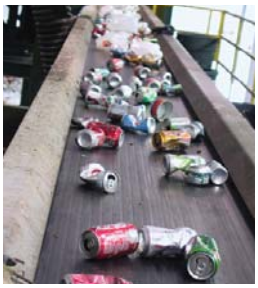
PRELIMINARY DRAFT
COMPREHENSIVE SOLID AND HAZARDOUS WASTE MANAGEMENT PLAN

WHATCOM COUNTY, WASHINGTON

July 16, 2015



ACKNOWLEDGEMENTS

The Whatcom County Comprehensive Solid and Hazardous Waste Management Plan was prepared by a team consisting of Whatcom County Solid Waste Division staff, the Whatcom County Solid Waste Advisory Committee, and the Maul Foster & Alongi, Inc. consultant team. Throughout development of this document, the individuals involved dedicated an extensive amount of time and energy in formulating recommendations, discussing approaches, and reviewing the document. In particular, the team wishes to acknowledge, with great appreciation, the solid waste industry service providers in our community, and their employees, who work hard to effectively manage our solid and hazardous wastes.

Maul Foster & Alongi, Inc.

Justin Clary
Erik Bakkom
Jacqueline Gruber

Whatcom County Staff

Jeff Hegedus, Health Department
Debbie Bailey, Public Works Department
Gary Stoyka, Public Works Department

Solid Waste Advisory Committee

Barbara Brenner, Whatcom County Council representative
Greg Young, City of Ferndale, small cities representative
Eric Johnston, City of Bellingham representative
Casey Heinle, citizen representative
Ed Nikula, citizen representative
Mark Peterson, public interest group representative
Marjorie Ann Leone, public interest group representative
Amber Jones, business/industry representative
Calvin DenHartog, waste collection industry representative (term expired 12/31/2014)
Troy Lautenbach, waste collection industry representative (term began 1/1/2015)
Martin Kuljis, Jr., waste recycling industry representative
Pete Edwards, solid waste facility representative

Washington State Department of Ecology

Diana Wadley
Peter Christiansen

Contact Information

Whatcom County Health Department
509 Girard Street
Bellingham, Washington 98225
360.676.6724

CONTENTS

ACRONYMS AND ABBREVIATIONS

Beyond Waste	Washington State Beyond Waste Plan
C/D	Construction and Demolition
Cando	Cando Recycling and Disposal
CESQG	Conditionally Exempt Small-quantity Generator
County	Whatcom County
CPG	Coordinated Prevention Grant
Ecology	Washington State Department of Ecology
E-waste	Electronic Waste
FCO	Flow Control Ordinance
HHW	Household Hazardous Waste
LAMIRD	Limited Area of More Intense Rural Development
MFS	Minimal Functional Standards
MRF	Material Recovery Facility
MRW	Moderate-risk Wastes
MSW	Municipal Solid Waste
MTCA	Model Toxics Control Act
NVD	Nooksack Valley Disposal
NWCAA	Northwest Clean Air Agency
OFM	Washington State Office of Financial Management
Plan	Comprehensive Solid and Hazardous Waste Management Plan
PPG	Ecology Public Participation Grant
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RDC	Regional Disposal Company
RDS	Recycling and Disposal Services
SEPA	State Environmental Policy Act
SSC	Sanitary Service Company
SWAC	Solid Waste Advisory Committee
SWEC	Solid Waste Executive Committee
TZW	Toward Zero Waste
TZWI	Toward Zero Waste Initiative
UGA	Urban Growth Area
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
WAC	Washington Administrative Code
WCC	Whatcom County Code
WDFW	Washington Department of Fish and Wildlife
WSDOT	Washington State Department of Transportation
WSU	Washington State University
WUTC	Washington Utilities and Transportation Commission

1 INTRODUCTION

1.1 PURPOSE

The State of Washington enacted legislation through adoption and subsequent, periodic amendments to Revised Code of Washington (RCW) Chapter 70.95 establishing comprehensive statewide programs for solid waste handling and solid waste recovery and recycling. The purpose of these requirements is to prevent land, air, and water pollution, and to conserve the natural, economic, and energy resources of the state.

Each county in the state is required by RCW 70.95.080 to prepare a solid waste management plan. Washington Administrative Code (WAC) Section 173-304-011 states that "the overall purpose of local comprehensive solid waste planning is to determine the nature and extent of the various solid waste categories and to establish management concepts for their handling, utilization, and disposal consistent with the priorities established in RCW 70.95.010 for waste reduction, waste recycling, energy recovery and incineration, and landfill."

To address state requirements, Whatcom County (the County) originally developed and adopted the first revision of the Comprehensive Solid and Hazardous Waste Management Plan (the Plan) in 1974. This 2015 revision represents the sixth iteration of the Plan, which was most recently revised in 1999 and 2008. RCW 70.95.110 requires that each plan be reviewed and revised, if necessary, at least every five years.

1.2 SOLID WASTE SYSTEM OVERVIEW

The waste management system in the County, illustrated in Figure 1-1, consists of approximately 35 permitted and exempt solid waste handling facilities, as regulated by WAC 173-350, *Solid Waste Handling Facilities*. These facilities consist of private sector landfills, landfills managed in post-closure, transfer stations, drop box collection sites, moderate risk waste (MRW) fixed facilities, composting facilities, anaerobic digesters, biosolids facilities, and recycling operations. The solid waste system is largely privatized, and except for the MRW facility (Disposal of Toxics Program), the County neither owns nor operates collection, treatment or disposal facilities. An overview of the County's solid waste system is provided below. Specific details on the system components are located in the corresponding sections.

1.2.1 WASTE REDUCTION AND PUBLIC EDUCATION

The first step in the waste management hierarchy is reducing waste generated. The County's waste reduction efforts use public education and technical assistance for businesses to educate the public on the importance of and methods for reducing waste generated to the extent possible. In addition, there is a wide variety of material reuse opportunities provided by private sector and nonprofit entities, consisting of consignment stores, donation centers, and construction material reuse centers. More detail is provided in Section 3.1.

1.2.2 RECYCLING

Recyclable materials are collected in the system through curbside collection, drop-box facilities, and transfer station drop-off locations and are delivered to the appropriate facilities. Most household recyclable materials go to Northwest Recycling. Other recycling services are also available to the public and are described in more detail in Section 4.1.

1.2.3 ORGANIC MATERIALS MANAGEMENT

Curbside and self-haul organic materials (yard and food waste) are collected and delivered to Green Earth Technology Composting Facility. Materials are processed on site. More detail is described in Section 5.1.2.

1.2.4 SOLID WASTE COLLECTION

Solid waste in the county is collected primarily by three private haulers, covering distinct service areas: Sanitary Service Company (SSC), Nooksack Valley Disposal (NVD), and Cando Recycling and Disposal (Cando). The far eastern portion of Whatcom County is served by the Skagit County waste hauler, currently Waste Management, and is not included in the Plan. All cities in Whatcom County, with the exception of Bellingham, use traditional bag or customer-owned, 32-gallon can residential collection systems, or collector provided containers or totes. Customers of SSC and NVD also have the option of using collection-company-owned wheeled carts. Residential recycling is collected on a weekly basis in Bellingham and biweekly elsewhere in the county, and organic materials (yard waste and food waste) are picked up on a biweekly basis throughout the year. Commercial recycling collection frequency and services vary based on customer need. More detail is provided in Section 6.1.

1.2.5 TRANSFER AND DISPOSAL

Curbside waste, recycling, and organic materials collected by the private haulers are transported to one of three transfer stations, which also receive waste from public self-haulers. Municipal solid waste (MSW) is consolidated into transfer trucks or railcars for landfill disposal outside the county. The three transfer stations include the Recycling and Disposal Services (RDS) Transfer Station, Regional Disposal Company (RDC) Transfer Station, and Cando Recycling Transfer Station.

The County system also includes four drop-box facilities available to public self-haulers: NVD Drop Box Facility, SSC Roeder Avenue Drop Box Facility, SSC Birch Bay-Lynden Drop Box Facility, and SSC Cedarville Drop Box Facility. Waste collected in these drop boxes is hauled to the transfer stations in Whatcom County.

Waste for disposal is transferred by truck or rail to the Columbia Ridge Landfill in Arlington, Oregon (RDS), the Roosevelt Landfill in Roosevelt, Washington (RDC), or the Cowlitz County landfill (Cando). While there are no active landfills, there are five closed landfills maintained under permit in post closure statues in the county, in addition to several others regulated as MTCA sites. Other system facilities include the City of Bellingham Clean Green Drop Box Facility (organic materials only), the City of Bellingham Vactor Waste Transfer Station, the Whatcom County MRW Facility (Disposal of Toxics Program), and a variety of private recycling and reuse services.

More detail is provided in Section 7.1. A list of public and private solid-waste-handling facilities is provided in Appendix A.

1.2.6 SPECIAL WASTE

Special wastes are materials that require special or separate handling because of their unique characteristics, such as bulk, water content, or dangerous constituents. Special wastes include agricultural waste, contaminated soils, vactor waste, tires, and construction and demolition (C/D) waste, to name a few. Special waste is handled through material-specific programs. Details on these programs are provided in Section 8.1.

1.3 PARTICIPATING JURISDICTIONS

Pursuant to interlocal agreements, the Plan defines the solid waste management policy of Whatcom County and all incorporated cities in the county, including Bellingham, Blaine, Everson, Ferndale, Lynden, Nooksack, and Sumas. These jurisdictions have worked with the County to plan for solid-waste-related needs since the 1970s and originally entered into formal inter-local agreements regarding solid waste management in 1989. The agreements have been amended over the years. Current interlocal agreements were reviewed as part of the planning process and are consistent with the Plan. These agreements are presented in Appendix C.

The Plan encompasses both the incorporated and unincorporated areas of the western and central portion of the county, with the exception of the Lummi and Nooksack reservations. In addition, the far eastern portion of Whatcom County (including Newhalem and Diablo) is serviced by the Skagit County waste hauler, currently Waste Management, and is not included in this Plan.

Comprehensive Solid and Hazardous Waste Management Plan Update

Figure 1-1
Handling Facilities Map

Whatcom County
Washington

BLAINE
SUMAS
LYNDEN
NOOKSACK
EVERSON
FERNDALE
BELLINGHAM
546
548
539
544
5
542
9
Bellingham Bay
Sammish Bay
Lake Whatcom
NO FACILITEIS IN EAST COUNTY

Point Roberts
NTS

Legend

- City Boundary
- Planning Area

HandlingFacilities

- Organics Drop Box
- Drop Box Facility
- Hazardous Waste
- Organics Drop-off
- Reuse Drop-off Location
- Recycling Drop-off Location
- Transfer Facilities
- Vactor Waste

0 6,000 12,000
Feet

Source: City Boundary & Planning Area from Whatcom County.
Roads from WSDOT.

