waste Advisory Committee. Pursuant to RCW 70.95.165 (3) and RCW 39.34.030 (4), and Snohomish County Code section 7.34, a Solid Waste Advisory Committee shall continue operating as specified in Snohomish County Code. The City of Everett shall have at least one voting member of the Committee.

11. Miscellaneous.

11.1 No waiver by any party of any term or condition of this Interlocal Agreement shall be deemed or construed to constitute a waiver of any other term or condition or of any subsequent breach whether of the same or of a different provision of this Interlocal Agreement.

11.2 Notwithstanding the fact that Everett understands and agrees that the County intends to enter into agreements substantially similar to this one with

all the other Cities and Towns located within the County's boundaries, the only parties to this Interlocal Agreement are the County and Everett, and no other person or entity shall be entitled to be treated as a third party beneficiary of this Interlocal Agreement.

12. If any term or condition of this Interlocal Agreement or the application thereof to any person(s) or circumstances is held invalid, such invalidity shall not affect other terms, conditions or applications which can be given effect without the invalid term, condition or application. To this end, the terms and conditions of this Interlocal Agreement are declared severable.

This Interlocal Agreement has been executed by the parties shown below and is dated as of the 5th day of NOVEMBER, 2003.

SNOHOMISH COUNTY

Gary Weikel 9/3/03

Bob Drewel
County Executive

GARY WEIKEL
Deputy Executive

APPROVED BY

SNOHOMISH COUNTY

ORDINANCE NO. 03-114

EVERETT

Frank E. Anderson

Frank Anderson
Mayor of Everett

APPROVED BY

EVERETT

ORDINANCE NO. 2716-03

ATTEST:

Sharon Marks

City Clerk

APPROVED AS TO FORM:

Carol Weibel 9-2-03
Deputy Prosecuting Attorney

APPROVED AS TO FORM:

Mark Soine
City Attorney

D-7

Unofficial Copy

After Recording Return to.

Assistant Clerk
Snohomish County Council
3000 Rockefeller, M/S 609
Everett, WA 98201

201107080092 29 PGS
07/08/2011 9:44am $0.00
SNOHOMISH COUNTY, WASHINGTON

Agencies: Snohomish County and City of Bothell
Tax Account No.: N/A
Legal Description: N/A
Reference No. of Documents Affected: Interlocal Recorded at AF#_____
Filed with the Auditor pursuant to RCW 39.34.040
Documents Title:

# MASTER ANNEXATION INTERLOCAL AGREEMENT BETWEEN THE CITY OF BOTHELL AND SNOHOMISH COUNTY CONCERNING ANNEXATION AND URBAN DEVELOPMENT WITHIN THE BOTHELL MUNICIPAL URBAN GROWTH AREA

## 1. PARTIES

This Interlocal Agreement ("Agreement" or "ILA") is made by and between the City of Bothell ("City"), a Washington municipal corporation, and Snohomish County ("County"), a political subdivision of the State of Washington, individually referred to as a "Party" and collectively as the "Parties," pursuant to Chapter 36.70A RCW (Growth Management Act), Chapter 36.115 RCW (Governmental Services Act), Chapter 43.21C RCW (State Environmental Policy Act), Chapter 36.70B RCW (Local Project Review), Chapter 58.17 RCW (Subdivisions), Chapter 82.02 RCW (Excise Taxes), and Chapter 39.34 RCW (Interlocal Cooperation Act).

## 2. PURPOSE, INTENT AND APPLICABILITY

2.1 Purpose. The purposes of this Agreement are to facilitate an orderly transition of services and responsibility for capital projects from the County to the City at the time of annexation of unincorporated areas of the County to the City; and, both prior to and following annexation, to address reciprocal mitigation of interjurisdictional land development impacts and joint planning of City and County services and facilities having interjurisdictional implications. This Agreement is intended to serve as a master annexation interlocal agreement addressing all future annexations by the City of unincorporated County territory.

2.2 Snohomish County Tomorrow Annexation Principles. The County and the City intend that this Agreement be interpreted in a manner that furthers the objectives articulated in the Snohomish County Tomorrow Annexation Principles. For the purpose of this Agreement, the Snohomish County Tomorrow Annexation Principles means that document adopted by the

Snohomish County Tomorrow Steering Committee on February 28, 2007, and supported by the Snohomish County Council in Joint Resolution No. 07-026 passed on September 5, 2007. The Snohomish County Tomorrow Annexation Principles are attached to this Agreement as Exhibit A. As provided for in the Annexation Principles, the City opts out of preparing and maintaining a Six Year Annexation Plan because at the effective date of this Agreement, the City is considering annexations which comprise the entire Bothell Municipal Urban Growth Area (MUGA) as it exists at the time of this Agreement.

2.3 Establish a framework for future annexations. The City and County intend that this Agreement provide a framework for future annexations within the Bothell MUGA to implement urban development standards within the Bothell MUGA prior to annexation, to plan for and fund capital facilities in the unincorporated portion of the Bothell MUGA, and to enable consistent responses to future annexations.

2.4 Subsequent agreements and interpretations. The City and County recognize that this Agreement includes general statements of principle and policy, and that addenda or amendments to existing interlocal agreements or government service agreements or subsequent agreements on specific topical subjects relating to annexation and service transition may be executed. By way of example only, and not by way of limitation, the City and County contemplate that such subsequent amendments or agreements might address the following types of issues: roads and traffic impact mitigation; surface water management; parks, recreation and open space; police services; fire marshal services; permit review services; revenue- and cost-sharing; common zoning and development standards; and sub-area planning. In addition, a subsequent agreement or an addendum to this Agreement might address issues related to the annexation of a specific area. In the event that any term or provision in this Agreement conflicts with any term or provision in any subsequent agreement, addendum or amendment, the term or provision in the subsequent agreement, addendum or amendment shall prevail unless specifically stated otherwise in this Agreement.

2.5 Applicability. This Agreement applies to all annexations within the geographic areas described in Subsection 2.6 of this Agreement that will be finalized by the City after the effective date of this Agreement.

2.6 Geographic areas eligible for annexation.

2.6.1 Appendix B of the Snohomish County Countywide Planning Policies, as now existing or hereafter amended, identifies the Bothell MUGA in the Southwest Urban Growth Area (SWUGA) Map, which is a component of the County's Countywide Planning Policies. It is within the Bothell MUGA,

as now existing or hereafter amended, in accordance with the Snohomish County Countywide Planning Policies, that the City may consider future annexations. The area of the SWUGA map which shows the Bothell MUGA at the time of the effective date of this Agreement is attached to this Agreement as Exhibit B.

2.6.2 If the City proposes any annexation which would include territory located within the SWUGA but outside of the Bothell MUGA as adopted in the Countywide Planning Policies, and the city in whose MUGA such territory is located agrees in writing to the proposed annexation boundaries, the County may not oppose the annexation based solely on such territory being outside of the Bothell MUGA.

2.6.3 Pursuant to RCW 35A.14.410, the boundaries arising from an annexation of territory shall not include a portion of the right-of-way of any public street, road, or highway except where the boundary runs from one edge of the right-of-way to the other edge of the right-of-way. When such right-of-way of any public street, road, or highway is included in an annexation proposal, it shall be considered a part of the City's MUGA.

## 3. GENERAL PROVISIONS

3.1 Consistency of Annexation. If the Snohomish County Council finds that a proposed annexation within the Bothell MUGA is consistent with this Agreement, the objectives established in RCW 36.93.180, and the health, safety and general welfare of Snohomish County citizens affected by the annexation, and that an addendum pursuant to Section 16 of this Agreement is completed or is not necessary, the County shall not oppose the proposed annexation and will send a letter to the Boundary Review Board in support of the proposed annexation.

3.2 Public facilities and services. The City and County share a commitment to ensure that public facilities and services which are within the funding capacities of the City and County will be adequate to serve development within the MUGA at the time such development is available for occupancy and use without decreasing current service levels below locally established minimum standards.

3.3 Reciprocal mitigation and impact fees. The City and County believe it is in the best interest of the citizens of both jurisdictions to enable reciprocal imposition of impact mitigation requirements and regulatory conditions for improvements in the respective jurisdictions. A separate interlocal agreement known as the *"Interlocal Agreement between Snohomish County and the City of Bothell on Reciprocal Mitigation of Transportation Impacts,"* which was effective on August 9, 2006, addressing reciprocal transportation impact mitigation, already exists between the City and the

County. Other interlocal agreements on reciprocal mitigation may be negotiated after the effective date of this Agreement as described in Subsection 2.4 of this Agreement. Whether impact fees can be collected and transferred between the County and the City will depend, in part, on the circumstances of any individual annexation and the plans of the jurisdictions to provide improvements for the benefit of the annexed area.

3.4 Joint planning provision. The City and County recognize the need for joint planning to establish local and regional facilities the jurisdictions have planned or anticipate for the area, to identify ways to jointly provide these facilities, and to identify transition of ownership and maintenance responsibilities as annexations occur. This need may result in mutual ongoing planning efforts, joint capital improvement plans, and reciprocal impact mitigation. By way of example only, and not by way of limitation, joint planning issues may include: planning, design, funding right-of-way acquisition, construction, and engineering for road projects; regional transportation plans; infrastructure coordination; watershed management planning; capital construction and related services; parks, recreation, and open space; permit review services; revenue and cost-sharing; adoption of common zoning and development standards; and sub-area planning.

3.5 City to adopt County codes and ordinances. The City agrees to adopt by reference the County codes and ordinances listed in Exhibit C of this Agreement for the purpose of allowing the County to process and complete permits and fire inspections in annexed areas. Adoption of the County's codes by the City in no way affects projects applied for under the City's jurisdiction. The County shall be responsible for providing copies of all the codes and ordinances listed in Exhibit C of this Agreement, in addition to all the updates thereto, to the Bothell City Clerk, so that the City Clerk may maintain compliance with RCW 35A.12.140.

3.6 City and County responsibilities. Within their own jurisdictions, the County and the City each have responsibility and authority derived from the Washington State Constitution, state statutes, and any local charter to plan for and regulate uses of land and resultant environmental impacts.

3.7 Intergovernmental cooperation for extra-jurisdictional impacts. The City and the County recognize that land use decisions and transportation planning can have extra-jurisdictional impacts and that intergovernmental cooperation is an effective manner to deal with impacts and opportunities that transcend local jurisdictional boundaries.

3.8 Coordinated Planning. The City and the County recognize that sub-area planning related to interjurisdictional coordination as outlined in the Snohomish County Tomorrow Annexation Principles facilitate the transition of services from the County to the City in the event of an

annexation. Addenda or amendments to existing interlocal agreements or government service agreements, or subsequent agreements on specific topical subjects relating to annexation and service transition, as described in Subsection 2.4 of this Agreement, will reflect joint planning between the City and the County relative to the Snohomish County Tomorrow Annexation Principles.

3.9 Taxes, fees, rates, charges, and other monetary adjustments. In reviewing annexation proposals, the City and County must consider the effect on the finances, debt structure, and contractual obligations and rights of all affected governmental units. Tax and revenue transfers are generally provided for by state statute.

3.10 Wetland mitigation sites and habitat projects. The City and County share a commitment to ensure the success of wetland mitigation sites and habitat improvement projects. The City and County agree that both jurisdictions will benefit from the maintenance and monitoring of publicly constructed and maintained wetland mitigation sites and habitat improvement projects. If such sites or projects exist in an annexation area, the City and County may enter into an agreement prior to the effective date of the annexation to determine responsibility and costs for maintenance and monitoring for wetland mitigation sites and habitat improvement projects.

## 4. GROWTH MANAGEMENT ACT ("GMA") AND LAND USE

4.1 Urban density requirements. Except as may be otherwise allowed by law, the City agrees to adopt and maintain land use designations and zones that will accommodate the population and employment allocations assigned by the County under the GMA for the City and the Bothell MUGA as established in Appendix B of the Countywide Planning Policies for Snohomish County. The City reserves the right to designate and zone land within the City to accommodate such allocations irrespective of internal boundaries between King and Snohomish Counties and between prior City limits and newly annexed territory. Should such designation and zoning result in a different growth allocation for the Snohomish County portion of the City, then consultation with Snohomish County Tomorrow for amendments to Appendix B of the Countywide Planning Policies of Snohomish County shall be required. Nothing in this Subsection 4.1 shall be deemed as a waiver of the City's right to appeal the assignment of such population and employment allocation under the GMA.

4.2 Land Use, Urban Centers and Transit Corridor Requirements. The City agrees to ensure after annexation that the City's comprehensive plan and development regulations will provide for land use designations and zones necessary to support transit corridors designated by the County or a

transit agency or to be consistent with the land use designations and zones adopted by the County in its comprehensive plan prior to annexation.

4.3 Transfer of Development Rights. If an area to be annexed has been designated a Transfer of Development Rights (TDR) receiving area by the County, the City agrees that after annexation, the area shall remain a TDR receiving area or the City shall ensure that other areas of the City are designated TDR receiving areas so that the City's development regulations provide equivalent or greater receiving capacity for receiving TDR certificates and equivalent or greater incentives for the use of TDR certificates.