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

Path: \\nfsgpdx-fs1\A RCGIS.NET\0744.02 Whatcom Co SWMP\Projects\Fig_1-1_HandlingFacilities.mxd
Print Date: 4/15/2015
Approved By: J. Gruber
Produced By: jmiller
Project:

1.4 REQUIRED CONTENTS

RCW 70.95.090 mandates the required contents for solid waste management plans in Washington State, including:

- A detailed inventory and description of all existing solid waste handling facilities, including an inventory of any deficiencies in meeting current solid waste handling needs.
- The estimated long-range needs for solid waste handling facilities projected 20 years into the future.
- A program for the orderly development of solid waste handling facilities in a manner consistent with the plans for the entire county that shall:
  - Meet the Minimum Functional Standards (MFS) for solid waste handling adopted by the County and all laws and regulations relating to air and water pollution, fire prevention, flood control, and protection of public health
  - Take into account the comprehensive land use plan of each jurisdiction
  - Contain a six-year construction and capital acquisition program for solid waste handling facilities
  - Contain a plan for financing both capital costs and operational expenditures of the proposed solid waste management system
- A program for surveillance and control.
- A current inventory and description of solid waste collection needs and operations within each respective jurisdiction that shall include:
  - Any certificate for solid waste collection granted by the Washington Utilities and Transportation Commission (WUTC) in the respective jurisdictions
  - Any city solid waste operation in the county and the boundaries of such operation
  - The population density of each area serviced by a city operation or by a certificated operation within the respective jurisdictions
  - The projected solid waste collection needs for the respective jurisdictions for the next six years
- A comprehensive waste reduction and recycling element that, in accordance with the priorities established in RCW 70.95.010, provides programs that reduce waste, provides incentives and mechanisms for source separation, and establishes recycling opportunities for the source-separated waste. RCW 70.95.090(6) and (7) list detailed program and strategy requirements.
- An assessment of the plan's impact on the costs of solid waste collection. The assessment must conform to guidelines established by the WUTC.
- A review of potential areas that meet the solid waste disposal facility siting criteria outlined in RCW 70.95.165.

A compliance checklist has been provided that clearly articulates requirements specified by state code and illustrates how the revised plan formally achieves each standard on a case-by-case basis (Appendix B). The compliance checklist cites each regulatory requirement and the section in the Plan report that satisfies each criterion.

1.5 RELATIONSHIP TO OTHER PLANS

The 2015 Plan builds on previous solid waste plans, namely the 1999 Comprehensive Solid Waste Management Plan, the 2008 Plan Update, and the 1991 Hazardous Waste Management Plan. These documents provide a useful baseline for the 2015 planning process, but in many cases do not reflect the County's current practices and administrative structure.

In addition, this 2015 Plan builds on the foundation of the County's comprehensive plan, which provides framework for growth in the county over the 20-year planning horizon in accordance with the Growth Management Act (RCW 36.70A). The 2014 Comprehensive Plan is the current, adopted County plan; however, County planning staff are currently in the process of the comprehensive plan update, which is scheduled for adoption in 2016. To ensure consistency between plans, this Plan has been developed using the latest demographic data for population and employment projections provided by County Planning and Development Services. Although the comprehensive plan update will not be complete for another year, these demographic figures have received preliminary approval from the County Council through Ordinance 2014-013 and represent the best data available. Further, this 2015 Plan complies with the land use policies set forth in the 2014 Comprehensive Plan.

In addition, the following plans provided a foundation for development of this 2015 Plan and were reviewed for consistency:

- Whatcom County Code (WCC), Title 20—Zoning (updated November 2014)
- Washington State Growth Management Act, RCW Chapter 36.70A
- Washington State Office of Financial Management (OFM) County Growth Management Population Projections by Age and Sex: 2010-2040
- Washington State Department of Ecology (Ecology) 2009 Washington State Beyond Waste Plan (Beyond Waste Plan)
- Washington State Department of Ecology Draft 2015 Beyond Waste Plan Update (in development)
- Supporting comprehensive and land use plans for the jurisdictions of Bellingham, Blaine, Everson, Ferndale, Lynden, Nooksack, and Sumas.

1.6 THE SOLID WASTE ADVISORY COMMITTEE AND SOLID WASTE EXECUTIVE COMMITTEE

The Solid Waste Advisory Committee (SWAC) provides ongoing public input and advice to the County on solid waste management issues and played a critical role in overseeing the creation of this Plan.

The SWAC consists of 11 committee members: eight Council-appointed members and three designees from the County and municipal jurisdictions. Members are appointed for three-year terms, with a two-term limit. Returning members are required to have a one-year separation between terms, and that position is filled by another individual for the entire term. The SWAC meets on a quarterly basis to discuss current solid waste issues. To facilitate the development of the Plan, a SWAC subcommittee was formed to provide frequent direction to the planning team on an as-needed basis.

The SWAC includes the following members, with SWAC subcommittee members designated:

- County Council Representative
- City of Bellingham Representative (SWAC subcommittee)
- Small Cities Representative
- Citizen Representative I
- Citizen Representative II
- Public Interest Group Representative I (SWAC subcommittee)
- Public Interest Group Representative II
- Business/Industry Representative (SWAC subcommittee)
- Waste Collection Industry Representative
- Waste Recycling Industry Representative (SWAC subcommittee)
- Solid Waste Disposal Facility Representative

The Solid Waste Executive Committee (SWEC) consists of the County Executive and Mayor of each city, and was established in 1991 by interlocal agreement. SWEC meets at least annually as may be necessary to approve the Plan or amendments to the Plan, review and approve budget proposals, flow control ordinance revisions, and other solid waste system policy considerations.

1.7 MISSION

The County's mission through implementation of the Plan is to facilitate an economically efficient waste prevention, recycling, and disposal system that protects human health and the environment. The County provides for appropriate and economical utilization of natural resources for the citizens of Whatcom County by managing a privatized solid waste system. The Plan works to develop, monitor, educate and enforce various federal, state, and local government plans, laws, regulations, and grants.

The County achieves this mission through the following objectives:

- Reduce or prevent, where possible, the generation of solid waste and MRW and their associated issues through service-oriented, cost-effective actions in which prevention or reduction will protect human health, safety, and environmental quality.
- Solve issues related to solid waste and MRW through service-oriented actions that protect human health and safety and environmental quality.
- Maintain a balance with the privatized solid waste system while ensuring that user needs are satisfied.
- Provide necessary support for the preceding goals, using service-oriented, cost-effective actions.

1.8 PROCESS OF UPDATING THE PLAN

This Plan was developed by the County through direct input from staff, the public, SWAC, SWEC, WUTC, Ecology, and industry stakeholders.

1.8.1 DEVELOPMENT OF SOLID WASTE PLAN

The preparation of the 2015 Plan began in July 2014 and will proceed through June 2015. At the start of plan development, background information available in the previous plan was reviewed, and informational interviews with County staff and service providers were conducted to update the description of the overall County solid waste system. These interviews provided insight into the effectiveness of programs and system capacity from a service-provider perspective, with interviewees providing feedback on potential system gaps for further evaluation by the SWAC. This description was used as the basis for the data gathering analysis and reporting process for the plan update. An updated description of the current solid waste system was prepared so that all members of the SWAC had an accurate basis for evaluating the path forward.

An evaluation of the system's past performance was conducted using data from Ecology's annual waste disposal and recycling summary for the County. Data from the past ten years were compiled and analyzed to understand total tonnage of waste recycled, diverted, and disposed of, as well as the breakdown by type of the county's recycled and diverted materials. This analysis resulted in a detailed understanding of the historical waste profile critical to understanding the value of specific waste management programs.

A demographic analysis was conducted to understand historical population trends. Future population projections were also considered and the anticipated growth rate was applied to estimate future waste disposal and recycling trends. When considered with the waste generation information, changes in individual waste generation and recycling habits could then be analyzed.

An updated understanding of the current system was developed with support from the SWAC subcommittee. County staff worked with the SWAC subcommittee and consultant team to identify 15 goals in these primary areas to address the needs identified through the planning effort. Forty-three supporting actions were developed by the County and its partners, providing a road map for strategic implementation of each goal.

1.8.2 IMPLEMENTATION PLAN

The implementation plan described in Section 10 was developed to assist the County in the systematic achievement of each goal defined in this Plan through specific, measurable actions. Each of these actions is described in detail in the corresponding sections. Actions were prioritized over the six-year planning horizon, from year 2016 through 2021. The implementation plan is designed to assist the County with decision-making associated with new or expanded programming, as funding becomes available.

1.8.3 PUBLIC PARTICIPATION

The SWAC meets on a quarterly basis to provide public input and advice to the County on a variety of solid waste management issues. To assist with the development of this Plan, the County SWAC formed a subcommittee of members who agreed to meet on a more frequent basis to facilitate the

rapid development and evaluation of information and strategy. The subcommittee met periodically, between September 2014 and February 2015, and went through a process of evaluating the existing system, identifying needs, setting goals, and determining future action items. The progress of the plan development was reviewed with the SWAC during their regular quarterly meetings, with ultimate approval of all recommendations coming from the full SWAC. All draft chapters and subsequent revisions of the 2015 Plan have been reviewed by the SWAC.

SWAC meetings were open to the public and provided opportunities for public input. Planning materials and periodic updates were posted on the County's solid waste web site to ensure inclusivity in the process. Following the development of the draft Plan, the Plan was presented to the full SWAC and then released for a 30-day public review and comment period. Toward the end of the review period, the County Council held a public hearing to consider public comments on the draft Plan. After revision to incorporate public and Ecology comments, and SWEC review and approval, the Council formally adopted the final Plan and submitted it to Ecology for approval. The final resolution for adoption and accompanying interlocal agreements are located in Appendix C.

1.8.4 PUBLIC AGENCY REVIEW

A State Environmental Policy Act (SEPA) checklist was prepared in conjunction with the Plan update. The submittals and meetings required for SEPA checklist review and approval were timed to facilitate the incorporation of the SEPA checklist (Appendix D) into the final revision of the Plan submitted to Ecology.

The WUTC reviewed the draft Plan, as well as the WUTC Cost Assessment Questionnaire (Appendix E), during the approval process. The WUTC regulates solid waste companies and reviews solid waste plans to evaluate probable financial impacts to ratepayers. More information regarding their authority is provided in Section 9.1.1.

The draft 2015 Plan was also reviewed by all participating local jurisdictions represented in the Plan. To ensure consistency with prior efforts, the Plan was also reviewed by the County Public Works Department, the previous County authority for solid waste management (effective January 1, 2015 the County Solid Waste Division was transferred from the Public Works Department to the Health Department).

The County Health Department revised the Plan to address comments received from all parties. The revised draft amendment was submitted to Ecology for final review. When Ecology indicated that the revised draft Plan was ready, the County carried out the local adoption process and revisited existing interlocal agreements with participating municipalities to ensure accordance with the terms. Following adoption, the final Plan was submitted to Ecology for final approval. Implementation of the 2015 Plan began following Ecology approval.

1.9 ORGANIZATION OF THE PLAN

This Plan provides an overview of existing conditions, needs, and opportunities, as well as defining system-wide solid waste management goals. Action items supporting each of these goals are embedded in the corresponding chapter.

The format of this Plan was drafted to correspond with the Plan Organization Table provided in the Ecology Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revisions (Publication No. 10-07-005). However, the plan outline was modified following

discussion with Ecology staff to meet the unique needs of the County, which operates as an administrative and educational agency overseeing a privatized solid waste system. The resulting plan framework focuses on system-wide goals and actions for implementing new programs and services, rather than evaluating alternatives for future specific facility or infrastructure improvements, which will be determined by the private waste collection and disposal providers.

This Plan includes ten subsequent sections relating to:

- Waste reduction
- Public education
- Recycling
- Organics
- Waste collection
- Transfer and disposal
- Special waste
- Administration and enforcement
- Implementation
- Hazardous waste management

2 PLANNING AREA

2.1 DESCRIPTION OF THE PLANNING AREA

Whatcom County is the northernmost county in western Washington. The county, depicted in Figure 2-1, covers an area of 2,182 square miles and extends from the Strait of Georgia eastward to the crest of the Cascade Mountain Range. Whatcom County is bounded on the north by Canada, Okanogan County to the east, and Skagit County to the south. Nearly two-thirds of the county's total land area lies in the mountainous region of the Mt. Baker National Forest, with most of the population residing in the western portion of the county. This portion of the county constitutes the solid waste management planning area and encompasses 755 square miles, including the incorporated municipalities of Bellingham, Blaine, Everson, Ferndale, Lynden, Nooksack, and Sumas.

2.1.1 NATURAL ENVIRONMENT

Topography

Northwestern Whatcom County is relatively flat terrain, with elevations ranging from sea level to a few hundred feet above mean sea level. Rolling hills characterize the bottom southwestern portion of the county. The eastern portion of the county, not included in the study area, is typically mountainous. Mt. Baker, the most notable landmark of the North Cascade range, reaches an elevation of 10,781 feet (USGS, 2015).

Climate

The county's position between western ocean salt water and eastern mountains gives it a maritime climate. Winters are generally moist, with temperatures dropping into the 30 degrees Fahrenheit range; summers are generally dry, with temperatures in the 70 degrees Fahrenheit range. Precipitation falls mostly as rain in the lowlands and snow in the mountains, and varies from 30 inches per year near Puget Sound to as much as 200 inches annually in the Cascades.

Hydrology

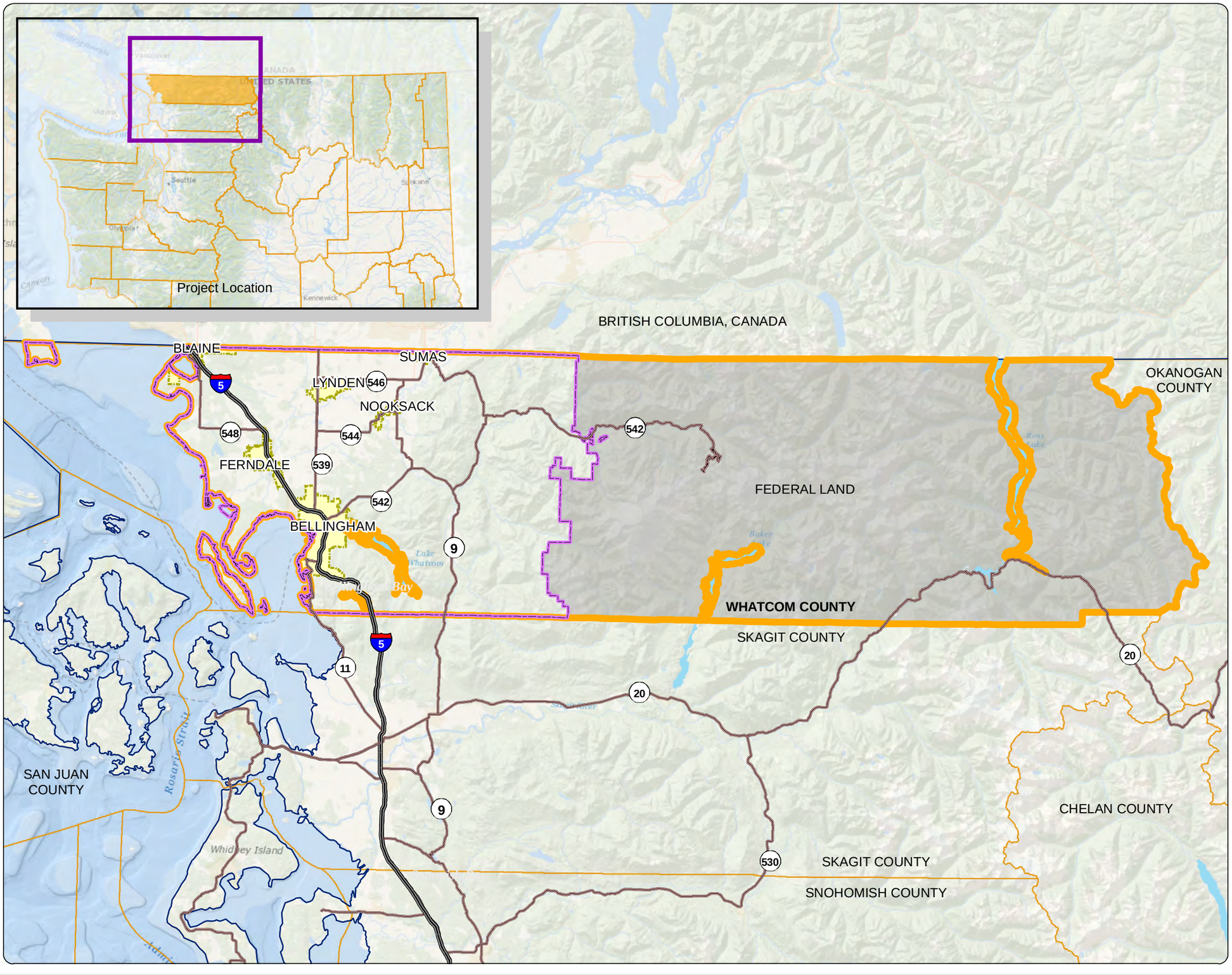
Three main river systems, the Nooksack, Sumas, and Skagit, help to drain the lowlands, foothills, and western mountains. The largest body of water in the western part of the county is Lake Whatcom (4,924 acres) and is the main source of drinking water for Bellingham. Other sizable lakes include Lake Samish (809 acres), Lake Terrell (321 acres), Silver Lake (157 acres), Lake Padden (147 acres), and Wiser Lake (116 acres) (WDFW, 2015).

Because of the county's hydrological features, the area available for the development of any future solid waste disposal landfill sites has proven to be extremely limited. Therefore, all solid waste generated in the county is transported to permitted sites outside the county.

Comprehensive Solid and Hazardous Waste Management Plan Update

Figure 2-1
Whatcom County Base Map

Whatcom County
Washington



Legend

- Planning Area
- City Boundary
- County Boundary
- Washington Boundary
- Federal Land (not in plan)

0 4.5 9
Miles

Source: Modeled terrain from Esri ArcGIS Online City Boundary, County Boundary, Federal Lands, Railroad, & Roads from Whatcom County.

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

Path: \\mfasp\dx-fs1\ARCGIS.NET\0744.02 Whatcom Co SWMP\Projects\Fig_2-1_Basemap.mxd
Print Date: 4/17/2015
Approved By: J. Gruber
Produced By: jmiller
Project:

Soils and Geology

There are a wide variety of soil types in the lowland portions of the county, including sandstone, shales, conglomerates, and coal, all of which are underlain by sedimentary bedrock. The lowland consists of alluvial bottomlands, broad fluvial and glacial terraces, and several large moraines of bedded glacial till clays and gravels. The low-permeability cemented hardpan or clay soils provide protection of the underlying groundwater, but can also create constraints associated with construction of solid waste disposal facilities. A very compact or firmly cemented and comparatively impervious hardpan could result in a perched water table and make excavation difficult.

From a solid waste management standpoint, the area's most important physical feature is the alluvial plain of the Nooksack River, which extends more than 20 miles inland and is a center for population and economic activity. The terrain is relatively flat, with a few low, poorly drained sections of lakes and marshes. The Nooksack River meanders slightly above sea level and periodically floods areas between Lynden and Ferndale. Just east of the alluvial plain, the north, middle, and south forks of the Nooksack River have formed narrow valleys as they flow out of the Cascade foothills.

In southwestern Whatcom County, glaciers of the Pleistocene epoch (about 10,000 to 15,000 years ago) carried uplifted and eroded rocks to the sea, forming Lake Whatcom and Lake Samish, and affecting the Chuckanut Mountain Range. The southern edge of Bellingham is situated on the lower, primarily sandstone slopes of the Chuckanut Mountains. Potential land disposal sites can be found in the unconsolidated deposits of the lowland portion of Whatcom County. These deposits consist of two distinct types, characterized by whether they were formed by glaciers or water movement.

Glacial movement formed marine and till deposits around King Mountain, Lummi Peninsula, the northern half of Lummi Island, Mountain View, Birch Point, and Point Roberts. Glacial deposits are essentially an impervious, blue-gray, compacted mixture of clay, silt, sand, and gravel up to 50 feet thick.

Deposits from water movement associated with glacial outwash and recent alluvium also contain clay, sand, silt, and gravel, but are not as impervious as the more compact glacial deposits. Such sedimentary deposits are located along the Nooksack lowland, Custer Trough, Lynden Terrace, and Sumas Trough.

The detailed soils maps produced by the Soil Conservation Service and the U.S. Geological Survey should be consulted for site-specific information.

2.1.2 COUNTY DEMOGRAPHICS

Population

Waste generation, recycling, and disposal rates of an area are a function of the county's population and projected growth. The 2010 U.S. Census estimated the total county population as 201,140. The population of the incorporated areas was 114,061, while the population of unincorporated areas was 87,079. The U.S. Census defines rural areas as census-designated places that contain 2,500 residents or more. By this definition, 94.3 percent of the total county population resided in urban areas.

Table 2-1 provides a more detailed breakdown of different areas in the county from the federal census data.

Table 2-1
Whatcom County Population

PLACE	2000[a]	2010[a]	2013
Urban Areas			
Bellingham	67,171	80,885	82,759[b]
Blaine	3,770	4,684	4,793[b]
Ferndale	8,758	11,415	11,679[b]
Lynden	9,020	11,951	12,228[b]
Unincorporated Urban	66,117	80,789	82,661[b]
Urban Subtotal	**154,836**	**189,724**	**194,120**[b]
Rural Areas			
Everson	2,035	2,481	2,538[b]
Nooksack	851	1,338	1,369[b]
Sumas	960	1,307	1,337[b]
Unincorporated Rural	8,132	6,290	6,436[b]
Rural Subtotal	**11,978**	**11,416**	**11,680**[b]
TOTAL POPULATION	**166,814**	**201,140**	**205,800**[c]

Source:
[a]Data for 2000 and 2010 was provided by the U.S. Census Bureau.
[b]The breakdown of population estimated for each jurisdiction in 2013 was calculated by assuming the same population share for each jurisdiction in 2010.
[c]Total population for 2013 is projected data prepared by OFM.

Between 2000 and 2010, the growth rate of county population varied between 0.6 percent and 2.6 percent per year, with an average annual growth of 1.8 percent.

Employment

The U.S. Census 2013 American Community Survey reports that approximately 96,145 individuals above the age of 16 are employed in Whatcom County. The current employment rate is approximately 46.7 percent. This employment rate is comparable to the future statewide employment rates projected by OFM.

To support the ongoing comprehensive planning update effort, the County also conducted analysis of employment in the county. The study utilizes county population and statewide employment forecasts, provided by OFM, to estimate an annual employment growth rate of approximately 1.1 percent through 2036. Overall, 64 percent of employment growth is expected to occur in the City of Bellingham Urban Growth Area (UGA), with additional growth occurring in the cities of Ferndale and Lynden (6.6 percent and 6.1 percent, respectively). The major growth sectors for the county as a whole are commercial (59 percent of total anticipated growth), industrial (26 percent), and retail (15 percent) (BERK, 2013).

Table 2-2 illustrates historical employment rates in Whatcom County compared to Washington State.

Table 2-2
Employment Rates

	Whatcom County	Washington State
Historical Estimates		
1990	50.6%	49.4%
2000	50.1%	49.2%
2010	48.0%	47.1%
Projections		
2020	-	46.6%
2030	-	44.8%
2040	-	44.4%
Source: BERK, Whatcom County Population and Employment Projections and Urban Growth Area Allocations, 2013. (References: OFM Long-term Forecast of the Washington Labor Force, March 2012-2013, Employment Security Department Local Employment Statistics.)		

Employment opportunities in the county are diversified; however, health care and social assistance, retail trade, manufacturing, and education services provide the largest shares of employment. Table 2-3 provides more detail on the county's most substantial industry sectors. According to the U.S. Census Survey of business owners, conducted in 2007, there are nearly 20,000 companies in Whatcom County.