4.4 City standards. The County agrees to encourage land use project permit applicants within the Bothell MUGA to design projects consistent with the City's urban design and development standards; however, the City agrees that the County can require only that an applicant comply with the County's development regulations. The City agrees to make written recommendations to the County on how proposed land use permit applications could be made consistent with City standards. When approval of a project permit is contingent upon extension of water or sewer service provided by the City, the County agrees to impose only those conditions related to the provision of such service voluntarily negotiated between the property owner or developer and the City as a condition of a water or sewer contract between the property owner or developer and the City, provided that the conditions meet minimum County development standards and mitigation conditions.

4.5 Joint review of permit applications. The City and County recognize that it is in the best interest of both jurisdictions to engage in the shared review of County permit applications within areas anticipated for annexation. The City and County agree to consider a potential subsequent agreement relating to shared permit review.

## 5. PROCESSING OF PERMITS IN THE BOTHELL MUGA

5.1 Definitions. For the purposes of this Agreement, the following definitions apply:

"Building permit application" shall mean an application for printed permission issued by the authorizing jurisdiction that allows for the construction of a structure, and includes repair, alteration, or addition of or to a structure.

"Associated permit application" shall mean an application for mechanical, electrical, plumbing and/or sign permit for a structure authorized pursuant to a building permit.

"Land use permit application" shall mean an application for any land

use or development permit or approval and shall include, by way of example and not by way of limitation, any of the following: subdivisions, planned residential developments, short subdivisions, binding site plans, single family detached units, conditional uses, special uses, rezones, shoreline substantial development permits, grading or land disturbing activity permits and variances. A "land use permit application" shall not include a "building permit application" except for non-single family building permits for structures greater than 4,000 square feet in size.

"Pending permit applications" shall mean all building permit applications, associated permit applications and land use permit applications respecting real property located in an annexation area that are either (i) still under review by the County on the effective date of the annexation, or (ii) for which a decision has been issued but an administrative appeal is pending on the effective date of the annexation.

"Permit review phase" shall mean a discrete stage of or discrete activity performed during a jurisdiction's review of a pending permit application that has a logical starting and stopping point. By way of example, and not by way of limitation, applications for subdivisions and short subdivisions are deemed to have the following permit review phases: (i) preliminary plat approval; (ii) plat construction plan approval; (iii) revision, alteration or modification of a preliminary plat approval; (iv) construction inspection; (v) final plat processing; and (vi) final plat approval and acceptance. When it is not clear which activities related to the review of a particular pending permit application constitute a distinct permit review phase, the County and the City shall determine same by mutual agreement, taking into account considerations of convenience and efficiency.

5.2 City consultation on County land use permit applications. After the effective date of this Agreement, the County agrees to give the City timely written notice and review opportunity related to all land use permit applications inside the Bothell MUGA, as defined in Subsection 5.1 of this Agreement. The County will invite City staff to attend meetings between County staff and the applicant relating to such permit applications, including pre-application meetings.

5.3 Review of County land use permit applications. All land use permit applications under County jurisdiction in the Bothell MUGA will be reviewed consistent with all applicable laws, regulations, rules, policies and agreements including, but not limited to, the applicable provisions of this Agreement, the State Environmental Policy Act (Chapter 43.21C RCW) and the Snohomish County Code.

5.4 Permits issued by County prior to effective date of annexation. All building permits, associated permits and land use permits and approvals respecting real property located in an annexation area that were issued or

approved by the County prior to the effective date of an annexation shall be given full effect by the City after the annexation becomes effective. Any administrative appeals of such decisions that are filed after the effective date of the annexation shall be filed with the City and handled by the City pursuant to the City's municipal code.

5.5 Enforcement of County conditions. Any conditions imposed by the County relating to the issuance or approval of any of the permits described in Subsection 5.4 above shall be enforced by the City after the effective date of an annexation to the same extent the City enforces its own permit conditions. The County agrees to make its employees available, at no cost to the City, to provide assistance in enforcement of conditions on permits originally processed and issued by the County.

5.6 Pending permit applications.

5.6.1 Vesting. The County and the City agree that any complete building permit application, associated permit application or land use permit application respecting real property located in an annexation area that is submitted to the County prior to the effective date of an annexation and that has vested under Washington statutory or common law or the Snohomish County Code shall remain subject to the laws and regulations of the County that were in effect at the time the permit application was deemed complete by the County, notwithstanding any subsequent annexation.

5.6.2 Automatic transfer of authority regarding permits. The County and the City understand and agree that the police power with respect to real property located in an annexation area automatically transfers from the County to the City on the effective date of an annexation. The Parties understand and agree that it is the police power that provides local jurisdictions with the authority to impose and implement building and land use regulations. Accordingly, the Parties understand and agree that, as a matter of law, all responsibility for and authority over pending permit applications automatically transfers from the County to the City on the effective date of an annexation.

5.6.3 Completing the active phase of review. The County and the City agree that to facilitate an orderly transfer of pending permit applications to the City after the effective date of an annexation, it is desirable for the County to continue processing all pending permit applications through the completion of the permit review phase that was in progress on the effective date of the annexation. Accordingly, beginning on the effective date of any annexation governed by this Agreement, the County shall act as the City's agent for the limited purpose of reviewing and processing all pending permit applications until such time as County personnel have completed the permit review phase that was in progress on the effective

date of the annexation at issue. Upon completion of such permit review phase with respect to any particular pending permit application, the County shall transfer all materials relating to the pending permit application to the City. After such transfer, the City shall perform all remaining permit review and approval activities.

5.6.4 Urban Center permit vesting. The County and the City agree that any complete building permit application, associated permit applications or land use permit application respecting Urban Center zoned real property located in an annexation area that is submitted to the County prior to the effective date of an annexation and that has vested under Washington statutory or common law or the Snohomish County Code shall remain subject to the laws and regulations of the County that were in effect at the time the permit application was deemed complete by the County, notwithstanding any subsequent annexation.

5.6.5 Urban Center permit review. The County shall involve the City in the review of an Urban Center permit application as outlined in chapter 30.34A SCC, the County regulations governing Urban Center development.

5.6.6 Urban Center application and annexation. All pending Urban Center permit applications within an annexed area shall be transferred to the City after the effective date of annexation pursuant to provisions of Subsection 5.6.3, but in the event the County and City cannot agree on when the transfer of the Urban Center permit applications shall occur, the County shall continue to review and process the pending Urban Center permit applications until such time the County determines the transfer of permit application is appropriate.

5.6.7 Exception for administrative appeals. Notwithstanding anything to the contrary contained in Subsection 5.6.3 and 5.6.6 above, the County and the City agree that it is not desirable for the County's quasi-judicial hearing officers or bodies to act as agents for the City for the purposes of hearing and deciding administrative appeals of permit decisions on behalf of the City, but it is also not desirable to disrupt an administrative appeal that is already in progress on the effective date of an annexation. Accordingly, if the permit review phase that was in progress on the effective date of an annexation was an administrative appeal of a decision made by the County, then that administrative appeal shall be handled as follows: (i) if the appeal hearing has not yet occurred as of the effective date of the annexation, then all materials related to the appeal shall be transferred to the City as soon as reasonably possible after the effective date of the annexation and the appeal shall be handled by the City pursuant to the procedures specified in the City's municipal code; (ii) if the appeal hearing has already occurred as of the effective date of the annexation,

but no decision has yet been issued by the County's quasi-judicial hearing officer or body, then the County's quasi-judicial hearing officer or body shall act as an agent for the City and issue a timely decision regarding the administrative appeal on behalf of the City; or (iii) if a decision regarding the administrative appeal was issued by the County's quasi-judicial hearing officer or body prior to the effective date of the annexation, but a timely request for reconsideration was properly filed with the County prior to the effective date of the annexation, then the County's quasi-judicial hearing officer or body shall act as an agent for the City and issue a timely decision on reconsideration on behalf of the City.

5.6.8 Effect of decisions by the County regarding permit review phases. The City shall respect and give effect to all decisions made by the County regarding those permit review phases for a pending permit application that are completed by the County prior to the transfer of the pending permit application to the City, regardless of whether such decisions were made by the County on its own behalf prior to the effective date of annexation, or on behalf of the City after the effective date of annexation.

5.6.9 Proportionate sharing of permit application fees. The County and the City agree to proportionately share the permit application fees for pending permit applications. Proportionate shares will be calculated based on the County's permitting fee schedule. With respect to each pending permit application, the County shall retain that portion of the permit application fees that is allocable to the phases of review completed by the County prior to the effective date of the annexation. In compensation for the County's work in reviewing pending permit applications on behalf of the City, the County shall also retain that portion of the permit application fees that is allocable to the phase(s) of review completed by the County while acting as an agent of the City. The County shall transfer to the City any remaining portion of the permit application fees collected, which shall be commensurate with the amount of work left to be completed with respect to the pending permit application at the time the pending permit application is transferred to the City.

5.6.10 Dedications or conveyances of real property. The City and the County acknowledge and agree that after the effective date of an annexation the County Council will have no authority to accept dedications or other conveyances of real property to the public with respect to real property located in the area that has been annexed by the City. Accordingly, notwithstanding anything to the contrary contained elsewhere in this Section 5, after the effective date of any annexation governed by this Agreement, the approval and acceptance of final plats or other instruments or documents dedicating or conveying to the public an interest in real property located in the annexed area will be transmitted to the City for acceptance by the City Council.

5.7 Judicial appeals of permit decisions. The County shall be responsible for defending, at no cost to the City, any judicial appeals of decisions regarding building permit applications, associated permit applications and/or land use permit applications respecting real property located in an annexation area that were made or issued by the County prior to the effective date of the annexation. The City shall be responsible for defending, at no cost to the County, any judicial appeals of decisions regarding building permit applications, associated permit applications and/or land use permit applications respecting real property located in an annexation area that are made or issued after the effective date of the annexation, regardless of whether such decisions are made or issued by City personnel or by the County in its capacity as an agent for the City pursuant to Subsection 5.6 of this Agreement.

5.8 Permit renewal or extension. After the effective date of annexation, any request or application to renew or extend a building permit, an associated permit or a land use permit respecting real property located in the annexed area shall be submitted to and processed by the City, regardless of whether such permit was originally issued by the County or the City.

5.9 Administration of bonds. The County's interest in any outstanding performance security, maintenance security or other bond or security device issued or provided to the County to guarantee the performance, maintenance or completion by a permittee of work authorized by or associated with a permit respecting real property located in an annexation area will be assigned or otherwise transferred to the City upon the effective date of the annexation if such assignment or transfer is reasonably feasible. If it is not reasonably feasible for the County to transfer any outstanding bond or security device to the City, whether due to the terms of the bond or security device at issue or for some other reason, then the County shall continue to administer the bond or security device until the earlier to occur of the following: (i) the work guaranteed by the bond or security device has been properly completed; (ii) the City has been provided with an acceptable substitute bond or security device; or (iii) the bond or security device has been foreclosed. For bonds and security devices that the County continues to administer after the effective date of annexation, the City shall notify the County when either the work guaranteed by the bond or security device is completed, or when the City is provided with an acceptable substitute bond or security device, at which time the County shall release the original bond or security device. Should it become necessary to foreclose any bond or security device the County continues to administer after the effective date of annexation, the County and the City shall cooperate to perform such foreclosure.

5.10 Building and land use code enforcement cases. Any pending building or

land use code enforcement cases respecting real property located in an annexation area will be transferred to the City on the effective date of the annexation. Any further action in those cases will be the responsibility of the City at the City's discretion. The County agrees to make its employees available as witnesses at no cost to the City if necessary to prosecute transferred code enforcement cases. Upon request, the County agrees to provide the City with copies of any files and records related to any transferred case.

## 6. RECORDS TRANSFER AND ACCESS TO PUBLIC RECORDS FOLLOWING ANNEXATION

6.1 Records to be transferred. Prior to and following annexation of unincorporated area into the City, and upon the City's request in writing, copies of County records relevant to jurisdiction, the provision of government services and permitting within the annexation area may be copied and transferred to the City in accordance with the procedure identified in Subsection 6.2 of this Agreement. Said records shall include, but are not limited to, the following records from the Snohomish County Department of Public Works, the Snohomish County Department of Planning and Development Services, and the Business Licensing Department of the Snohomish County Auditor's office: all permit records and files, inspection reports and approved plans, GIS data and maps in both printed and electronic versions, approved zoning files, code enforcement files, fire inspection records, easements, plats, databases for land use, drainage, street lights, streets, regulatory and animal license records, records relating to data on the location, size and condition of utilities, and any other records pertinent to the transfer of services, permitting and jurisdiction from the County to the City. The County reserves the right to withhold confidential or privileged records. In such cases where the County opts to withhold such records, it shall provide the City with a list identifying the records withheld.

6.2 Procedure for copying. The City records staff shall discuss with the County records staff the types of records identified in Subsection 6.1 of this Agreement that are available for an annexed area, the format of the records, the number of records, and any additional information pertinent to a request of records. Following this discussion, the County shall provide the City with a list of the available files or records in its custody. The City shall select records from this list and request in writing their transfer from the County to the City. The County shall have a reasonable time to collect, copy, and prepare for transfer of the requested records. All copying costs associated with this process shall be borne by the City. When the copied records are available for transfer to the City, the County shall notify the City and the City shall arrange for their delivery.