Table 2-3
Whatcom County Employment Sectors, 2013

Industry	% of Total Population	Median Annual Income
Health care and social assistance	13%	$29,541
Retail trade	13%	$21,231
Manufacturing	11%	$40,737
Educational services	11%	$26,687
Professional, scientific, management, and administrative	10%	$33,640
Accommodations and food service	7%	$13,393
Construction	6%	$36,317
Financing, insurance, and real estate	5%	$39,106
Public administration	5%	56,606
Transportation, warehousing, and utilities	4%	$48,957
Other services	4%	$21,014
Agriculture, forestry, fishing, hunting, and mining	4%	$22,536
Arts, entertainment, and recreation	3%	$21,821
Wholesale trade	3%	$37,170
Information	2%	$32,739
Source: 2013, U.S. Census American Community Survey		

2.1.3 LAND USE

Whatcom County covers approximately 2,152 square miles, with the majority (nearly three-quarters) of nonfederal land use distribution in unincorporated Whatcom County dedicated to forestry and agriculture. Residential lands make up approximately 11 percent of the county's unincorporated areas.

The Washington State Growth Management Act requires that counties designate UGAs based on the 20-year population projections developed by OFM. By definition, these areas must contain enough space and density to accommodate the projected growth. Counties then allocate data-gathering tasks for more specific forecasts, which are essential for planning by cities, towns, and rural areas. Whatcom County's process involves all jurisdictions and the County's Planning Department.

The Whatcom County Comprehensive Plan, most recently updated in 2014, sets policies for land use, community services, transportation, and environmental management.

2.2 HISTORY OF SOLID WASTE SYSTEM

The 2015 Plan represents the sixth iteration of the Plan. Each planning period represents a chapter in the history of solid waste management in Whatcom County, and each has contributed to where we are today.

Until the early 1970s, the County was involved in relatively unsophisticated solid waste disposal, the management of four dumps: Birch Bay-Lynden, Cedarville, Point Roberts, and Y-Road. In addition, two incinerators were privately operated by Recomp of Washington, Inc. and Olivine Corporation. In the early 1970s, the County acquired minimal solid waste management planning responsibilities as a result of a new state law, and produced its first plan in 1974. The Plan was developed in conjunction with the cities and towns in the county, and recognized that open dumps were no longer an acceptable solid waste disposal method, and that public health and environmental concerns warranted a more rigorous approach. This is when "the system" was formed, and the County set up a separate Solid Waste Management Division within its Department of Public Works. At that time, state grants helped finance capital costs, while disposal or tipping fees financed operational costs.

In the early 1980s, the system began closing its dumps to all municipal solid waste (MSW), and three of the four accepted only C/D waste until the late 1980s. During the late 1980s, the County relied on private disposal companies and Cedarville Landfill to provide for the county's waste disposal needs. The system also began environmental compliance at the closed landfill sites and developed the second iteration of the Plan.

The 1980s saw the system expand its solid waste management activities to include more than disposal, at least partially as a result of increased state and federal requirements. During this period, the system closed most of its existing dumps, examined the feasibility of waste export versus finding a site for a new landfill, and began the development of the third iteration of the Plan. Most importantly, from a functional viewpoint, the system designed and implemented its initial recycling and MRW programs. Trends in federal and state environmental regulation had increased the emphasis on multimedia approaches to environmental problems. Activities such as solid waste management were seen as capable of contributing to the resolution of problems such as resource depletion and air and water pollution. For the first time, the system formally acknowledged that its

waste responsibilities extended beyond solid waste and beyond disposal-related activities. One component of this acknowledgment was the adoption, in the 1990 plan, of a 41 percent recycling goal by 1994.

Since the 1990 plan was adopted, the system made the decision to abandon efforts to site a County-owned landfill, and expanded the recycling and MRW programs into the area of waste and pollution prevention, with an increased emphasis on recycling and MRW-related activities. In addition, environmental compliance responsibilities increased as a result of additional mandates and closure of the Cedarville Landfill. Since this time, the private sector has played an increasing role in the County's solid waste system, providing not only for disposal, but also for handling of solid waste. While the system owns the MRW Facility (Disposal of Toxics Program), the operation of the facility is contracted out.

Later iterations of the Plan, in 1999 and 2008, stressed the importance of diverting waste from landfill through reducing, reusing, recycling, and composting. The primary roles of the County in the current system revolve around in-house waste prevention, public education and outreach, in-house recycling, MRW disposal, monitoring and compliance at closed landfills, enforcement, and administration.

2.3 QUANTITY AND CHARACTERIZATION OF SOLID WASTE

This section identifies and characterizes the county's waste stream, which provides the information necessary for evaluation of existing programs, development of new strategies, and implementation of new or revised planning measures.

2.3.1 SOLID WASTE DEFINITIONS

The following definitions describe general categories of waste discussed throughout this Plan. A more comprehensive glossary of definitions is provided immediately following the main body of this document.

Solid Waste: All putrescible and non-putrescible solid and semisolid wastes, including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, C/D wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

MSW: A subset of solid waste that includes unsegregated garbage, refuse, and similar solid waste material discarded from residential, commercial, institutional, and industrial sources and community activities, including residue left after recyclables have been separated.

Industrial Waste: Industrial waste includes by-products from manufacturing operations, food processing, and other industrial processes, such as scraps, trimmings, packaging, boiler ash, wood-product residuals, and other discarded materials not otherwise designated as a dangerous waste under Chapter 173-303 WAC.

Recycling: Transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration. Recycling does not include collection, compacting, repackaging, and sorting for the purpose of transport.

Diversion: Any method of recycling, energy production, or beneficial use that prevents disposition of material in landfills or incinerators. This definition includes all materials that are reported as recyclable.

Waste Reduction: Also sometimes referred to as "precycling." Waste reduction is the practice of minimizing waste through responsible purchasing and consumerism. It is, essentially, removing waste from the waste stream by not creating it in the first place. Waste reduction is typically achieved through better product or packaging design, by improved efficiency of use by the end user, and/or by process management.

2.3.2 WASTE DISPOSAL

The discussion presented below is based mainly on data that were collected by Ecology and provided to Whatcom County.[1] A total of 311,842 tons of solid waste was generated in Whatcom County in 2013. Most of the total solid waste generated in the county is MSW, with roughly 56 percent of that waste disposed of at Columbia Ridge landfill in Arlington, Oregon (RDS), and roughly 36 percent disposed of at the Roosevelt Landfill in Roosevelt, Washington (RDC). The remaining 8 percent of waste was disposed of at the BP Cherry Point landfill in Blaine, Washington, the Cemex waste landfill in Everett, Washington, and the greater Wenatchee regional landfill in East Wenatchee, Washington.

2.3.3 POPULATION PROJECTIONS

OFM's population estimates for 2013 are used as a basis for the discussion below (OFM, 2014). OFM provides population forecasts for each county in Washington State. OFM has prepared high-, medium-, and low-series population projections for Washington counties through 2040. RCW 43.62.035 provides that counties may, for purposes of growth management planning, use values between the high and low projections. As shown in Table 2-4, the intermediate series population projection predicts a county population of 284,901 in 2040. These populations would be attained with an average annual growth rate of approximately 1.4 percent over the planning period. The OFM low- and high-series projections have average annual growth rates of approximately 0.8 percent to 2.1 percent, respectively.

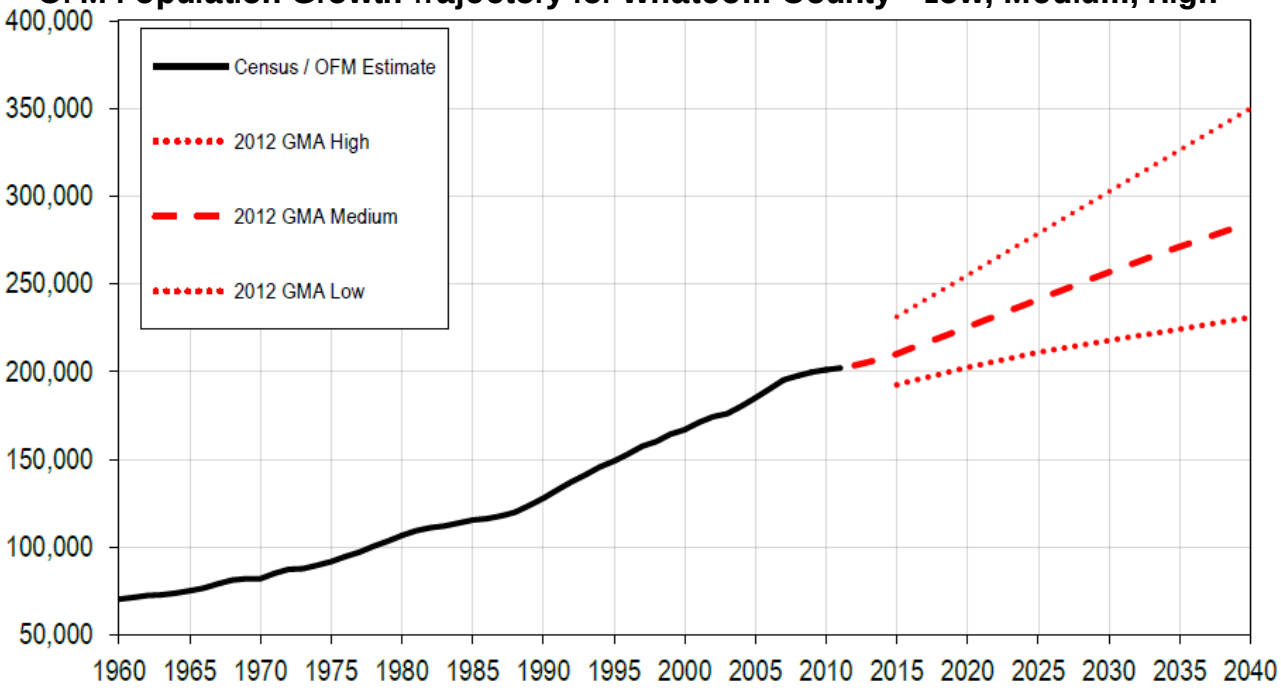
Table 2-4
OFM Population Projections

Year	Low Series	Medium Series	High Series
2015- estimated current	192,540	210,050	231,274
2020	202,407	225,307	255,019
2025	210,985	241,138	287,764
2030	217,628	256,643	302,509
2035	224,268	271,142	326,254

[1] http://www.ecy.wa.gov/programs/swfa/solidwastedata/recycle/CountyDisposalTotals13.xlsx

Year	Low Series	Medium Series	High Series
2040	230,908	284,901	350,000
Average Annual Percent Growth	0.8%	1.4%	2.1%
Note: All projections based on 2010 base year population of 201,140.			

Figure 2-2
OFM Population Growth Trajectory for Whatcom County—Low, Medium, High



Continued increases in population and households likely will result in increased overall solid waste generation, which will increase the need for continued emphasis on waste reduction and recycling.

2.3.4 SOLID WASTE PER CAPITA

In 2013, 311,842 tons of MSW (including recycled and diverted material) was generated in Whatcom County (see Table 2-5). Of that total amount generated, 135,134 tons were transported to and disposed of at an MSW landfill. With an estimated population of 205,800 in 2013 (OFM, 2014), the county's municipal disposal rate was 1,313 pounds per person per year, or 3.60 pounds per person per day. Table 2-5 summarizes the county's total waste and diversion rates per capita over the last ten years.

Table 2-5
Whatcom County Municipal Solid Waste Summary—Total and Per Capita
2003-2013

Year	County-wide	Total Recycling (Tons/Yr)	Total Diversion (Tons/yr)	Total MSW Disposal (Tons/yr)	Per Capita Waste Generation	Total Recycling (Lbs/Yr)	Total Diversion (Lbs/yr)	Total MSW Disposal (Lbs/yr)
2003		68,327	123,847	135,114		777	1,407	1,536
2004		80,447	157,417	140,913		983	1,747	1,564
2005		93,643	107,677	142,324		1,013	1,164	1,539
2006		109,583	105,430	152,664		1,153	1,109	1,606
2007		132,007	88,602	156,043		1,349	906	1,595
2008		121,917	28,232	149,751		1,234	286	1,515
2009		92,358	75,300	138,623		925	754	1.388
2010		103,385	88,194	133,943		1,028	877	1,332
2011		129,553	55,679	130,171		1,282	551	1,288
2012		120,215	88,347	132,539		1,181	868	1,303
2013		114,055	62,653	135,134		1,108	609	1,313

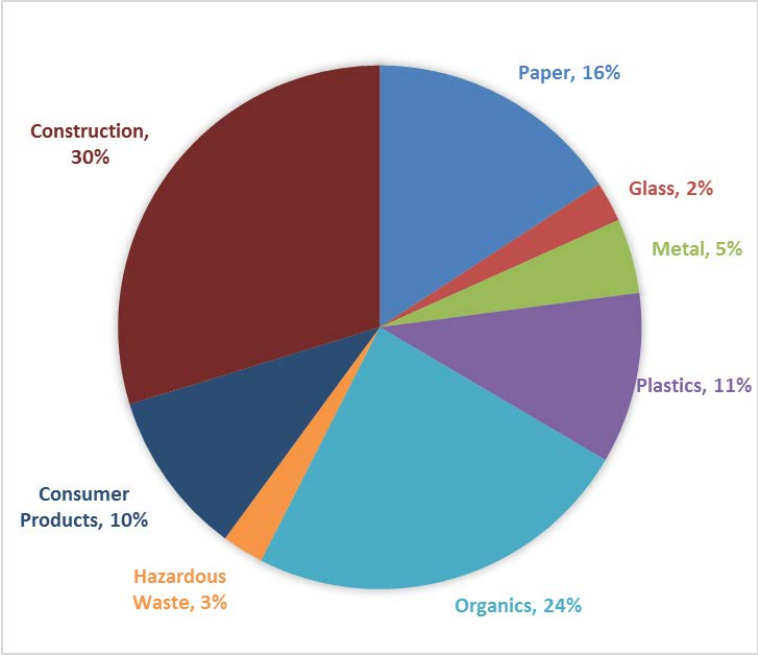
NOTES:
Tons landfilled data for 2003-2013 are taken from annual Ecology records. Recycled tons are taken from annual Ecology Recycling Survey.

2.3.5 DISPOSED-OF MUNICIPAL SOLID WASTE STREAM COMPOSITION

In 2009, Ecology conducted a four-season MSW characterization study that identified major waste stream compositions for specific counties in Washington State.[2] The study included wastes generated from four major sectors: commercial waste sector, residential waste sector, self-hauled C/D waste sector, and self-hauled other waste sector. Figure 2-3 below shows the disposed-of waste stream composition for the county from all waste sectors averaged over the four seasons.

[2] http://www.ecy.wa.gov/pubs/1007023.pdf

Figure 2-3
Whatcom County Waste Stream Composition
2009 Seasonal Study (All Seasons)*



*Ecology seasonal percentages have been averaged among the four seasons.

The annual disposed-of waste stream composition for Whatcom County is nearly identical to the waste stream composition for Washington State as a whole.

2.3.6 OTHER DISPOSED-OF SOLID WASTE

Table 2-6 shows the other major waste streams generated in Whatcom County in addition to MSW.

Table 2-6
Whatcom County Total Tonnage of Waste Disposal
2003-2013

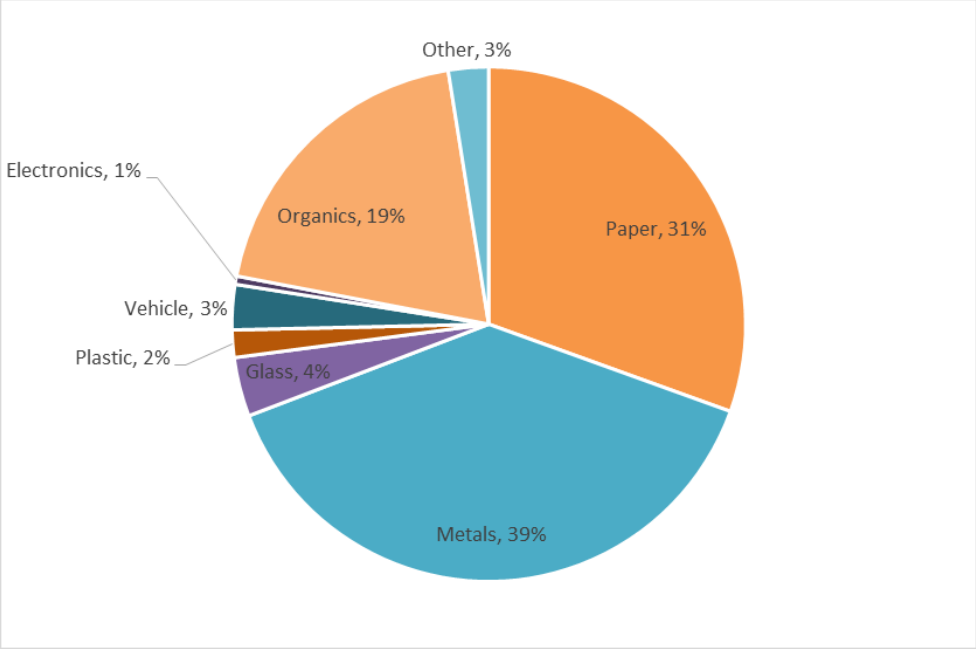
Year	Municipal Waste	Industrial Waste	Petroleum-Contaminated Soil	C/D Waste	Asbestos-Containing Materials
2003	135,114	2,663	1,808	17,019	294
2004	140,913	16,827	9,765	24,312	473
2005	375,284	176,816	18,106	15,483	413
2006	152,664	4,556	5,665	16,727	381
2007	156,043	29,503	11,299	815	6,214
2008	149,751	3,447	10,901	3,034	1,004
2009	138,623	1,511	12,197	460	67
2010	133,943	4,109	10,485	2,938	236
2011	130,171	7,893	16,332	440	227
2012	132,539	13,380	8,062	2,270	115
2013	135,134	3,407	6,027	4,541	93
Percent of Total Waste Stream	**79%**	**12%**	**5%**	**4%**	**<1%**

2.3.7 DIVERSION AND RECYCLING RATES

Diverted waste is the prevention of landfill disposal of generated waste though source reduction, reuse, recycling, energy recovery, or composting. The waste diversion rate for the county over the most recent five-year period (2009 to 2013) has fluctuated between 52 and 58 percent. The rate of recycled MSW over the same period has been between 40 and 50 percent.

Major diversion streams for the county include C/D-related waste, metals, paper, and organics. Major recycled streams for the county include metals, paper, and organics. Figure 2-4 illustrates the major recycle stream compositions.

Figure 2-4
Whatcom County Recycled Stream Composition
2007-2013



A summary of the overall diversion and recycling rates for 2013 are summarized in Table 2-7.

Table 2-7
Total Tonnage of Waste Generation, Diversion, and Recycling
Whatcom County 2013

Total Tonnage of Waste Generation and Diversion (2013)	
MSW Disposed Of	135,134
Other Waste Types Disposed Of	26,551
Recycled MSW	114,055
Diverted MSW	62,653
TOTAL MSW GENERATED	249,189
TOTAL RECOVERED	176,708
TOTAL WASTE GENERATED	338,393
OVERALL RECYCLING RATE	**46%**
OVERALL DIVERSION RATE	**52%**

2.3.8 WASTE PROJECTIONS

Per Capita Waste Projections

The per capita MSW generation chart is shown in Figure 2-5, highlighting two drastically different trends. Between 2000 and 2008, per capita waste generation rates ranged between 2,300 and 2,600 pounds per person. However, starting in 2009, the per capita waste generation rate fell to a very

consistent level of between 2,000 and 2,100 pounds per person. A large part of the change in the annual per capita waste generation rate likely is due to the significant financial recession that began in 2008. This change in the per capita trend is a phenomenon has been observed at a state and national level. A portion of the drop in the per capita waste generation likely is also a result of increasing public awareness of the negative economic and environmental impact, which resulted in improved efficiency (reducing management costs) and/or community motivation to prevent the generation of solid waste. Table 2-8 illustrates the pattern of waste generation trends in the county since 2003.

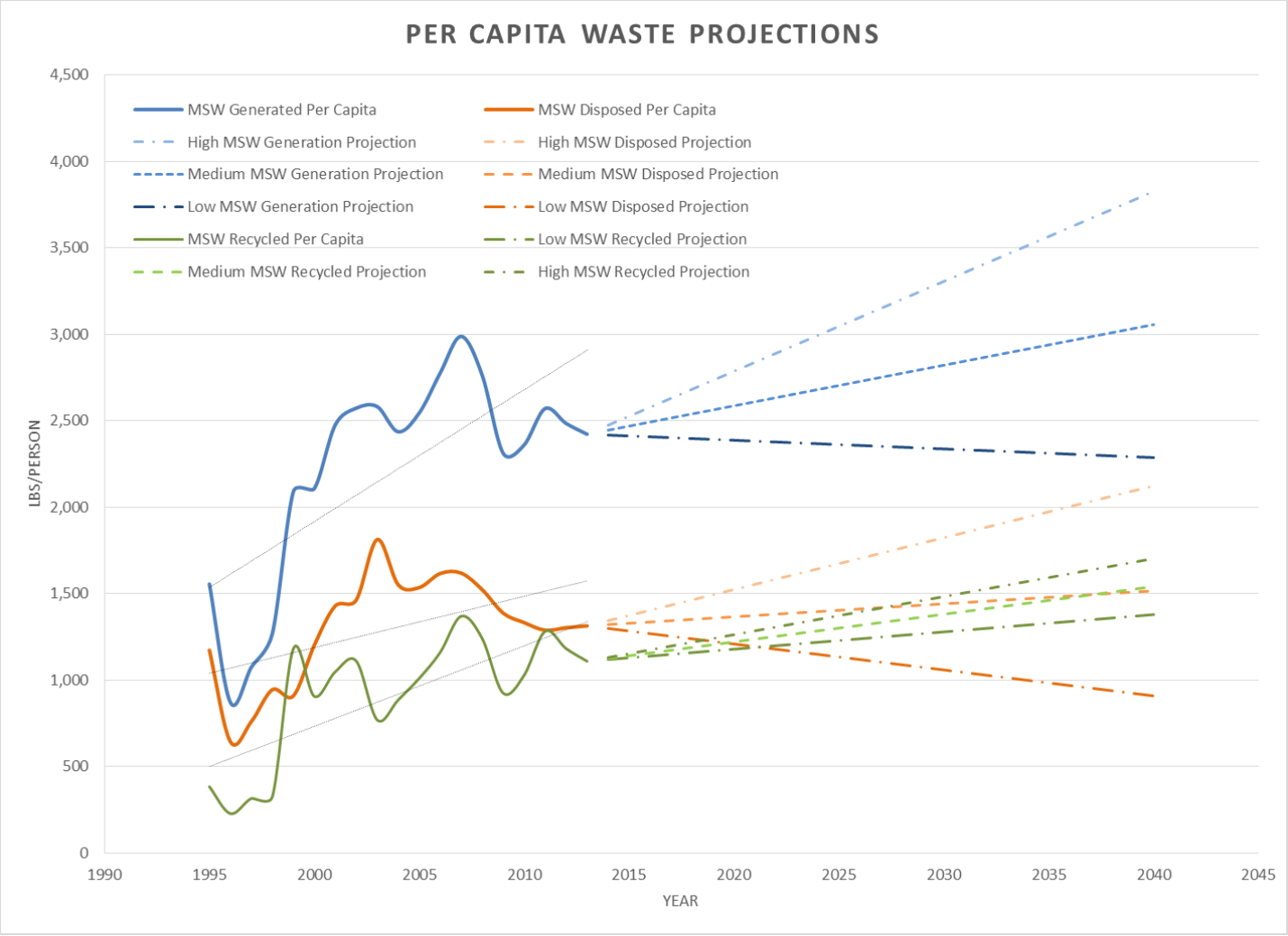
Table 2-8
Waste Summary—Change Over Time
2003-2013

Year	Tons MSW Landfilled	Annual Percent Change	Tons Recycled	Annual Percent Change in Tons Recycled
2003	135,114		68,327	
2004	140,913	4.1%	80,447	15.1%
2005	142,324	1.0%	93,643	14.1%
2006	152,664	6.8%	109,583	14.5%
2007	156,043	2.2%	132,007	17.0%
2008	149,751	-4.2%	121,917	-8.3%
2009	138,623	-8.0%	92,358	-32.0%
2010	133,943	-3.5%	103,385	10.7%
2011	130,171	-2.9%	129,553	20.2%
2012	132,539	1.8%	120,215	-7.8%
2013	135,134	1.9%	114,055	-5.4%

NOTES:
Tons landfilled data for 2003-2013 are taken from annual Ecology records.
Recycled tons are taken from annual Ecology Recycling Survey.