6.3 Electronic data. In the event that electronic data or files are requested by the City, the City shall be responsible for acquiring any software licenses that are necessary to use the transferred information.

6.4 Custody of records. The County shall retain permanent custody of all original records. No original records shall be transferred from the County to the City. As the designated custodian of original records, the County shall be responsible for compliance with all legal requirements relating to their retention and destruction as set forth in Subsection 6.5 of this Agreement.

6.5 Records retention and destruction. The County agrees to retain and destroy all public records pursuant to this Agreement consistent with the applicable provisions of Chapter 40.14 RCW and the applicable rules and regulations of the Secretary of State, Division of Archives and Records Management.

6.6 Public records requests. Any requests for copying and inspection of public records shall be the responsibility of the Party receiving the request. Requests by the public shall be processed in accordance with Chapter 42.56 RCW and other applicable law. The City agrees to withhold from disclosure documents which the County has requested remain confidential and not be disclosed where disclosure is not mandated by law.

## 7. COUNTY CAPITAL FACILITIES REIMBURSEMENT

7.1 Consultation regarding capital expenditures. The County will consult with the City in planning for new local and regional capital construction projects within the Bothell MUGA. The County and City agree to begin consultation regarding existing active County projects within sixty (60) days of approval of this Agreement. Consultation shall include discussions between the County and the City regarding the need for shared responsibilities in implementing capital projects, including the potential for indebtedness by bonding or loans. The City and County shall pursue cooperative financing for capital facilities where appropriate. Interlocal agreements addressing shared responsibilities for capital projects within the Bothell MUGA shall be negotiated, where appropriate.

7.2 Continued planning, design, funding, construction, and services for active and future capital projects. Separate interlocal agreements for specific projects will address shared responsibilities for local capital projects and local share of regional capital facilities within the Bothell MUGA and the continued provision of County services relating to the planning, design, funding, property acquisition, construction, and engineering for local capital projects within an annexation area. An annexation addendum

under Section 16 of this Agreement will document appropriate interlocal agreements relating to planning, design, funding, property acquisition, construction, and other architectural or engineering services for active and future capital projects within an annexation area.

7.3 Capital facilities finance agreements. The City and County will discuss project-specific interlocal agreements for major new local capital facility projects and local share of regional capital facilities within the Bothell MUGA. Depending on which jurisdiction has collected revenues, these agreements may include: transfers of future revenues from the City to the County or from the County to the City; proportionate share reimbursements from the City to the County or from the County to the City; and City assumption of County debt service responsibility (or County assumption of City debt service responsibility) for loans or other financing mechanisms for new local capital projects and existing local capital projects with outstanding public indebtedness within the annexation area at the time of annexation. Both Parties agree that there should not be any reimbursement for capital facility projects that have already been paid for by the citizens of the annexing area by means such as special taxes or assessments, traffic mitigation, or other attributable funding sources.

7.4 Continuation of latecomers cost recovery programs and other capital facility financing mechanisms. After annexation, the City agrees to continue administering any non-protest agreements, latecomer's assessment reimbursement programs established pursuant to Chapter 35.72 RCW, or other types of agreements or programs relating to future participation or cost-share reimbursement, in accordance with the terms of any agreement recorded with the Snohomish County Auditor relating to property within the Bothell MUGA. In addition to the recorded documents, the County will provide available files, maps, and other relevant information necessary to effectively administer these agreements or programs. If a fee is collected for administration of any of the programs or agreements described in this Subsection 7.4, the County agrees to transfer a proportionate share of the administration fee collected to the City, commensurate with the amount of work left to be completed on the agreement. The proportionate share will be based on the County's fee schedule.

## 8. ROADS AND TRANSPORTATION

8.1 Annexation of County road right-of-ways. Except for noncontiguous municipal purpose annexations under RCW 35.13.180 or 35A.14.300, the City agrees to propose annexation of the entire right-of-way of County roads adjacent to an annexation boundary. As used in Section 8 of this Agreement, "County road" means "County road" as defined in RCW 36.75.010(6). The City agrees to assume full ownership, legal control and

maintenance responsibility for County roads and associated drainage facilities within the annexed area upon the effective date of annexation, unless otherwise mutually agreed in writing.

8.2 Road maintenance responsibility. Where possible, the City agrees to annex continuous segments of County road to facilitate economical division of maintenance responsibility and avoid discontinuous patterns of alternating City and County road ownership. Where annexation of segments of County road are unavoidable, the City and County agree to consider a governmental services agreement providing for maintenance of the entire County road segment by the jurisdiction best able to provide maintenance services on an efficient and economical basis.

8.3 Traffic Mitigation and Capital Facilities

8.3.1 Reciprocal impact mitigation. The City and County have agreed to mutually enforce each other's traffic mitigation ordinances and policies to address multi-jurisdictional impacts under the terms and conditions provided in the *"Interlocal Agreement between Snohomish County and the City of Bothell on Reciprocal Mitigation of Transportation Impacts,"* which was effective on August 9, 2006. In addition to the agreement adopted on August 9, 2006 and referenced in this Subsection 8.3.1, the Parties may enter into another agreement that addresses implementation of common MUGA development standards (including access *and circulation requirements), level of service standards, concurrency management* systems, and other transportation planning issues.

8.3.2 Transfer of road impact fees. The County collects road impact fees pursuant to Chapter 30.66B of the Snohomish County Code. Where the annexation area includes system improvements for which road impact fees have been collected and which remain programmed for improvements, the County and City will negotiate transfers of all or a portion of these fees to the City to construct the improvements. Any issues relating to unbudgeted improvements for the annexation area shall be resolved prior to the transfer of any road impact fees. Road impact fees shall not be transferred to the City until maintenance and ownership responsibilities of road system improvements have been determined.

8.3.3 Reimbursement for transportation-related capital facilities investment. There will be no reimbursement from the City to the County for existing capital improvements. However, the County and the City may agree to develop separate agreements for cost sharing for new capital improvement projects.

8.4 Joint planning for transit-oriented development implementation. The City and County agree to cooperate on the development of transit-oriented

development regulations and transit supportive policies to implement County and City comprehensive planning policies.

8.5 Maintenance services. The City and County agree to evaluate whether an interlocal agreement addressing maintenance of roads, traffic signals, or other transportation facilities will be appropriate. Any County maintenance within an annexation area after the effective date of an annexation will be by separate service agreement negotiated between the City and County.

## 9. SURFACE WATER MANAGEMENT

9.1 Legal control and maintenance responsibilities. If an annexation area includes surface water management improvements or facilities (i) in which the County has an ownership interest, (ii) over or to which the County has one or more easements for access, inspection and/or maintenance purposes, and/or (iii) with respect to which the County has maintenance responsibilities, all such rights and responsibilities shall be transferred to the City by the end of the calendar year in which the annexation becomes effective, except as otherwise negotiated between the City and County in any subsequent agreements. The County agrees to provide a list of all such known surface water management improvements and facilities to the City prior to the start of negotiations. If the County's current Annual Construction Program or Surface Water Management Division budget includes major surface water projects in the area to be annexed, the City and County will determine how funding, construction, programmatic and subsequent operational responsibilities, legal control and responsibilities will be assigned for these improvements, and the timing thereof, under the provisions of RCW 36.89.050, RCW 36.89.120 and all other applicable authorities.

9.2 Taxes, fees, rates, charges and other monetary adjustments. The City recognizes that service charges are collected by the County for unincorporated areas within designated Watershed Management Areas. Watershed management service charges are collected at the beginning of each calendar year through real property tax statements. Upon the effective date of an annexation, the City hereby agrees that the County may continue to collect and, pursuant to Chapter 25.20 SCC and to the extent permitted by law, to apply the service charges collected during the calendar year in which the annexation occurs to the provision of watershed management services designated in that year's budget. These services, which do not include servicing of drainage systems in road rights-of-way, will be provided through the calendar year in which the annexation becomes effective and will be of the same general level and quality as those provided to other property owners subject to service charges in the County.

9.3 Compliance with NPDES Municipal Stormwater Permit. The parties acknowledge that upon the effective date of any annexation, the annexation area will become subject to the requirements of the City's Phase II NPDES Municipal Stormwater Permit, and will no longer be subject to the requirements of the County's Phase I NPDES Municipal Stormwater Permit. Notwithstanding the County's continued provision of stormwater management services in an annexation area pursuant to Subsection 9.2 above, the City expressly acknowledges, understands and agrees that from and after the effective date of any annexation (i) the City shall be solely responsible for ensuring the requirements of the City's NPDES Permit are met with respect to the annexation area, and (ii) any stormwater management services the County continues to provide in the annexation area pursuant to Section 9.2 above will not be designed or intended to ensure or guarantee compliance with the requirements of the City's Phase II NPDES Permit.

9.4 Access during remainder of calendar year in which annexation occurs. To ensure the County is able to promptly and efficiently perform surface water management services in the annexation area after the effective date of annexation, as described in Subsection 9.2 above, the City shall provide the County with reasonable access to all portions of the annexation area in which such services are to be performed. Reasonable access shall include, by way of example and not by way of limitation, the temporary closing to traffic of streets, or portions thereof, if such closing is reasonably necessary to perform the service at issue.

9.5 Government service agreements. The County and City intend to work toward one or more interlocal agreements for joint watershed management planning, capital construction, infrastructure management, habitat/river management, water quality management, outreach and volunteerism, and other related services.

## 10. SOLID WASTE MANAGEMENT

The City and County agree that solid waste management and disposal within an annexation area of the City shall be governed by the terms and conditions set forth in the "Agreement Between the City of Bothell and Snohomish County Concerning Solid Waste Management" dated JUNE 28, 2011.

## 11. PARKS, OPEN SPACE AND RECREATIONAL FACILITIES

11.1 Local or community parks. If an annexed area includes parks, open space or recreational facilities that are listed in the Snohomish County Comprehensive Parks and Recreation Plan as a local or community park,

the City agrees to assume maintenance, operation and ownership responsibilities for the facilities identified in the map attached to this Agreement as Exhibit D upon the effective date of annexation unless the Parties have adopted an agreement for an alternate mutually acceptable date. In addition, the City's maintenance, operation and ownership responsibilities may not apply when prior to annexation the County declares its intention to retain ownership of the park, open space or recreational facility pursuant to Subsection 11.2 of this Agreement.

11.2 County retention of ownership. The County, in its own discretion and after consulting with the City, will determine whether to retain ownership of a park, open space or recreational facility (collectively "facility") described in Subsection 11.1 of this Agreement based on consideration of the following criteria and consistent with the Snohomish County Comprehensive Parks and Recreation Plan:

- The facility has a special historic, environmental or cultural value to the citizens of Snohomish County, as determined by the Snohomish County Department of Parks and Recreation;
- There are efficiencies with the County's operation or maintenance of the facility;
- The County has made a substantial capital investment in the facility, including but not limited to the purchase of the facility property, the development of the facility, and the construction of the facility;
- There are specialized stewardship or maintenance issues associated with the facility that the County is best equipped to address;
- The facility generates revenue that is part of the larger County park operation budget;
- The facility serves as a regional park or is part of the County's trail system and should remain a part of the County's regional network; and
- Retaining ownership of the facility is consistent with the Snohomish County Tomorrow Annexation Principles.

11.3 Joint planning for parks, recreation and open space. The City and County may, upon the effective date of this Agreement, establish an interlocal agreement for parks, open space and recreational facilities. Such an interlocal agreement shall be based upon the City and County's efforts to provide parks, recreational facilities and open space within the Bothell MUGA and surrounding area. Any subsequently adopted agreement for park, open space, and recreational facilities shall be consistent with the joint planning efforts of the City and County under the Snohomish County Tomorrow Annexation Principles, establish the nature and type of facilities the jurisdictions have planned or anticipate for the area, identify ways to jointly provide these services, and identify transition of ownership and maintenance responsibilities as annexations occur. This effort will result in a mutual ongoing planning effort, joint capital improvement plans and reciprocal impact mitigation.



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## 12. POLICE SERVICES

As provided by law, at the effective date of annexation police services responsibility will transfer to the City. However, the City and County may agree to discuss the need for developing a contract for police services in order to accommodate the needed transfer of police services within an annexed area and the unincorporated MUGA. Upon request of the City, the Snohomish County Sheriff's Office will provide detailed service and cost information for the area to be annexed. This request to the Sheriff's Office for detailed service and cost information for police contract services does not preclude the City from seeking additional service and cost information proposals for similar services from other governmental entities. Agreements between the City and County will be made consistent with RCW 41.14.250 through 41.14.280 and RCW 35.13.360 through 35.13.400. If the timing of the notification of the effective date for an annexation is such that SNOPAC 911 has already adopted its budget, the City is responsible for the SNOPAC 911 assessment to the Sheriff's Office for the remainder of the adopted SNOPAC 911 budget period.