There are very few data to support the full development of a predictable trend at this lower rate of change in the per capita waste generation rate. Additionally, at the writing of this Plan (2015), the market conditions that were seen during the recession have largely reversed. Therefore, a projection of the per capita MSW generation in Whatcom County has been developed for both of the trends that are shown in Figure 2-5: a high projection assumes the gradual return to the generation rates and annual growth that were observed prior to the recession; and a low projection that assumes maintaining current waste-generation habits. The per capita low projection of waste generation decreases at a rate of 5 pounds per person per year, while the high rate increases at 52 pounds per person per year. The per capita low projection of recycling increases at 10 pounds per person per year, while the high rate increases at 22 pounds per person per year.

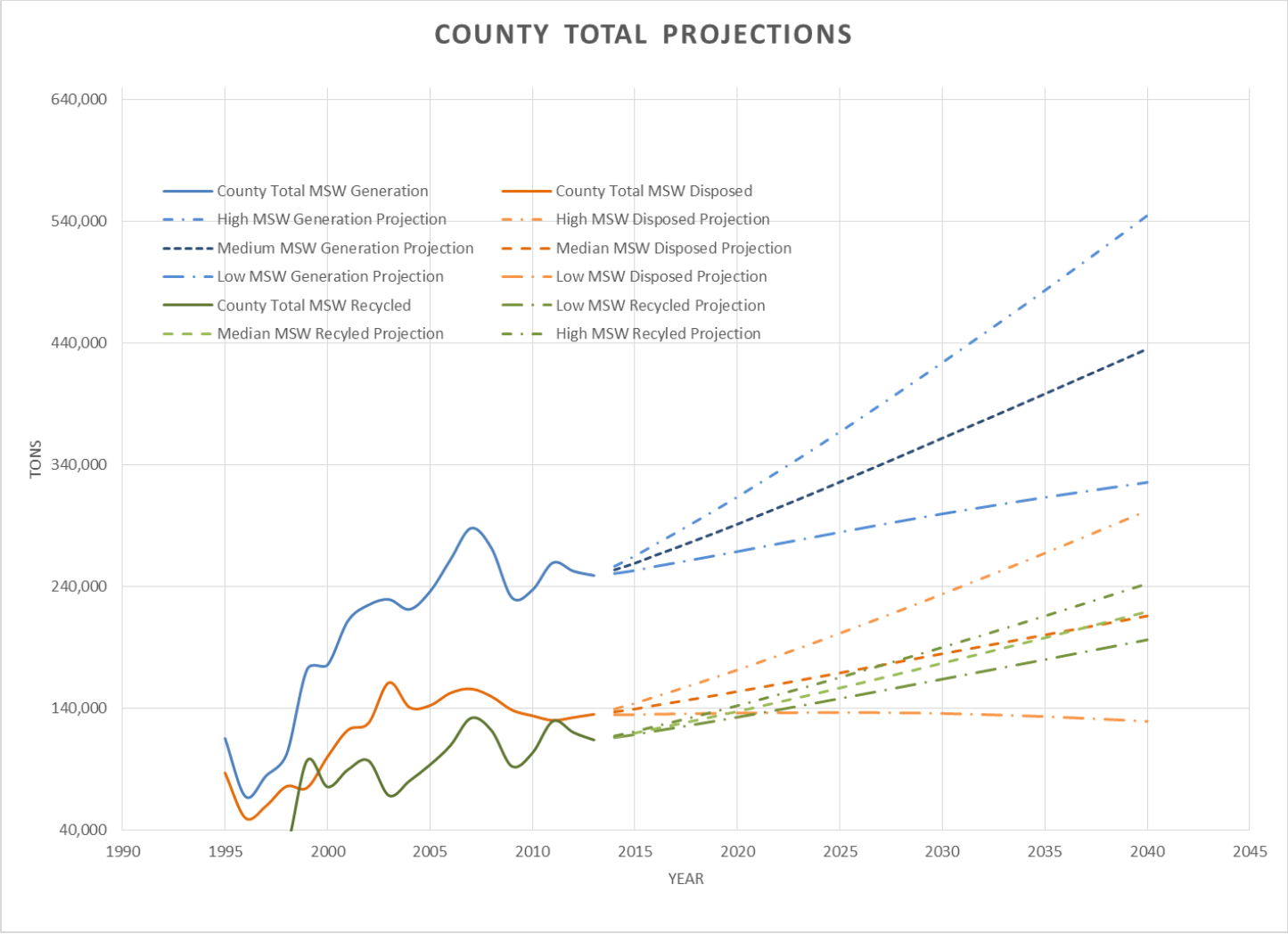
Figure 2-5
Whatcom County Waste Projection, Per Capita



Total County Waste Projections

Estimates for future waste generation, recycling, and disposal are generated by multiplying the population projections with the per capita waste generation projections. The medium series population projection is shown in Figure 2-6, reflecting the high and low per capita as shown in Figure 2-5. The middle per capita number combined with the medium series population growth for the county identifies a 20-year waste potential of 350,000 tons generated, 200,000 tons disposed of, and 150,000 tons recycled.

Figure 2-6
Whatcom County Waste Projection, Total



2.3.9 MODERATE-RISK WASTE MANAGEMENT

MRW is regulated as solid waste, and is defined as hazardous waste (waste chemicals) generated from households and qualified CESQG businesses (conditionally exempt small quantity generators). The State of Washington's 22nd Annual Status Report on Solid Waste, published by Ecology in December 2013, provides a summary of the statewide solid waste activities, including MRW activities. The report states that Whatcom County was one of the five counties that publicly collected the most CESQG waste per capita. The County collected 92,365 pounds of CESQG waste in 2012.

3 WASTE REDUCTION AND PUBLIC EDUCATION

The State of Washington identifies source reduction of waste as a fundamental strategy and a top priority for solid waste management (RCW 70.95). As a result, waste reduction is a critical element of all local solid waste management plans. Waste reduction is defined in RCW 70.95.030 as "reducing the amount or toxicity of waste generated or reusing materials." Recycling is defined in RCW 70.95.030 as "transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration."

There are two primary reasons for promoting waste reduction. One is to reduce the risks associated with all solid waste management methods by reducing toxicity. Reducing the toxicity of solid waste makes all solid waste management methods safer and helps develop public confidence in waste management methods. The other reason is to reduce the quantity of discarded materials. This extends the useful life of existing and future facilities and conserves natural resources; there is also significant economic value to the avoided cost of disposal.

Waste prevention and pollution prevention are the most environmentally beneficial waste management strategies. Nevertheless, they have not gained the political support or public enthusiasm as other waste management efforts, such as recycling. While individual companies can achieve considerable economic benefits through waste and pollution prevention, no other company, such as a hauler or processor of recyclables, will gain from another party reducing their generation of waste. This is contrary to the situation of recyclables, where certain companies earn money by helping others to recycle. Since no such profits exist in the case of waste or pollution prevention, the marketing of these strategies is left largely to the public sector and nonprofits, with some exceptions. In Whatcom County, County programming and work conducted by Sustainable Connections, RE Sources, WSU and others attempt to fill this void.

In a few cases, private haulers have demonstrated a balanced approach by pursuing community outreach efforts and providing technical assistance to businesses with reduction and recycling. For example, SSC currently provides waste audits to businesses in order to increase efficiency in their customers' system and to help save money and gain efficiencies.

The objective of this chapter is to identify waste reduction actions that are reasonable for implementation in the county.

3.1 EXISTING CONDITIONS

3.1.1 PUBLIC SECTOR ACTIVITIES

Whatcom County

In a privatized solid waste system, a primary County role in solid waste management is public outreach and education. The County conducts, sponsors and/or contracts for several waste prevention and public outreach programs, including in-class education, green classroom certification programs, business outreach through the Local Source Control and EnviroStars programs, and volunteer training through the Washington State University (WSU) Extension Master Recycler &

Composter Program. The County also serves as a resource for members of the public who may have questions regarding the solid waste program.

Classroom Education and Programming are provided by the County through contracts with third-party entities, currently RE Sources. County contractors provide in-classroom education to educate students on responsible waste management, including ways to minimize waste and disposal. Green classroom certifications and waste audits are also provided as a means to measure classroom and cafeteria waste and educate students. More details are provided in Section 3.1.3.

Local Source Control is a program funded through grants from Ecology to both the County and the City of Bellingham that provides business assistance for hazardous materials management, stormwater protection, and other resource management issues. The grant focuses on "source control" and the process of identifying pollution sources and preventing them from entering the environment. Included in these activities is providing technical assistance to businesses to reduce pollution through site visits to businesses. County staff help businesses identify and mange dangerous waste, prepare for spills, and reduce stormwater pollution. The grant also funds the EnviroStars Program (below).

The EnviroStars Program profiles sustainable businesses and provides a rating system that helps businesses communicate to the public their commitment to environmental protection. The program provides technical assistance with:

- Waste storage
- Disposal and recycling
- Spill management and prevention
- Stormwater protection
- Washwater practices
- Recordkeeping
- Processes that generate wastewater
- Outdoor storage of products and waste

To qualify as an EnviroStar, businesses must not generate large quantities of hazardous waste and must set goals to reduce hazardous materials and improve handling practices. Businesses are rated on a scale of two to five stars based on their ability to reduce waste, protect water quality, conserve energy, and educate the public on green practices. EnviroStar businesses are listed in the annual EnviroStars directory and receive a window decal advertising their participation in the program. Businesses are also recognized through radio, print, and online advertisements and through award nominations. The program is a joint effort between the Whatcom County Health Department and the regional EnviroStars Cooperative. Assistance is provided in conjunction with the County's Local Source Control program.

City of Bellingham

A **Single-Use Carry-Out Bag Ordinance**, commonly referred to as the "plastic bag ban," was instituted in the City of Bellingham through Ordinance 2011-07-034. The ordinance prohibited the

use of single-use, plastic, carry-out bags less than 2.25 mils[3] thick, like those typically provided by retailers at the point of sale. Thick plastic bags, thicker than 2.25 mils, are deemed reusable and may be with or without a charge, at the store's discretion. Large paper bags require a 5-cent charge and must be a minimum of 40 percent post-consumer recycled fiber. Fiber content is required to be marked on the outside of the bag. The ordinance represents a big step forward in reducing litter and unnecessary waste, protecting water and wildlife, and saving money by reducing the use of plastic bags in the community. The ordinance was approved in July 2011 and took effect in August 2012.

3.1.2 PRIVATE SECTOR ACTIVITIES

Repair and reuse of durable products represent the most traditional forms of waste reduction and are well established in the county. There are various nonprofit and for-profit ventures in the county that accept or purchase used goods and resell them through local storefronts and other outlets. Online material exchanges such as Craigslist (http://www.craigslist.org/) and Industrial Waste Exchange (http://www.lhwmp.org/home/BHW/index.aspx) are additional resources available for material exchange and resale. Reuse of goods is a significant contributor to the success of waste-prevention activities but is also extremely hard to measure because these businesses do not track and report their data in a measure that is comparable to waste (i.e., weight in tons).

The following organizations accept used goods from the public in the county. This list of organizations should not be considered inclusive of all organizations that accept used goods.

Appliance Depot offers free curbside pickup of large household appliances in the City of Bellingham. Pickup service in other areas of the county is also available. Appliance Depot reconditions and then sells these appliances.

ARC of Washington State offers curbside pickup of bedding, small appliances, videos, small children's items, clothing/shoes, craft items, furniture, kitchen equipment, home goods, musical instruments, records, tapes, CDs, camping equipment, and VCRs. Donated materials are sold to the public.

Goodwill Bellingham accepts reusable clothing, household items, and electronics, including televisions, computer monitors, desktop computers, and laptops. Donated materials are sold to the public.

Habitat for Humanity accepts donations of surplus building materials, furniture, and appliances. Materials are sold to the public at discounted rates.

Northwest Center's Big Blue Truck offers curbside pickup of bedding, small appliances, books, videos, clothing/shoes, craft items, small furniture, kitchen equipment, records, tapes, CDs, toys, bikes, camping equipment, VCRs. Donated materials are sold to the public.

The RE Store is a program of RE Sources for Sustainable Communities. Staff and volunteers work to divert more than 4 million pounds of C/D waste annually by deconstructing small homes and outbuilding, salvaging usable building materials and furnishings from residential and commercial

[3] A mil is equivalent to one thousandth of an inch.

buildings, offering free pickup of usable building materials and usable manufacturing by-products, and accepting material donations at their facility. The RE Store operates a retail store that sells affordable building materials and furnishings as a quality alternative to new products; locally manufactures fine, handcrafted furniture and furnishings created from repurposed building materials; offers educational opportunities to the community throughout North Puget Sound; and has an extensive community jobs training program with more than 225 work trainees and volunteers, totaling more than 5,100 hours annually.

Salvation Army Bellingham accepts clothing, furniture, electronics, and household goods, including pots, pans, and blankets. Donated materials are sold to the public.

Value Village Bellingham accepts reusable clothing, household items, and electronics, including televisions, computer monitors, desktop computers, and laptops. Donated materials are sold to the public.

Education programming and public outreach efforts are also provided by the private sector and nonprofit entities.

SSC has provided over 2,000 free commercial waste evaluations since 1996. Evaluations are provided to local businesses, government agencies, and institutions such as school districts, St. Joseph's Hospital, and local colleges and universities. These on-site evaluations continue to be provided on request, and through SSC's participation as a Pioneer Business Partner in the Toward Zero Waste Program organized by Sustainable Connections in concert with the City of Bellingham and Whatcom County. Participating entities receive a written report outlining current activities and additional opportunities in waste reduction, reuse, and recycling, as well as links to resources in similar community efforts for water, energy, and traffic. Aggregate recycling savings to the community at large totals in the tens of millions of dollars.

Since 1994, the SSC Recycling Manager has reviewed all new commercial and multi-family construction in the City of Bellingham (Ferndale and Blaine applications since roughly 2004) to help design safe and effective enclosures for recycling, composting, and refuse collection, thus adding to the permanent infrastructure in the community, making waste diversion easier and more cost effective. SSC also consults regularly with local processors, agency staff and elected officials on new opportunities in public area recycling, event recycling, and possible program expansions. Free recycling and waste prevention consultations have been provided to local event managers for twenty years, helping create an even stronger climate of resource conservation and community support for the curbside program serving all residents.

NVD also provides educational materials at their facility and online to educate customers on proper waste-disposal practices, as well as recycling and composting.

Sustainable Connections is a nonprofit membership organization that provides educational programming and technical services for reducing waste, increasing reuse and recycling, and increasing the purchasing of recycled and environmentally preferable products. Sustainable Connections provides waste audits, trainings, and education toolkits, and promotes companies committed to reducing waste in the community on a limited basis, determined by funding levels. Sustainable Connections is currently conducting business outreach through funding provided by the Alcoa Foundation. The program actively engages 50 businesses per year over a two-year period, helping participants implement individual Toward Zero Waste (TZW) plans. Of these businesses, 30 to 35 typically are existing participants who need supplemental hands-on assistance to successfully

implement TZW, and ten to 15 are new participants interested in establishing TZW in their businesses. By September 30, 2014, a total of 365 participating businesses showed improvement in at least two of the following areas:

- Reducing solid waste generated by 50 percent compared to pre-TZI participation
- Increasing recycling and composting by 50 percent
- Reducing their largest solid waste stream
- Participating in additional sustainable business practices

3.1.3 NONPROFIT AND INSTITUTIONAL ACTIVITIES

RE Sources is a nonprofit environmental education organization that provides technical assistance for clean energy, water, carbon emissions, and school education programs. RE Sources also operates The RE Store reuse facility. Currently the Sustainable Schools team offers two types of programming on behalf of the Whatcom County Solid Waste Division's traditional in-class presentations on solid waste, paper-making, and household hazardous waste; and a Green Classroom Certification program for elementary schools. The Green Certification builds on the introductory presentations to create a structured way for classrooms to implement behavior change in the classroom and beyond.

In 2014, RE Sources conducted programming in 81 classrooms, made contact with 1,685 students, and certified seven Green Classrooms. Outreach took place in 15 different schools in six school districts throughout Whatcom County. The 1999 Plan states that, before County funding was reduced, RE Sources conducted outreach to 331 classrooms in the 1995 annual budget cycle. RE Sources is seeking additional funding to expand and extend waste prevention education programming to the middle school level in 2015 and explore the potential for programs at the high school level in 2016. In addition, RE Sources will continue to develop relationships with district-level staff, starting with Mt. Baker School District.

County funding for solid waste education is supplemented by funding provided by private foundations and a Washington Service Corps AmeriCorps service member placement. These additional funding sources support education for clean energy, clean water, and low-carbon-living programs.

The RE Store provides manufacturing businesses with a waste or by-product audit to identify usable materials and an end use through repurposing as a means for increased diversion and cost savings to those businesses.

WSU, Whatcom County Extension hosts a Master Recycling & Composting Program. The effort is a volunteer service program in which volunteers are trained in methods for reducing waste and increasing public awareness of opportunities to prevent waste, recycle, and compost in Whatcom County. Course participants work with local organizations, community members, neighborhoods, schools, and workplaces, or at special events encouraging waste prevention, recycling, and composting. Scheduled programming for 2015 includes a four-week course with an emphasis on composting and soil building. Enrollment is anticipated at 12 to 15 students.

3.1.4 FORMER EDUCATION EFFORTS (COUNTY, PRIVATE, AND NONPROFIT)

Although current programming is viewed as an effective mechanism for maintaining current waste-reduction levels, funding for such programs is scarce and many previous programs were discontinued during the economic recession.

The County has a long history of public education and outreach regarding solid waste best management practices. Although these programs have been successful, the County was forced to reduce funding allocated toward public education during the Great Recession. As funding levels return to pre-recession levels, the County may look toward the success of former programs, either reinstating them or preparing new programs. Examples of programs that were previously funded by the County, or that could potentially be funded by the County in the future, are listed below.

The **Toward Zero Waste (TZW) Initiative** is an ongoing effort to reduce waste, increase reuse and recycling rates, and increase purchases of environmentally friendly products by businesses in the county. The program, led by Sustainable Connections, receives funding from multiple public and private sources to promote the TZW in person to a list of nearly 700 business leaders and participants. Outreach staff attend local conferences and events to promote sustainable waste management practices. In addition, the initiative funds the update of the Construction Waste Recycling Toolkit and Service Provider Directory, which is widely distributed both in print and online.

Despite the lack of County funding, the program has been highly successful. As of the end of 2014, 379 businesses were participating in the TZW program. Eighty-two percent of respondents have reduced, reused, or recycled their largest waste stream, 54 percent of participants reduced the size of their garbage dumpster, 34 percent of participants reduced the frequency of waste hauler pickup, and 49 percent of TZW participants have instituted at least one additional sustainable business practice. This effort, originally launched in 2009, received funding from Whatcom County in 2009 and 2011, but has not received additional County funding since. Most current program funding comes from private foundations and grants.

An **Ecology Public Participation Grant (PPG)** formerly provided for technical business assistance that was contracted to Sustainable Connections. The program provided technical assistance and educational outreach to commercial entities over a 15-month period in order to promote Green Building and TZW practices. Outreach was conducted to building professionals, business owners, and individuals interested in environmental friendly and energy saving practices. Technical workshops and green building tours were conducted for designers, developers, media, and business entities. Funding was also used to coordinate with waste service providers to measure monthly volumes of generated waste, recycled materials, and costs to business owners for committing to TZW and green building practices. The quantitative data were intended to measure the effectiveness of these methods; however, the PPG was awarded in 2009, but was pulled early because of shortfalls in the Washington State budget.

Sustainable Connections has been able to pursue similar work, in smaller amounts, through a Sustainable Path Toward Zero Waste Grant, awarded for 2011-2012. As part of this work, Sustainable Connections conducted a waste audit for the Whatcom County Library System central services, illustrating that waste streams could be reduced by 70 percent by separating materials disposed of. This recommendation has now been effectively implemented in nine other County library locations.

A formal **Recycling Hotline** was operated by the County, and previous to that, by RE Sources, to answer questions regarding waste reduction, recycling, composting, and household hazardous waste. Callers were served by a recorded message and were referred to the County's solid waste Web site, or were able to leave a message. Messages left on the hotline were returned by solid waste staff multiple times per week. Calls made to the hotline are now redirected to the County Health Department receptionist and calls are referred to relevant staff.

Diaper Education Programs were formerly provided in cooperation with Bellingham Technical College; these provided diaper use alternative information through teacher training, student brochures, and an instructional video. Teachers use this information in prenatal and parenting classes. The County also cooperated with the Health Department to distribute this information to daycare providers in hopes of influencing diaper use decisions at daycare facilities. Cloth diaper use increased dramatically (285 percent) as a result of the program.

The Paper Tiger Program used posters and brochures to emphasize ways to reduce the amount of waste paper produced in government and business offices. Paper Tiger materials were distributed to businesses and institutions throughout Whatcom County.

"Absolutely Free" Listings were free advertisements for free items that ran in four newspapers, the Bellingham Herald, Lynden Tribune, Ferndale Record Journal and the Echo, as well as KGMI radio station and TCI cable station.

Permanent Information Centers were installed in 1992 to provide solid waste information throughout the county. Locations include libraries, city halls, post offices, malls, recreation centers, senior centers, Western Washington University and Whatcom Community College.