## 13. CRIMINAL JUSTICE SERVICES

Criminal Justice System Services – All misdemeanor crimes that occur within an annexation area prior to the effective date of annexation will be considered misdemeanor crimes within the jurisdiction of Snohomish County for the purposes of determining financial responsibility for criminal justice system services, including but not limited to prosecution, court costs, jail fees and services, assigned counsel, jury and witness fees, and interpreter fees. On and after the effective date of any annexation, all misdemeanor crimes that occur in the annexation area will be considered crimes within the jurisdiction of the City for purposes of determining financial responsibility for such criminal justice system services.

## 14. FIRE MARSHAL SERVICES

14.1 County to complete certain annual fire inspections. The County agrees to process and complete only those fire inspections in an annexed area that were scheduled and occur before the effective date of the annexation. All other inspections will be conducted by the City.

14.2 County to complete certain fire code enforcement cases. The County will complete through final disposition any fire code enforcement cases within an annexation area pending at the effective date of an annexation, after review and consultation of the violation(s) by the City Fire Marshal or his/her designee. After final disposition, any further action or enforcement will be at the discretion of the City.

## 15. STATUS OF COUNTY EMPLOYEES

Subject to City civil service rules and state law, the City agrees to consider the hiring of County employees whose employment status is affected by the change in governance of an annexation area where such County employees make application with the City per the City hiring process and meet the minimum qualifications for employment with the City and provided further that the City consideration of hiring affected sheriff department employees shall be governed by the provisions set forth in RCW 35.13.360 through 35.13.400. The County shall in a timely manner provide the City with a list of those employees expressing a desire to be considered for employment with the City.

## 16. ADDENDA AND AMENDMENTS

16.1 Addenda related to annexation. At the discretion of the Parties, an addendum to this Agreement may be prepared for each annexation by the City to address any issues specific to a particular annexation.

16.2 Amendments. The City and County recognize that amendments to this Agreement may be necessary.

16.3 Process for addending or amending this Agreement. An addendum or amendment to this Agreement must be mutually agreed upon by the Parties and executed in writing. Any addendum or amendment to this Agreement shall be executed in the same manner as this Agreement.

16.4 Additional agreements. Nothing in this Agreement limits the Parties from entering into interlocal agreements on issues not covered by, or in lieu of, the terms of this Agreement.

## 17. THIRD PARTY BENEFICIARIES

There are no third party beneficiaries to this Agreement, and this Agreement shall not be interpreted to create any third party beneficiary rights.

## 18. DISPUTE RESOLUTION

Except as herein provided, no civil action with respect to any dispute, claim or controversy arising out of or relating to this Agreement may be commenced until the dispute, claim or controversy has been submitted to a mutually agreed upon mediator. The Parties agree that they will participate in the mediation in good faith, and that they will share equally in its costs. Each jurisdiction shall be responsible for the costs of its own legal representation. Either Party may seek equitable relief prior to the mediation process, but only to preserve the status quo pending the completion of that process. The City and County agree to mediate any disputes regarding the annexation process or responsibilities of the Parties.

prior to any Boundary Review Board hearing on a proposed annexation, if possible.

## 19. HONORING EXISTING AGREEMENTS, STANDARDS AND STUDIES

In the event a conflict exists between this Agreement and any agreement between the City and the County in existence prior to the effective date of this Agreement, the terms of this Agreement shall govern the conflict.

## 20. RELATIONSHIP TO EXISTING LAWS AND STATUTES

This Agreement in no way modifies or supersedes existing state laws and statutes. In meeting the commitments encompassed in this Agreement, all Parties will comply with all applicable state or local laws. The County and City retain the ultimate authority for land use and development decisions within their respective jurisdictions. By executing this Agreement, the County and City do not intend to abrogate the decision-making responsibility or police powers vested in them by law.

## 21. NONDISCRIMINATION

The City shall comply with the Snohomish County Human Rights Ordinance, Chapter 2.460 SCC, which is incorporated herein by this reference. Execution of this Agreement constitutes a certification by the City of the City's compliance with the requirements of Chapter 2.460 SCC. If the City is found to have violated this provision, or furnished false or misleading information in an investigation or proceeding conducted pursuant to Chapter 2.460 SCC, this Agreement may be subject to a declaration of default and termination at the County's discretion. This provision shall not affect the City's obligations under other federal, state, or local laws against discrimination.

## 22. EFFECTIVE DATE, DURATION AND TERMINATION

22.1 Effective Date. This Agreement shall become effective following the approval of the Agreement by the official action of the governing bodies of each of the Parties hereto and the signing of the Agreement by the duly authorized representative of each of the Parties hereto.

22.2 Duration. This Agreement shall be in full force and effect through December 31, 2029. If the Parties desire to continue the terms of the existing Agreement after the Agreement is set to expire, the Parties may either negotiate a new agreement or extend this Agreement through the amendment process.

22.3 Termination. Either Party may terminate this Agreement at the end of a calendar year provided the terminating Party provides not less than one

hundred eighty (180) days advance written notice to the other Party prior to the date of termination. Notwithstanding termination of this Agreement, the County and City are responsible for fulfilling any outstanding obligations under this Agreement incurred prior to the effective date of the termination.

## 23. INDEMNIFICATION AND LIABILITY

23.1 This Section shall govern the legal relationship of the Parties with regard to claims for damages and claims arising out of requests for mitigation.

23.2 Indemnification of County. The City shall protect, save harmless, indemnify and defend, at its own expense, the County, its elected and appointed officials, officers, employees and agents, from any loss or claim for damages of any nature whatsoever arising out of the City's performance of this Agreement, including claims by the City's employees or third parties, except for those damages caused solely by the negligence or willful misconduct of the County, its elected and appointed officials, officers, employees, or agents.

23.3 Indemnification of City. The County shall protect, save harmless, indemnify, and defend at its own expense, the City, its elected and appointed officials, officers, employees and agents from any loss or claim for damages of any nature whatsoever arising out of the County's performance of this Agreement, including claims by the County's employees or third parties, except for those damages caused solely by the negligence or willful misconduct of the City, its elected and appointed officials, officers, employees, or agents.

23.4 Extent of liability. In the event of liability for damages of any nature whatsoever arising out of the performance of this Agreement by the City and the County, including claims by the City's or the County's own officers, officials, employees, agents, volunteers, or third parties, caused by or resulting from the concurrent negligence of the County and the City, their officers, officials, employees and volunteers, each Party's liability hereunder shall be only to the extent of that Party's negligence.

23.5 Hold harmless. No liability shall be attached to the City or the County by reason of entering into this Agreement except as expressly provided herein. The City shall hold the County harmless and defend at its expense any legal challenges to the City's requested mitigation and/or failure by the City to comply with Chapter 82.02 RCW. The County shall hold the City harmless and defend at its expense any legal challenges to the County's requested mitigation or failure by the County to comply with Chapter 82.02 RCW.

## 24. SEVERABILITY

If any provision of this Agreement or its application to any person or circumstance is held invalid, the remainder of the provisions and the application of the provisions to other persons or circumstances shall not be affected.

## 25. EXERCISE OF RIGHTS OR REMEDIES

Failure of either Party to exercise any rights or remedies under this Agreement shall not be a waiver of any obligation by either Party and shall not prevent either Party from pursuing that right at any future time.

## 26. RECORDS

The Parties shall maintain adequate records to document obligations performed under this Agreement. The Parties shall have the right to review each other's records with regard to the subject matter of this Agreement, except for privileged documents, upon reasonable written notice. Public records will be retained and destroyed according to Subsection 6.5 of this Agreement.

## 27. ENTIRE AGREEMENT

This Agreement constitutes the entire Agreement between the Parties concerning annexation within the Bothell MUGA, except as set forth in Subsection 2.4 and Sections 10, 16 and 19 of this Agreement.

## 28. GOVERNING LAW AND STIPULATION OF VENUE

This Agreement shall be governed by the laws of the State of Washington. Any action hereunder must be brought in the Superior Court of Washington for Snohomish County.

## 29. CONTINGENCY

The obligations of the City and County in this Agreement are contingent on the availability of funds through legislative appropriation and allocation in accordance with law. In the event funding is withdrawn, reduced or limited in any way after the effective date of this Agreement, the City or County may terminate the Agreement under Subsection 22.3 of this Agreement, subject to renegotiation under those new funding limitations and conditions.

## 30. FILING

A copy of this Agreement shall be filed with the Bothell City Clerk and recorded with the Snohomish County Auditor's Office.

## 31. ADMINSTRATORS AND CONTACTS FOR AGREEMENT

The Administrators and contact persons for this Agreement are:

Bill Wiselogle, Comm. Dev. Dir.
City of Bothell
9654 NE 182nd Street
Bothell, WA 98011
(425)486-8152

Richard Craig, Senior Planner
Snohomish County
Dept. of Planning and Development Services
3000 Rockefeller Avenue
Everett, WA 98201
(425) 388-3311

IN WITNESS WHEREOF, the Parties have signed this Agreement, effective on the later date indicated below.

CITY OF BOTHELL

By _____
Robert S. Stowe, City Manager

Date 6/28/11

ATTEST:

_____
JoAnne Trudel
City Clerk

Approved as to form:

Office of the City Attorney

_____
Joseph N. Beck
Attorney for the City of Bothell

SNOHOMISH COUNTY

By _____
for Aaron G. Reardon, County Executive

Date 6/21/11

**GARY HAAKENSON**
**Deputy County Executive**

ATTEST:

_____
Kathryn Bratcher
Clerk of the County Council

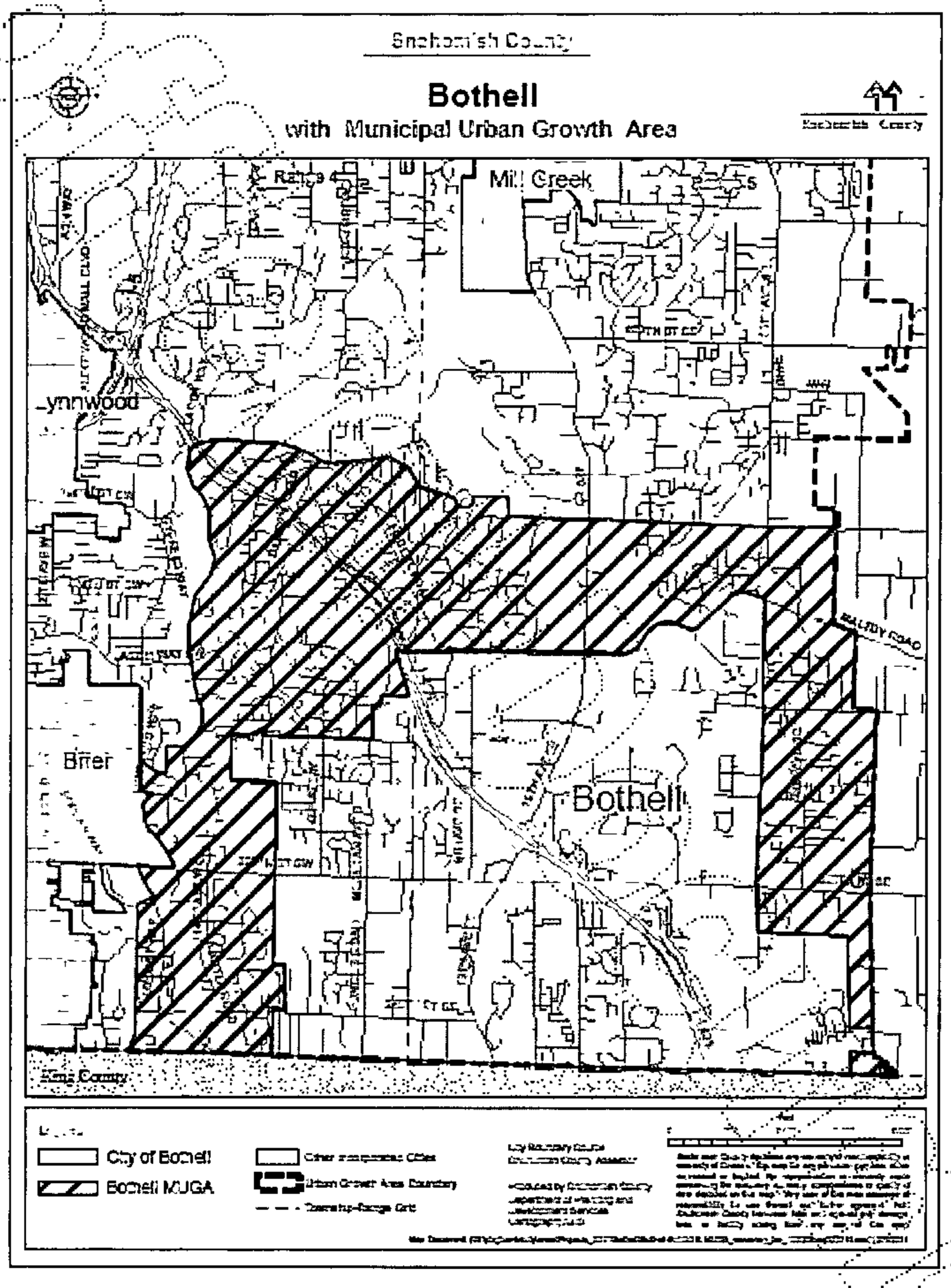
Approved as to form:

Snohomish County Prosecuting Attorney

_____
Deputy Prosecuting Attorney for Snohomish County

COUNCIL USE ONLY
Approved: 6-15-11
Docfile: D-11

## EXHIBIT A – BOTHELL MUNICIPAL URBAN GROWTH AREA MAP



## EXHIBIT B – SNOHOMISH COUNTY TOMORROW ANNEXATION PRINCIPLES

The following principles are intended as a "roadmap" for successful annexations but are not intended to require cities to annex all UGA lands. The desired outcome will reduce Snohomish County's current delivery of municipal services within the urban growth area while strengthening the County's regional planning and coordinating duties. Likewise, cities/towns will expand their municipal services to unincorporated lands scattered throughout the UGAs in Snohomish County. These principles propose altering historical funding and service delivery patterns. All parties recognize that compromises are necessary.

1. The county and all Snohomish County cities will utilize a six-year time schedule which will guide annexation goals. This work will be known as the Six Year Annexation Plan. As follow-up to the county's Municipal Urban Growth Area (MUGA) policies, those cities that have a (MUGA) land assignment, should designate this land assignment a priority. Each jurisdiction shall conduct its normal public process to ensure that citizens from both the MUGA areas and city proper are well informed. All Snohomish County cities have the option of opting in or out of this process. Cities that opt in will coordinate with the county to establish strategies for a smooth transition of services and revenues for the annexations proposed in the accepted Six Year Plan.

2. Each city will submit a written report regarding priority of potential annexation areas to the county council every two years, at which time each city will re-evaluate its time schedule for annexation. This report will serve as an update to the Six Year Annexation Plan.

   The report to the county council should be based upon each city's internal financial analyses dealing with the cost of those annexations identified for action within the immediate two-year time period. This analysis shall include: current and future infrastructure needs including, but not be limited to, arterial roads, surface water management, sewers, and bridges. A special emphasis should be given to the financing of arterial roads, including historical county funding and said roads' priority within the county's current 6-year road plan. Where financing and other considerations are not compelling, the city and county may "re-visit" the annexation strategies at the next two-year interval.

3. To facilitate annexation within urban growth areas (UGAs), the host city and the county may negotiate an Interlocal agreement providing for sub-area planning to guide the adoption of consistent zoning and development regulations between the county and the city. Coordination of zoning densities between the county and the host city may require the revision of

land use maps, adoption of transfer rights or other creative solutions. Upon completion of sub-area planning, if densities cannot be reconciled, then the issue would be directed to SCT for review and possible re-assignment to alternate sites within the UGA.

The Interlocal Agreement would also address development and permit review and related responsibilities within the UGA, apportioning related application fees based upon the review work performed by the respective parties, and any other related matters. The format for accomplishing permit reviews will be guided in part by each city's unique staffing resources as reflected in the Interlocal agreement between the host city and the county.

4. The city and the county will evaluate the financial and service impacts of an annexation to both entities, and will collaborate to resolve inequities between revenues and service provision. The city and county will negotiate on strategies to ensure that revenues and service requirements are balanced for both the city and the county. These revenue sharing and/or service provision strategies shall be determined by individual ILAs to address service operations and capital implementation strategies.

5. The county and the host city will negotiate with other special taxing districts on annexation related issues. Strategies for accomplishing these negotiations will be agreed to by the county and host city, and reflected in the host city's annexation report. (See preceding Principle #2.)

6. To implement the goals of the Annexation Principles regarding revenue sharing, service provision, and permit review transitions, the county and the cities will consider a variety of strategies and tools in developing Interlocal Agreements, including:

    - Inter-jurisdictional transfers of revenue, such as property taxes, Real Estate Excise Taxes (REET), storm drainage fees, sales tax on construction, and retail sales tax. Dedicated accounts may be opened for the deposit of funds by mutual agreement by the county and city;
    - Service provision agreements, such as contracting for service and/or phasing the transition of service from the county to the city;
    - Identifying priority infrastructure improvement areas to facilitate annexation of areas identified in Six Year Annexation Plans.



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## EXHIBIT C – SNOHOMISH COUNTY CODE ("SCC") PROVISIONS AND SNOHOMISH COUNTY ORDINANCES TO BE ADOPTED BY CITY

A. The following portions of SCC Title 13, entitled ROADS AND BRIDGES: Chapters 13.01, 13.02, 13.05, 13.10 through 13.70, 13.95, 13.110 and 13.130

B. SCC Title 25, entitled STORM AND SURFACE WATER MANAGEMENT

C. SCC Subtitle 30.2, entitled ZONING AND DEVELOPMENT STANDARDS

D. SCC Chapter 30.34A, entitled URBAN CENTER DEVELOPMENT

E. SCC Chapter 30.41A, entitled SUBDIVISIONS

F. SCC Chapter 30.41B, entitled SHORT SUBDIVISIONS

G. SCC Chapter 30.42B, entitled PLANNED RESIDENTIAL DEVELOPMENTS

H. SCC Chapter 30.41D, entitled BINDING SITE PLANS

I. SCC Chapter 30.44, entitled SHORELINE MANAGEMENT

J. SCC Chapter 30.51A, entitled DEVELOPMENT IN SEISMIC AREAS

K. SCC Chapter 30.52A, entitled BUILDING CODE

L. SCC Chapter 30.52B, entitled MECHANICAL CODE

M. SCC Chapter 30.52C, entitled VENTILATION AND INDOOR AIR QUALITY CODE

N. SCC Chapter 30.52D, entitled ENERGY CODE

O. SCC Chapter 30.52E, entitled UNIFORM PLUMBING CODE

P. SCC Chapter 30.52F, entitled RESIDENTIAL CODE

Q. SCC Chapter 30.52G, entitled AUTOMATIC SPRINKLER SYSTEMS

R. SCC Chapter 30.53A, entitled FIRE CODE

S. SCC Subtitle 30.6, entitled ENVIRONMENTAL STANDARDS AND MITIGATION

T. SCC Chapter 30.66A, entitled PARK AND RECREATION FACILITY IMPACT MITIGATION

U. SCC Chapter 30.66B, entitled CONCURRENCY AND ROAD IMPACTMITIGATION

V. SCC Chapter 30.66C, entitled SCHOOL IMPACT MITIGATION

W. Ordinance 93-036, entitled SHORELINE MASTER PROGRAM, as amended

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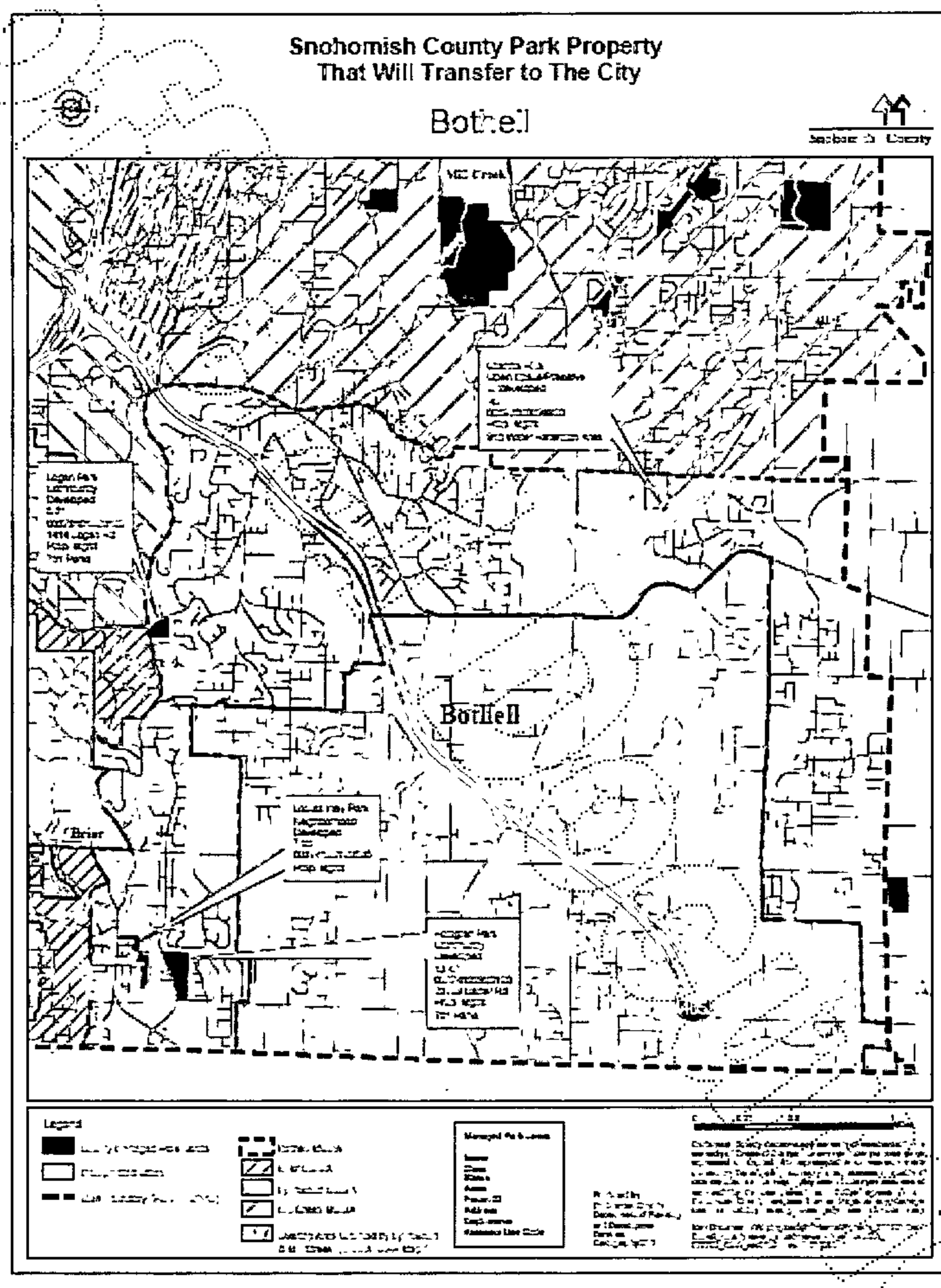
## EXHIBIT D – PARKS, OPEN SPACE AND RECREATIONAL FACILITIES



After Recording Return to:

Assistant Clerk
Snohomish County Council
3000 Rockefeller, M/S 609
Everett, WA 98201

CONFORMED COPY
201107080090 7 PGS
07/08/2011 9:41am $0.00
SNOHOMISH COUNTY, WASHINGTON

Agencies: Snohomish County and City of Bothell
Tax Account No.: N/A
Legal Description: N/A
Reference No. of Documents Affected: Interlocal Recorded at AF#_____
Filed with the Auditor pursuant to RCW 39.34.040
Documents Title:

# AGREEMENT BETWEEN THE CITY OF BOTHELL AND SNOHOMISH COUNTY CONCERNING SOLID WASTE MANAGEMENT

## PARTIES

This Agreement ("Agreement") is made by and between the City of Bothell ("City"), a Washington municipal corporation, and Snohomish County ("County"), a political subdivision of the State of Washington, collectively referred to as the "Parties," pursuant to RCW 35.21.152.

## RECITALS.

RCW 35.21.152 provides, in part, that cities may designate disposal sites for Solid Waste collected within their boundaries:

> A city or town may enter into agreements with public or private parties to: (1) Construct, lease, purchase, acquire, manage, maintain, utilize, or operate publicly or privately owned or operated solid waste handling systems, plants, sites, or other facilities; (2) establish rates and charges for those systems, plants, sites, or other facilities; (3) designate particular publicly or privately owned or operated systems, plants, sites, or other facilities as disposal sites .... Any agreement entered into shall be for such term and under such conditions as may be determined by the legislative authority of the city or town.

This Agreement is undertaken pursuant to the authority of RCW 35.21.152.

## 1. PURPOSE/ APPLICABILITY

1.1 Purpose. The purpose of this Agreement is to establish and designate the Solid Waste authority for Solid Waste generated in the City.

1.2 Applicability.

1.2.1 The Solid Waste authority for those portions of the City located in both King and Snohomish Counties as the City's boundaries exist on January 1, 2011, and all areas of King County later annexed to the City, shall remain King County in accordance with the "Solid Waste Interlocal Agreement" between King County and the City of Bothell effective January 1, 1988.

1.2.2 The Solid Waste authority for all portions of the City located in Snohomish County that are annexed into the City after January 1, 2011 shall be Snohomish County.

## 2. DEFINITIONS

For the purposes of this Agreement, the following definitions apply:

2.1 "Comprehensive Solid Waste Management Plan" or "Comprehensive Plan" means the Snohomish County Comprehensive Solid Waste Management Plan issued in January 2004, and as amended from time to time.

2.2 "Person" means an individual, firm, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever.

2.3 "Solid Waste" means all putrescible and nonputrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, and recyclable materials, with the exception of wastes listed in WAC 173-304-015 as may be amended from time to time.

2.4 "Solid Waste Handling" means the management, storage, collection, transportation, treatment, utilization, processing, and final disposal of Solid Wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from such wastes or the conversion of the energy in such wastes to more useful forms or combinations thereof, and as such term may be modified by amendments to RCW 70.95.030 (23).

2.5 "System" means all facilities for Solid Waste Handling owned or operated, or contracted for, by the County, and all administrative activities related thereto.

## 3. SOLID WASTE MANAGEMENT

3.1 Planning Authority. The County agrees to provide Solid Waste management services for solid waste generated and/or collected within the portion of the City described in Section 1.2.2. The provision of such services would commence at the time the first annexation to the City after January 1, 2011 has been approved. The County shall serve as the planning authority within such areas for Solid Waste including moderate risk waste but shall not be responsible for the planning of hazardous or

dangerous waste or any other planning responsibility that is specifically designated by State or Federal statute. The County shall develop waste stream forecasts as part of the comprehensive planning process and assumes all risks related to facility sizing based upon such forecasts. For the duration of this Agreement, the City shall participate in the Comprehensive Solid Waste Management Plan prepared and periodically reviewed and revised pursuant to chapter 70.95 RCW as may be amended from time to time. For the duration of this Agreement the City, in conformity with RCW 70.95.080 (3), as may be amended from time to time, authorizes the County to include in the Comprehensive Solid Waste Management Plan provisions for the management of Solid Waste generated within the portion of its corporate limits described in Section 1.2.2.

3.2 Disposal of Solid Waste. The County shall continue to provide for the efficient disposal of all Solid Waste generated within unincorporated areas of the County and within the portion of the City described in Section 1.2.2 of this Agreement, in the manner, and by facilities as described in the Comprehensive Solid Waste Management Plan. The County shall not be responsible for disposal of nor claim that this Agreement extends to Solid Waste that has been eliminated through waste recycling activities in conformity with the Comprehensive Solid Waste Management Plan.

3.3 Rates and Operations. The County shall be the operating authority for transfer, processing and disposal facilities for Solid Waste generated and/or collected within the portion of the City described in Section 1.2.2. The County shall provide support and technical assistance to the City in regards to educational materials related to waste reduction and recycling strategies. The City, an entity designated by the City or such other entity as is authorized by state law, shall serve as the operation authority for Solid Waste collection services provided within the City's corporate limits. In establishing or amending disposal rates for System users, the County may adopt, by motion, rates necessary to recover all costs of operation including the costs of handling, processing, disposal, defense and payment of claims, capital improvements, operational improvements and the closure of landfills which are or were operated by the County. The County shall establish classes of service for basic Solid Waste management services and by motion, establish rates for users of each class.

3.4 Flow Control. The City shall by ordinance designate the County System for the disposal of all Solid Waste including moderate risk waste generated and/or collected within the portion of the City described in Section 1.2.2. The City shall authorize the County to designate disposal sites for the disposal of all Solid Waste including moderate risk waste generated and/or collected within the portion of the City described in Section 1.2.2, except for Solid Waste which is eliminated through waste reduction or waste recycling activities consistent with the Comprehensive Solid Waste Management Plan. No Solid Waste generated or collected within the portion of the City described in Section 1.2.2 shall be diverted from the designated disposal sites without County approval. The designation of the County in this section shall not reduce or otherwise affect the City's control over Solid Waste collection as permitted by applicable state law.

3.5 Household Hazardous Waste. The County shall provide for the disposal of household hazardous wastes generated by residential households located in the portion of the City that is subject to this Agreement at the System's existing Moderate Risk Waste Facility, or in another reasonable and similarly convenient manner.

## 4. ENFORCEMENT

The County shall be primarily responsible for enforcement of laws and regulations requiring persons to dispose of Solid Waste at sites designated by the County. The City shall cooperate with the County in its enforcement efforts, and by ordinance shall provide that any person that disposes of Solid Waste generated within that portion of the City described in Section 1.2.2, at a site other than a site designated by the County, will be guilty of a misdemeanor, except where such disposal may be otherwise permitted by state law. To the extent legally possible, the County shall be responsible for bringing enforcement actions against persons violating state statutes or County ordinances relating to the disposal of Solid Waste at sites designated by the County. However, in instances in which the County lacks legal authority to bring an enforcement action, and the City possesses that authority, the County may request that the City bring such enforcement action. The City shall comply with any such request, or through the exercise of its authority under Chapter 35.21 RCW as may be amended from time to time, ensure that Solid Waste generated within that portion of the City described in Section 1.2.2, is disposed of at those sites designated by the County. The County shall pay as System costs all reasonable costs incurred by the City in taking such enforcement or other actions that are requested in writing by the County.

## 5. INDEMNIFICATION

5.1 The County shall indemnify and hold harmless and defend the City against any and all claims by third parties arising out of the County's operations of the System, and shall have the right to settle those claims by third parties, recognizing that all costs incurred by the County thereby are System costs which must be satisfied from disposal rates. In providing a defense for the City, the County shall exercise good faith in that defense or settlement so as to protect the City's interests. The County's agreement to indemnify the City for any and all claims arising out of the County's operation of the System extends to all claims caused by the actions of officers or agents of the County, including but not limited to actions which constitute misfeasance, or intentional misconduct or wrongdoing, even if the cost of such claims is held by a court of competent jurisdiction to not be a proper cost to the System. For the purpose of this paragraph, "claims arising out of the County's operations" shall include claims arising out of the ownership, control or maintenance of the System, but shall not include claims arising out of the collection of solid waste within the City prior to its delivery to a disposal site designated by the County or other activities under the control of the City.

5.2 If the County acts to defend the City against a claim, the City shall cooperate with the County.

5.3 The County shall defend the City against any challenge, whether judicially or before an administrative hearings panel, to the Comprehensive Plan elements adopted pursuant to this Agreement.

5.4 For purposes of this section, reference to the City and to the County shall be deemed to include the officers, agents and employees of such party, acting within the scope of their authority.

**6. DURATION**

This Agreement shall continue to be in full force and effect until December 31, 2057, unless terminated as described in the following paragraph.

**7. REVISION, AMENDMENT, SUPPLEMENTATION OR TERMINATION**

This Agreement shall be reviewed by the parties in conjunction with any review of the Comprehensive Solid Waste Management Plan. The terms of the Agreement may be revised, amended or supplemented, or the Agreement as a whole may be terminated only upon the written agreement of the parties executed with the same formalities as the original. No revision, amendment, supplementation or termination shall be adopted or put into effect if it impairs any contractual obligation of the County.

**8. PRIOR AGREEMENT SUPERCEDED** This Agreement entirely supercedes and replaces the "Interlocal Agreement Between Snohomish County and the City of Bothell to Address Disposal of Bothell's Solid Waste" dated October 28, 1992.

**9. NONDISCRIMINATION** The City shall comply with the Snohomish County Human Rights Ordinance, Chapter 2.460 SCC, which is incorporated herein by this reference. Execution of this Interlocal Agreement constitutes a certification by the City of the City's compliance with the requirements of Chapter 2.460 SCC. If the City is found to have violated this provision, or furnished false or misleading information in an investigation or proceeding conducted pursuant to Chapter 2.460 SCC, this Interlocal Agreement may be subject to a declaration of default and termination at Snohomish County's discretion. This provision shall not affect the City's obligations under other federal, state, or local laws against discrimination.

**10. SEVERABILITY**

If any provision of this Agreement or its application to any person or circumstance is held invalid, the remainder of the provisions and the application of the provisions to other persons or circumstances shall not be affected.

**11. EXERCISE OF RIGHTS OR REMEDIES**

Failure of either party to exercise any rights or remedies under this Agreement shall not

be a waiver of any obligation by either party and shall not prevent either party from pursuing that right at any future time.

## 12. RECORDS

The Parties shall maintain adequate records to document obligations performed under this Agreement. The Parties shall have the right to review each other's records with regard to the subject matter of this Agreement, except for privileged documents, upon reasonable written notice. The parties shall retain and destroy all public records pursuant to this Agreement in a manner consistent with the applicable provisions of Chapter 40.14 RCW and the applicable rules and regulations of the Secretary of State, Division of Archives and Records Management.

## 13. NO THIRD PARTY BENEFICIARIES

This Agreement is not entered into with the intent that it shall benefit any person or entity not signing this Agreement, and no other person or entity shall be entitled to be treated as a third party beneficiary of this Agreement.

## 14. ENTIRE AGREEMENT

This Agreement constitutes the entire Agreement between the Parties. Any written or verbal agreements that are not set forth herein or incorporated herein by reference are expressly excluded.

## 15. GOVERNING LAW AND STIPULATION OF VENUE

This Agreement shall be governed by the laws of the State of Washington. Any action hereunder must be brought in the Superior Court of Washington for Snohomish County.

## 16. FILING

A copy of this Agreement shall be filed with the Bothell City Clerk and recorded with the Snohomish County Auditor's Office.

## 17. ADMINSTRATORS AND CONTACTS FOR AGREEMENT

The Administrators and contact persons for this Agreement are:

Bill Wiselogle, Comm. Dev. Dir.
City of Bothell
9654 NE 182nd Street
Bothell, WA 98011

Matt Zybas, Solid Waste Dir.
Snohomish County
Dept. of Public Works
3000 Rockefeller Avenue
Everett, WA 98201

IN WITNESS WHEREOF, the parties have signed this Agreement, effective on the later date indicated below.

CITY OF BOTHELL

By _____
Robert S. Stowe, City Manager

Date 6/28/11

ATTEST:

_____
JoAnne Trudel
City Clerk

Approved as to form:

Office of the City Attorney

_____
Joseph N. Beck
Attorney for the City of Bothell

SNOHOMISH COUNTY

By _____
for: Aaron G. Reardon, County Executive

Date 6/20/11

GARY HAAKENSON
Deputy County Executive

ATTEST:

_____
Kathryn Bratcher
Clerk of the County Council

Approved as to form:

Snohomish County Prosecuting Attorney

_____ 5/13/11
Deputy Prosecuting Attorney for Snohomish County

COUNCIL USE ONLY
Approved: 6-15-11
Docfile: D-13

SNOHOMISH COUNTY COUNCIL
SNOHOMISH COUNTY, WASHINGTON

ORDINANCE 11 - 035

RELATING TO SOLID WASTE MANAGEMENT;
APPROVING AND AUTHORIZING THE COUNTY EXECUTIVE
TO EXECUTE THE AGREEMENT BETWEEN SNOHOMISH COUNTY
AND THE CITY OF BOTHELL REGARDING DISPOSAL OF SOLID WASTE
GENERATED IN AREAS ANNEXED BY THE CITY OF BOTHELL
AFTER JANUARY 1, 2011

WHEREAS, the Snohomish County Solid Waste Division currently provides solid waste planning and management services to unincorporated portions of Bothell's Municipal Urban Growth Area (MUGA); and

WHEREAS, Snohomish County and The City of Bothell desire to maintain Snohomish County's authority for the planning and management of solid waste services for this geographic area; and

WHEREAS, The City of Bothell is a signatory to the King County Solid Waste Management Plan and has an interlocal agreement with King County for the planning and management of solid waste generated within the incorporated boundaries of Bothell; and

WHEREAS, King County has agreed that any future annexations by the City of Bothell of Snohomish County lands occurring after January 1, 2011 should fall within the jurisdiction of Snohomish County for purposes of solid waste planning and management, including designation of disposal sites for solid waste generated in these areas ; and

WHEREAS, the Council believes that health and safety and the best interests of the citizens of Snohomish County would be served by maintaining the current boundaries for solid waste management and disposal, as they currently exist, in Snohomish County;

NOW, THEREFORE, BE IT ORDAINED:

Section 1. The Snohomish County Council hereby approves and authorizes the County Executive to sign the interlocal agreement titled "Agreement Between The City of Bothell and Snohomish County Concerning Solid Waste Management" substantially in the form of Exhibit A attached hereto.

PASSED this 15th day of June, 2011

SNOHOMISH COUNTY COUNCIL
Snohomish County, Washington

Chairperson

ATTEST:

Sheila McCallister
Clerk of the Council

(✓) APPROVED

( ) EMERGENCY

( ) VETOED

DATE: 6/20/11

for: County Executive

**GARY HAAKENSON**
**Deputy County Executive**

ATTEST:

Approved as to form only:

5/9/11
Deputy Prosecuting Attorney

D.13

Return to:
County Council, sm
M/S 609

201108040007 4 PGS
08/04/2011 8:53am $0.00
SNOHOMISH COUNTY, WASHINGTON

Please print neatly or type information:

Document Title(s)

Interlocal Agreement w/ King County

Reference Number(s) of related documents:

Additional Reference #'s on page _____

Grantor(s) (Last, First, and Middle Initial)

King County

Additional Grantors on page _____

Grantee(s) (Last, First, and Middle Initial)

Snohomish County

Additional Grantees on page _____

Legal Description (abbreviated form: i.e. lot, block, plat or section, township, range, quarter/quarter)

n/a

Complete legal on page _____

Assessor's Property Tax Parcel/Account Number

n/a

Additional parcel #'s on page _____

The Auditor/Recorder will rely on the information provided on this form. The responsibility for the accuracy of the indexing information is that of the document preparer.

*I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document.

Signature of Requesting Party

Exhibit A

# INTERLOCAL AGREEMENT BETWEEN KING COUNTY AND SNOHOMISH COUNTY RELATED TO SOLID WASTE DISPOSAL

THIS INTERLOCAL AGREEMENT ("Interlocal Agreement") BETWEEN KING COUNTY ("King County") AND SNOHOMISH COUNTY ("Snohomish County") RELATED TO SOLID WASTE DISPOSAL is entered into on this 22nd day of July, 2011. Collectively, King County and Snohomish County are referred to as the "Parties."

## 1. Recitals.

1.1 King County and the City of Bothell entered into the Solid Waste Interlocal Agreement ("Agreement") with an effective date of January 1, 1988, to establish the parties' rights and responsibilities with respect to disposal of solid waste generated and/or collected within the corporate limits of the City.

1.2 The City of Bothell wishes to amend the Agreement to allow solid waste generated in areas of Snohomish County annexed to the City after January 1, 2011 to be disposed through the Snohomish County solid waste system, and King County has indicated a willingness to consider such an amendment on certain terms and conditions.

## 2. Agreement.

2.1 The Parties agree that Snohomish County may require through an agreement with the City of Bothell that solid waste generated or collected within areas of Snohomish County that are annexed to the corporate limits of the City of Bothell after January 1, 2011, be disposed through the Snohomish County solid waste system throughout the term of this Interlocal Agreement.

2.2 The Parties agree that the Agreement requires that solid waste generated or collected within all other portions of the corporate limits of the City of Bothell (either within or outside King County) be disposed of through the King County Solid Waste system throughout the term of the Agreement, as it may be extended from time to time.

2.3 This Interlocal Agreement does not create any cause of action or other rights in the Parties in any way related to any agreement between the City of Bothell and King County or between the City of Bothell and Snohomish County that addresses disposal of solid waste generated or collected within the corporate limits of the City.

## 3. Effective Date.

This Interlocal Agreement shall become effective when all of the following have occurred: 1) the Parties have duly authorized and executed this Interlocal Agreement, 2) this Interlocal Agreement has been filed and recorded as provided in Paragraph 9, and 3) King County and Bothell have duly authorized and executed AMENDMENT NO. 1 TO THE SOLID WASTE INTERLOCAL AGREEMENT ("AGREEMENT") BETWEEN KING COUNTY AND THE CITY OF BOTHELL as attached to King County Proposed Ordinance 2011-0248.

## 4. Duration/Term.

This Interlocal Agreement shall continue to be in full force and effect through December 31, 2057 unless terminated earlier by mutual written agreement of the Parties.

## 5. Revision, Amendment or Supplementation.

The terms of this Interlocal Agreement may be revised, amended or supplemented only by written agreement of the Parties. Any revision, amendment or supplement shall be approved with the same formalities as the original. No revision, amendment or supplementation shall be adopted or put into effect if it impairs any contractual right or obligation of either King County or Snohomish County.

## 6. Nondiscrimination.

King County shall comply with the Snohomish County Human Rights Ordinance, Chapter 2.460 SCC, which is incorporated herein by this reference. Execution of this Interlocal Agreement constitutes a certification by King County of King County's compliance with the requirements of Chapter 2.460 SCC. If King County is found to have violated this provision, or furnished false or misleading information in an investigation or proceeding conducted pursuant to Chapter 2.460 SCC, this Interlocal Agreement may be subject to a declaration of default and termination at Snohomish County's discretion. This provision shall not affect King County's obligations under other federal, state, or local laws against discrimination.

## 7. No Separate Legal Or Administrative Agency/Administration/Handling Of Property.

7.1 No separate legal or administrative agency is created by this Interlocal Agreement.

7.2 No personal or real property will be jointly acquired to carry out the terms of this Interlocal Agreement.

7.3 Administration of this Interlocal Agreement shall be by the following county representatives:

King County Solid Waste Division
Director
201 South Jackson Street
Suite 701
Seattle, WA 98104

Snohomish County Solid Waste Division
Director
M/S 607
3000 Rockefeller Ave.
Everett, WA 98201

**8. No Third Party Beneficiaries.**

No other person or entity shall be entitled to be treated as a third party beneficiary of this Interlocal Agreement.

**9. Filing.**

A copy of this Interlocal Agreement shall be filed and recorded with the Snohomish County Auditor's Office and with the King County Records and Licensing Services Division.

**IN WITNESS WHEREOF**, the Parties have executed this Interlocal Agreement on the dates indicated.

King County

for

King County Executive

Date: 7/22/2011

Approved as to Form:

Janine Joly

Deputy Prosecuting Attorney

Snohomish County

for: Snohomish County Executive

Date: 6/20/11

GARY HAAKENSON
Deputy County Executive

Approved as to Form:

6/13/11

Deputy Prosecuting Attorney

COUNCIL USE ONLY
Approved: 6.15.11
Docfile: D-12

City of Bothell™

CITY CLERK'S ORIGINAL

**AMENDMENT NO. 1 TO THE SOLID WASTE INTERLOCAL AGREEMENT ("AGREEMENT") BETWEEN KING COUNTY AND THE CITY OF BOTHELL**

Whereas, King County ("County") and the City of Bothell ("City") entered into an Agreement with an effective date of January 1, 1988, to establish the parties' rights and responsibilities with respect to disposal of solid waste generated and/or collected within the corporate limits of the City; and

Whereas, the Agreement provides that the City shall authorize the County to designate disposal sites for the disposal of all solid waste, including moderate risk waste generated or collected within the corporate limits of the City, except for solid waste which is eliminated through waste reduction or waste recycling activities consistent with the King County Comprehensive Solid Waste Management Plan; and

Whereas, the Agreement further provides that no solid waste generated or collected within the City may be diverted from the designated disposal sites without County approval; and

Whereas, King County has designated facilities comprising the King County solid waste system for the disposal of solid waste generated and/or collected within the City; and

Whereas, effective April 30, 1992, the City annexed certain territory located in Snohomish County known as the "Canyon Park Area;" and

Whereas, to address the contractual obligation between the City and the County, the City entered into an agreement with Snohomish County dated October 28, 1992 providing that all solid waste generated in the City, including the Canyon Park Area, would be disposed of in the King County system; and

Whereas, the City is contemplating the annexation of additional territory in Snohomish County; and

Whereas, the City wishes to amend the Agreement with the County to allow solid waste generated in areas of Snohomish County annexed to the City after January 1, 2011 to be disposed through the Snohomish County solid waste system, and the County is willing to agree to such an amendment in exchange for an extension in the term of the Agreement; and

Whereas, the parties wish to amend the Agreement to the extent provided below.

Now therefore, the parties agree to the following amendments:

Section III. DURATION

The Agreement shall remain in effect through December 31, 2057.

Section VI. GENERAL OBLIGATION OF PARTIES

A new paragraph 6.1.h shall be added to read:

This Agreement shall not be construed to impose any contractual obligations on the County related to solid waste that the City disposes of through the Snohomish County solid waste system.

A new paragraph 6.2.c shall be added to read:

Notwithstanding paragraph 6.2b., the City may dispose of solid waste collected in areas of Snohomish County that are annexed to the City after January 1, 2011 through the Snohomish County solid waste system and may authorize Snohomish County to designate disposal sites for such solid waste; solid waste generated or collected within all other portions of the corporate limits of the City (either within or outside King County) shall be disposed through the King County solid waste system throughout the term of the Agreement at sites designated by King County.

VIII. LIABILITY

A new section 8.7 shall be added to read:

The City shall indemnify and hold harmless the County and shall have the right and duty to defend the County through the City's attorneys against any and all claims arising out of the City's disposal of solid waste through the Snohomish County solid waste system. In providing such defense of the County, the City shall exercise good faith in such defense or settlement so as to protect the County's interest.

A new section 8.8 shall be added to read:

In the event the County incurs attorney fees and/or costs to enforce the provisions of this Agreement due to the City's actions or failure to act, including, without limitation, provisions related to the City's obligations to cause the delivery of solid waste to County-designated disposal sites during the term of the Agreement, such attorney fees and costs shall be recoverable from the City in the event that the County prevails in a court of competent jurisdiction and/or the City is found to be at fault by a court of competent jurisdiction.

All other terms and conditions provided in the Agreement shall continue in effect throughout the duration of the Agreement. In the future, the parties may mutually agree to enter into an agreement to replace the Agreement, provided however, that the term of the new agreement shall be at least as long as the term of the Agreement as extended in this amendment.

CITY OF BOTHELL

~~Mayor~~ Deputy City Manager

Date: 6/30/11

KING COUNTY

King County Executive

Date: 7/22/2011

APPROVED AS TO FORM:

City Attorney

APPROVED AS TO FORM:

Deputy Prosecuting Attorney

Snohomish County
Public Works

**Aaron Reardon**
County Executive

3000 Rockefeller Ave., M/S 607
Everett, WA 98201 – 4046

(425) 388-3425
FAX (425) 388-7044

August 13, 2012

Snohomish County Council
3000 Rockefeller Avenue
Everett, Washington 98201

RE: Solid Waste Advisory Committee Participation and Approval of the 2012 Snohomish County Comprehensive Solid Waste Management Plan

Dear Councilmembers:

The Snohomish County Solid Waste Advisory Committee (SWAC) offers this letter of support and recommendation for approval of the 2012 Snohomish County Comprehensive Solid Waste Management Plan (Plan).

SWAC's involvement began in 2009, with review of the Plan layout, goals, and policies. SWAC has reviewed and commented on the development of all technical memorandums and the narrative portion of the Plan. SWAC has also reviewed and made suggestions regarding the recommendations and their ranking/implementation time frame.

We appreciate Solid Waste staff's efforts to involve SWAC in this planning process.

Sincerely,

Steve Fisher

Steve Fisher, Chair

Snohomish County Solid Waste Advisory Committee

**STATE OF WASHINGTON**
**DEPARTMENT OF ECOLOGY**
*Northwest Regional Office • 3190 160th Ave SE • Bellevue, Washington 98008-5452 • (425) 649-7000*
*711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341*

November 30, 2012

Matthew Zybas
Snohomish County Solid Waste Division
3000 Rockefeller Avenue
Everett, WA 98201

RE: *Ecology's Preliminary Review of Snohomish County's Comprehensive Solid and Hazardous Waste Management Plan, 2012*

Dear Mr. Zybas:

Please find attached Ecology's comments on Snohomish County's Preliminary Comprehensive Solid and Hazardous Waste Management Plan 2012 that was submitted on September 24, 2012.

Thank you and all involved parties for your hard work in preparing this document. If you have any questions or need clarification, please contact me at (425) 649-7266 or at taisa.welhasch@ecy.wa.gov. I look forward to the final draft.

Sincerely,

Taisa Welhasch

Taisa Welhasch
Regional Planner and Grant Officer
Northwest Regional Office
(425) 649-7266, taisa.welhasch@ecy.wa.gov

Cc: JR Myers, Snohomish County Solid Waste Division
Penny Ingram, Washington Utilities and Transportation Commission
Peter Christiansen, Department of Ecology, W2R Program

# Snohomish County 2012 Draft Solid and Hazardous Waste Management Plan

Review Comments: Taisa Welhasch
Solid Waste Planner, NWRO
November 30, 2012

Ecology's review comments are provided to assist Snohomish County in the development of a comprehensive, approvable, and useful solid and hazardous waste management plan. The goals of the planning process include reducing the total amount of waste produced through waste reduction and recycling, properly disposing the remainder of the waste and achieving compliance with state and local environmental regulations.

The task of comprehensive plan development is not an easy assignment considering the multitude of responsibilities confronting the Snohomish County Public Works Department. Ecology recognizes the tremendous effort in developing and updating the joint Solid and Hazardous Waste Management Plan. The Plan presented to Ecology has gone through a thorough review by SWAC, Snohomish County Cities, hauling service providers, the public and other interested parties in the County.

The Plan is well written, forward thinking and comprehensive in scope. Ecology is pleased that Beyond Waste and climate change priorities are repeatedly incorporated in your policy objectives. Ecology commends the County for strategically analyzing your solid waste and moderate risk waste collection system taking into consideration environmental outcomes such as reuse and carbon footprint, as well as efficiency, accessibility and budget. This Plan includes a thoughtful and methodical exploration of alternatives that should provide Snohomish County with the tools to continue to perform the excellent job of solid waste handling and reduction in the County.

## ITEMS THAT MUST BE ADDRESSED PRIOR TO PLAN APPROVAL

**Designation of Recyclable Materials** - RCW 70.95.010 (7)(c): The County's criteria and process for revising the list of designated recyclables is clear and thorough. In the event that the County decides to revise the list, Ecology must be notified when the changes are adopted. Please note this in the Plan.

**WUTC Comments:** The WUTC conducted a formal review of the Plan and forwarded their comments to Ecology and to the County in a letter dated October 25, 2012. The WUTC comment letter, assigned as an attachment to Ecology's comments, must be considered and attached to your Final Plan.

**OTHER COMMENTS**

The title of the Plan is appealing. Since this is an update to both Solid and Hazardous Waste Management Plans, the word "Hazardous" should be in the title.

On pg. 5 of the Outreach and Education Technical Memo, please remove "in alternating years." The supplemental grant cycle will most likely be offered simultaneously with the regular grant cycle.

On pg. 3 of the Organics Technical Memo, there is reference to cities that have banned yard debris from disposal with garbage. Consider listing the cities.

On pg. 11 of the Organics Technical Memo, please clarify the following sentence: "Since anaerobic digestion does not fully consume or process the incoming materials, the residuals from anaerobic digestion would still need to be composted and marketed." Composting is one option, however; it is not required and it is not the most commonly used option. Consider replacing the word "composted" with the word "processed."

On pg. 14 of the Organics Technical Memo, "compostable paper and plastic products" are mentioned as areas of focus for expanding food waste diversion. Plastics contamination in food waste at compost facilities is a growing problem. Cross contamination issues are acknowledged in the Recycling Technical Memo, but not in the Organics Technical Memo. Please consider this issue when implementing your recommendation for promoting food waste and compostable products diversion.

On pg. 5 of the Administration and Regulation Technical Memo, consider improving the resolution of Figure 1.

On pg. 5 of the Administration and Regulation Technical Memo, consider including the SWAC website link.

On pg. 21 of Volume I, consider inserting a short paragraph and/or website link describing the current pharmaceutical disposal options in the County.

On pg. 25 of Volume I, please clarify the following sentence: "The state of Washington developed a list of specific materials that needs to be addressed by local MRW plans." Ecology developed a hazardous household substance list that can be used as a starting point to identify household products that may pose public health or environmental risks in the planning area. The list is not a requirement. Local governments may use any part or the entire list in developing their household hazardous waste collection programs.

On pg. 27 of Volume I, consider using an alternative picture for demonstrating food waste collection more clearly. For example, consider a green bin and a biobag or no bag rather than a blue bin and a plastic liner.

In the Final Plan submittal, please include the interlocal agreement that the County currently has in place with the City of Bothell.

The County identifies that the designation of urban and rural areas can be found in the County Comprehensive Plan. Please reference the corresponding link and page numbers and consider including a general map of the two types of service areas into this Plan.

RCW 70.95.090(4) requires the plan to address surveillance and control program development and implementation. The County included a brief summary of the Health District's enforcement responsibilities. The implementation of the program and any planning issues should also be described in the Plan directly or through a link to the Health District's website.

We applaud that the County dedicated a technical memo to waste prevention. Consider adding an emphasis on the upstream benefits of green building and low impact development. Green building principals applied upstream result in the avoidance of the generation of C&D material. Green building also helps support markets for compost, non-toxic products, and conservation across the spectrum.

We applaud the County for your forward thinking on disaster debris planning. Will the Public Works Department be working with the Health District to assure that the sites picked for interim storage and staging could be quickly permitted if necessary?

We are pleased that the Plan acknowledges contamination issues and that the County is focusing educational and policy efforts on how best to recycle, so that markets receive loads of consistently high-quality commodities.

SERVICE DATE

OCT 25 2012

STATE OF WASHINGTON

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

*1300 S. Evergreen Park Dr. S.W., P.O. Box 47250 • Olympia, Washington 98504-7250*
*(360) 664-1160 • TTY (360) 586-8203*

RECEIVED
OCT 26 2012
DEPT OF ECOLOGY

October 25, 2012

Mr. Matthew Zybas, Director
Snohomish County Solid Waste Division
3000 Rockefeller Ave., M/S 607
Everett, WA 98201-4046

**RE: Snohomish County Comprehensive Solid Waste Management Plan, Docket TG-121593**

Dear Mr. Zybas:

The Washington Utilities and Transportation Commission (commission) has completed its review of the preliminary draft of the Snohomish County Comprehensive Solid Waste Management Plan Update (Plan).

The 2012-2017 Plan does not propose to increase the current tip fee of $105 per ton. Therefore, staff finds no financial rate impact to ratepayers served by regulated solid waste collection companies in Snohomish County.

Staff has no further comment on the Plan.

Please direct questions or comments about the commission's plan review process to Penny Ingram at (360) 664-1242 or pingram@utc.wa.gov.

Sincerely,

David W. Danner
Executive Director and Secretary

cc: Taisa Welhasch
Department of Ecology
Waste 2 Resources Program
300 Desmond Drive
P.O. Box 47775
Olympia, WA 98504-7775

Snohomish County
Public Works

**Snohomish County 2012 Draft Solid and Hazardous Waste Management Plan Responsive Summary to Department of Ecology's Comments on the Preliminary Draft Plan**

Prepared by: Solid Waste Division

## ITEMS THAT MUST BE ADDRESSED PRIOR TO PLAN APPROVAL

**Designation of Recyclable Materials** - RCW 70.95.010 (7)(c)**:** The County's criteria and process for revising the list of designated recyclables is clear and thorough. In the event that the County decides to revise the list, Ecology must be notified when the changes are adopted. Please note this in the Plan.

*On page 18 of the Recycling Technical Memorandum, the phrase "Ecology will be notified when changes to the list are adopted" has been added.*

**WUTC Comments:** The WUTC conducted a formal review of the Plan and forwarded their comments to Ecology and to the County in a letter dated October 25, 2012. The WUTC comment letter, assigned as an attachment to Ecology's comments, must be considered and attached to your Final Plan.

*The WUTC had no comments on the Preliminary Plan. Their letter stating such has been included in the Final Draft Plan.*

## OTHER COMMENTS

The title of the Plan is appealing. Since this is an update to both Solid and Hazardous Waste Management Plans, the word "Hazardous" should be in the title.

*The word "Hazardous" has been added to the title of the Final Draft Plan.*

On pg. 5 of the Outreach and Education Technical Memo, please remove "in alternating years." The supplemental grant cycle will most likely be offered simultaneously with the regular grant cycle.

*The phrase, "in alternating years" has been removed.*

On pg. 3 of the Organics Technical Memo, there is reference to cities that have banned yard debris from disposal with garbage. Consider listing the cities.

*The status of cities that have or have not banned yard debris from disposal with garbage is expected to change with the life of this Plan. Therefore, we prefer not to list specific Cities. Also, during discussions with SWAC it was felt this was unnecessary and could draw unnecessary attention to Cities that were not banning yard debris from disposal.*

On pg. 11 of the Organics Technical Memo, please clarify the following sentence: "Since anaerobic digestion does not fully consume or process the incoming materials, the residuals from anaerobic digestion would still need to be composted and marketed." Composting is one option, however; it is not required and it is not the most commonly used option. Consider replacing the word "composted" with the word "processed."

*The word "composted" has been replaced with the word "processed" for the following sentence, "Since anaerobic digestion does not fully consume or process the incoming materials, the residuals from anaerobic digestion would still need to be composted and marketed."*

On pg. 14 of the Organics Technical Memo, "compostable paper and plastic products" are mentioned as areas of focus for expanding food waste diversion. Plastics contamination in food waste at compost facilities is a growing problem. Cross contamination issues are acknowledged in the Recycling Technical Memo, but not in the Organics Technical Memo. Please consider this issue when implementing your recommendation for promoting food waste and compostable products diversion.

*The phrase "compostable paper and plastic products" has been changed to read "compostable paper and compostable plastic products". Cross contamination issues will be considered when implementing recommendations for promoting food waste and compostable products diversion.*

On pg. 5 of the Administration and Regulation Technical Memo, consider improving the resolution of Figure 1.

*The resolution of Figure 1 has been improved.*

On pg. 5 of the Administration and Regulation Technical Memo, consider including the SWAC website link.

*A link to the SWAC website has been included.*

On pg. 21 of Volume I, consider inserting a short paragraph and/or website link describing the current pharmaceutical disposal options in the County.

*The following paragraph was added to describe pharmaceutical disposal options in the County: "law enforcement agencies and other partners have established prescription drug drop-off locations throughout Snohomish County. These law enforcement locations accept narcotics and prescribed controlled substances, as well as other medications. Several Bartell Drugs stores, Group Health Cooperative clinics, and other locations also collect pharmaceuticals, but not narcotics. In addition, a link was created to the Snohomish County Solid Waste website for pharmaceutical disposal."*

On pg. 25 of Volume I, please clarify the following sentence: "The state of Washington developed a list of specific materials that needs to be addressed by local MRW plans." Ecology developed a hazardous household substance list that can be used as a starting point to identify household products that may pose public health or environmental risks in the planning area. The list is not a requirement. Local governments may use any part or the entire list in developing their household hazardous waste collection programs.

*The sentence now reads: "The state of Washington developed a list of materials as a starting point that can be addressed by local MRW plans."*

On pg. 27 of Volume I, consider using an alternative picture for demonstrating food waste collection more clearly. For example, consider a green bin and a biobag or no bag rather than a blue bin and a plastic liner.

*An alternative picture has been inserted for demonstrating food waste collection.*

In the Final Plan submittal, please include the interlocal agreement that the County currently has in place with the City of Bothell.

*Interlocal agreements with the City of Bothell and King County have been included in the Final Draft Plan.*

The County identifies that the designation of urban and rural areas can be found in the County Comprehensive Plan. Please reference the corresponding link and page numbers and consider including a general map of the two types of service areas into this Plan.

*A link to the current Comprehensive Plan has been included. This will keep the information current for the life of the Plan. The map has been revised to show Urban Growth Areas in the County.*

RCW 70.95.090(4) requires the plan to address surveillance and control program development and implementation. The County included a brief summary of the Health District's enforcement responsibilities. The implementation of the program and any planning issues should also be described in the Plan directly or through a link to the Health District's website.

*The phrase, "In 2011 the Health District issued 42 solid waste handling permits; reviewed 2 permit applications; conducted 399 inspections at permitted and exempt facilities; and responded to 780 complaints." was added to page 7 of the Administration and Regulation Technical Memorandum.*

We applaud that the County dedicated a technical memo to waste prevention. Consider adding an emphasis on the upstream benefits of green building and low impact development. Green building principals applied upstream result in the avoidance of the generation of C&D material. Green building also helps support markets for compost, non-toxic products, and conservation across the spectrum.

*During discussions with Solid Waste staff and SWAC, it was agreed that statements regarding green building and low impact development were best left to individual community development and planning departments and utilities where they would have the most impact and be most relevant.*

We applaud the County for your forward thinking on disaster debris planning. Will the Public Works Department be working with the Health District to assure that the sites picked for interim storage and staging could be quickly permitted if necessary?

*The Public Works Department will be working with the Health District to ensure that the sites selected for interim storage and staging could be quickly permitted if necessary.*

October 25, 2012

Mr. Matthew Zybas, Director
Snohomish County Solid Waste Division
3000 Rockefeller Ave., M/S 607
Everett, WA 98201-4046

**RE: Snohomish County Comprehensive Solid Waste Management Plan, Docket TG-121593**

Dear Mr. Zybas:

The Washington Utilities and Transportation Commission (commission) has completed its review of the preliminary draft of the Snohomish County Comprehensive Solid Waste Management Plan Update (Plan).

The 2012-2017 Plan does not propose to increase the current tip fee of $105 per ton. Therefore, staff finds no financial rate impact to ratepayers served by regulated solid waste collection companies in Snohomish County.

Staff has no further comment on the Plan.

Please direct questions or comments about the commission's plan review process to Penny Ingram at (360) 664-1242 or pingram@utc.wa.gov.

Sincerely,

David W. Danner
Executive Director and Secretary

cc: Taisa Welhasch
Department of Ecology
Waste 2 Resources Program
300 Desmond Drive
P.O. Box 47775
Olympia, WA 98504-7775

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
*Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000*
*711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341*

September 27, 2012

Ms. Penny Ingram, Regulatory Analyst
Washington Utilities and Transportation Commission (WUTC)
PO Box 47250
Olympia, WA 98504-7250

Re: Preliminary Draft Review – *Snohomish County Comprehensive Solid Waste Management Plan Update – 2012*

Dear Ms. Ingram:

Ecology is forwarding two copies of the formal submission of *Changing Waste For Changing Times Snohomish County Comprehensive Solid Waste Management Plan 2012* for review under Chapter 70.95 RCW (for solid waste), Chapter 70.105 RCW (for hazardous waste), and RCW 70.95I.020 (related to used oil) and Ecology's guidelines for solid and hazardous waste plans. The electronic version of the Plan can be found here:
http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/SolidWaste/Planning/compplan.htm

Ecology received this plan on September 26, 2012. It includes an updated WUTC Cost Assessment. Under the Interagency Agreement, comments from WUTC plan reviewers should be sent within 45 days from the date the plan is received and docketed by the WUTC.

Please forward copies of your correspondence with Snohomish County to me, and also please inform me of the date when this item will be presented at the WUTC public meeting.

Should you have questions about the information contained in the cost assessment questionnaire, please contact JR Myers at 425-388-6489 or bernard.myers@snoco.org. Any other questions can be directed to me. Thank you for your continued cooperation and assistance in plan review.

Sincerely,

Taisa Welhasch

Taisa Welhasch
Solid Waste Planner and Coordinated Prevention Grant Officer
Northwest Regional Office
(425) 649-7266, taisa.welhasch@ecy.wa.gov

Enclosure: Two copies of the *Changing Waste for Changing Times Snohomish County Comprehensive Solid Waste Management Plan 2012, and* one copy of the cover letter submitted by Snohomish County

cc: JR Myers, Snohomish County Public Works Senior Planner
Peter Christiansen, Ecology Waste 2 Resources Section Manager