Event Recycling was provided by RE Sources with funding from the County. RE Sources developed an event recycling guide that detailed how to host large, waste-free events (i.e., soccer tournaments, fundraisers, concerts) and then managed a crew of volunteers who staffed the garbage cans at several County events, including Ski to Sea, directing people how to dispose of their waste.

Dish Rental service was provided by RE Sources with funding from the County. RE Sources maintained a set of 100 dishes, flatware, and glasses and made them available to the public free of charge. RE Sources still receives inquiries about borrowing flatware.

Electronics Recycling assistance was provided by RE Sources in partnership with Ecology and local retailers. Information was provided at stores selling computers, TVs, and other electronics to educate the public on the importance of recycling electronic waste (e-waste) and the programs available to do so.

3.2 NEEDS AND OPPORTUNITIES

The State has identified citizen participation as a critical element in decreasing the per capita waste-generation rate. County residents currently generate approximately 2,422 pounds of waste per person per year, compared to the state rate of 2,552 pounds per person per year. After accounting for waste reduction and recycling, county residents dispose of 1,313 pounds per person per year compared to the state rate of 1,303 pounds per person per year. In summary, the average resident is generating less waste than the state as a whole, but somewhat less material is being recovered from the waste stream prior to disposal.

As presented in Section 2.3.8, based on the historical trends and existing waste reduction programs, the county per capita waste-generation rate is expected to stay level or increase at up to 2 percent per year over the next twenty years. The goal of successfully implementing the goals and actions of this Plan is to keep per capita generation to the mean 2016 level (or below 2,500 pounds of waste per person per year) and up to a 2 percent decrease in per capita waste generation annually after 2016 (50 pounds per person per year decrease). Keeping per capita waste generation levels steady as the state economy improves is a significant challenge that should be considered to be an indicator of a successful effort. Given the significant volumes of material that require disposal and the projections for continued population growth, there is a need for the County to maintain and strategically improve, as appropriate, its formal waste-reduction programs.

Waste reduction is the state's highest waste management priority. The Solid Waste Management Planning Guidelines recommend that local jurisdictions, such as the County, set specific waste-reduction goals and implement programs to reduce waste. The County may consider not only development of waste-reduction programs, but also a mechanism for tracking subsequent results. Initial recommendations highlight the need to track county waste trends.

Voluntary waste reduction can only be achieved through inclusion of public education, media campaigns, waste audits, classroom education and other outreach activities that promote the economics, necessity, and purpose of waste reduction. If the public does not understand these values, waste reduction efforts are not likely to succeed. If necessary, waste reduction goals may also be supported by regulatory requirements.

Easily accessible information is critical to raising public awareness of County-funded waste programs and encouraging public engagement in the waste management dialogue. To heighten public awareness, a rebranding effort may be undertaken to reenergize the community's efforts and increase program recognition. Residents who understand that the County has a role in management of the solid waste system may use the County as a resource when looking for information about management and disposal options. The County can play a significant role in providing easy access to waste management information that is spread to various Web sites, such as those maintained by the private haulers and transfer facilities, composting facilities, the master gardener program, and other municipal entities.

Public education and awareness efforts may also be expanded to include preparation of educational materials that advertise the solid waste services available through the County, haulers, facilities, community partners, and Ecology. Outreach efforts could be enhanced to include a greater presence at public events or by posting the County web site address prominently in public places (e.g., libraries and municipal buildings). The County may also partner with haulers to distribute informational material through billing systems.

3.3 GOALS AND ACTIONS

Education programming and waste reduction are two areas in which the County is most active in improving the solid waste system. As County funding levels for solid waste management improve, the County will prioritize their resources based on the goals and actions outlined in Table 3-1 below.

TABLE 3-1 GOALS AND ACTIONS FOR EDUCATION AND COMMUNITY OUTREACH

GOALS	ACTIONS	CONNECTING TO BEYOND WASTE
1. Increase community knowledge and expertise of waste reduction methods by providing educational opportunities to targeted populations using existing public and private resources.	A. Increase current youth and primary school education programming. B. Expand school education programming to include middle and high school levels with age-appropriate projects, information, and messaging. C. Support and fund commercial education through targeted outreach, commercial waste audits, and technical assistance. D. Provide waste audits and provide technical assistance to multi-family residential tenants and property managers. E. Increase support and advertising for the existing WSU composting education program through the Master Gardeners. F. Sponsor community events and promote a theme of zero waste to educate participants. Make arrangement for waste management and describe the decisions that were made to accommodate the choice. G. Publish educational materials about the solid waste system in response to community requests.	<u>Priorities of Plan</u> ▪ Move upstream: increase our focus on manufacturing and use phases, not just on end-of-life issues. - Enable more reuse of materials and products. ▪ Mitigate climate change. - Increase reuse, recycling, and waste reduction opportunities. - Reduce food waste generation.
2. Utilize appropriate and relevant tools for mass communication and outreach to further promote implementation of waste reduction methods, using an integrated public/private approach.	A. Continue distribution of educational materials digitally and make available in paper form, as requested. B. Integrate existing public and private social media profiles and a structure for effective advertisement and information sharing. C. Develop a cohesive branding for the solid waste system, recognizing public and private roles, and analyze the effectiveness of and develop a relevant and attention-getting advertising campaign that creates a vision in the collective public mind and appeals to the senses of the public. D. Consider development of other digital tools for communication of waste management information (e.g., mobile Web site, phone app, QR codes on advertising). E. Consider a marketing campaign that meets the public where they already are (e.g., on public transit, at events, or in movie theaters).	<u>Key Principles and Strategies</u> 1) Build on what is already working, such as maximizing the use of existing infrastructure. 3) Take advantage of momentum and complementary actions. 4) Create collaborative partnerships with a variety of partners. 5) Strive for continuous improvement.

GOALS	ACTIONS	CONNECTING TO BEYOND WASTE
3. Develop relevant educational materials for residential, commercial, and institutional consumers.	A. Educate on waste generation habits/trends.	
	B. Educate on waste reduction and home waste management (material reuse opportunities, purchasing products with less packaging, purchasing more durable goods, home composting, and food waste prevention).	
	C. Educate on the environmental impact of waste and waste management.	
	D. Promote the theme of zero waste.	
4. Review solid waste data on an annual basis to understand ongoing solid waste trends and prioritize County solid waste initiatives.	A. Review annual solid waste data provided by Ecology and track effectiveness of County programming.	
	B. Request more detailed data, as needed, from material handlers to better understand the effectiveness of County programming.	

*This column refers to the 2015 Draft Beyond Waste Plan. The numbering system for key goals and strategies is intended to reflect the number system in the Beyond Waste document.

4 RECYCLING

Recycling is defined by the State's *Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revisions* as "transforming or remanufacturing waste materials into usable marketable materials for use other than landfill disposal or incineration. Recycling does not include "collection, compacting, repackaging, and sorting for the purpose of transport" (WAC 173-350-100, as adopted by reference in WCC 24.06, *Solid Waste Rules*).

4.1 EXISTING CONDITIONS

Recyclable materials are currently collected in the county according to their potential for waste stream diversion, collection efficiency, processing requirements and market demand. The list of materials that the County Council has designated as "recyclable" is located in WCC 8.10.050, Section C. Items are added to or deleted from the list, depending on these very conditions, and as described in Section 4.1.3.

4.1.1 PROGRAMS

Collection Services

Residential Curbside Recyclable Collection is legally established and defined under WCC Section 8.10.050, which requires that source-separated recyclables be collected from all residences in unincorporated portions of the county that receive regularly scheduled garbage collection. In accordance with existing solid waste interlocal agreements (Appendix C), each county municipality requires that the County-designated recyclable materials be collected by the contracted waste hauler (SSC, NVD, or Cando, depending on service area) with regularly scheduled solid waste collection. Each private waste hauler offers residential collection services under the conditions of a WUTC permit (G-Permit) in unincorporated areas or through a contract directly with a municipality.

Recycling is collected through a three-bin system consisting of bins for newspaper; scrap paper, including cardboard and other wood-fiber materials; and containers, including plastics, glass, aluminum, and tin cans. All single-family residences are provided recycling collection service at least every other week on the same day of the week as garbage collection. Residents in unincorporated areas have the option of applying for a garbage collection exemption if they certify that they self-haul their waste and recyclables to local transfer or drop-box facilities. Residents claiming the exemption also have the opportunity to subscribe to recycling-only collection.

Collection companies provide recycling containers to each residence at the customer's request. The following recyclable materials are collected: newspaper, mixed paper, cardboard, aluminum, foil, tin, glass, plastic bottles, scrap metal, vehicle batteries, and motor oil. Recyclable materials are source-separated using a stackable, three-bin recycling system for newspaper, scrap paper, and containers.

Table 4-1
Accepted Curbside Materials by Bin

Bin	Acceptable Materials
Newspaper (Red Bin)	• Newspaper • Inserts • Ads
Scrap Paper (White Bin)	• Mail, magazines, catalogs • Envelopes, stationery, labels, paper sacks, phone books, paperback books, manuals, textbooks, and guides. Note: remove and discard covers and bindings of hardback books. • Computer, copy/office paper (all colors), carbonless paper, file folders, poster paper. • Paperboard cartons (e.g., cereal boxes, mac n' cheese boxes, shoe boxes, gift boxes, egg cartons). *Discard liners/packing material. Flatten.* • Staples, paper clips, file folder clips OK.
Containers (Blue Bin)	• Glass bottles • Jars • Aluminum cans • Tin cans • Foil • Plastic containers (i.e., bottles, jugs, caps and rings, tubs, pails, buckets, and lids)

Point Roberts, serviced by Cando and presenting special challenges due to geographical constraints, is an unincorporated community on the Tsawwassen Peninsula. Point Roberts is unique because of the seasonality of residents and because it's physical isolation requires two trips across the Canadian border in order for residents to connect to the rest of the county. In Point Roberts, single-family residences are defined as permanent, year-round-occupied homes. Recycling collection in this community is provided every other week, but is not required to take place on the same day as garbage pickup. All Point Roberts single-family residents meeting the WCC 8.10.030(H) definition of "seasonal vacation" or "weekend home" are exempt from curbside recycling collection requirements.

Commercial Recyclable Collection is provided directly to businesses by the private sector in an unregulated system. Recycling collectors include waste haulers, buyback centers, private collection firms, and small "mosquito fleet" operators (often consisting of a single pickup truck and driver).

SSC and NVD also provide technical assistance to businesses requesting information, or that need support in setting up commercial composting services.

In-House Recycling

The County manages an internal recycling program consisting of the collection of bottles, cans, and paper at all County facilities. The program provides recycling containers at all locations with trash containers in public areas. Recycling is emphasized in office areas by providing a small, deskside trash container and a larger recycling container. These measures have contributed to the County's

successful LEED (Leadership in Energy and Environment Design) certification of the Courthouse as an existing building.

Electronics Recycling

RCW 70.95.N.030 requires that manufacturers participate in an independent or standard plan that finances an electronics collection, transportation, and recycling program in Washington State. Products covered under the law include TVs, computers, and monitors (RCW 70.95.N.020 6) from "covered entities" defined as any household, charity, school district, small business, or small government. The County and private haulers inform residents, small businesses, and schools about this program through currently existing community outreach and education methods. Electronics can be dropped off at facilities in Whatcom County that are registered with E-Cycle Washington. The web site for this program is www.ecyclewashington.org.

Lightbulb Recycling

As of January 1, 2015, Washington State residents and businesses are able to recycle mercury-containing lights at no charge, by dropping them off at authorized collection sites throughout Washington State, including the County's MRW Facility (Disposal of Toxics Program). Categories of acceptable lights include fluorescent tubes, compact fluorescent lights, and high-intensity-discharge lights. Recycling mercury-containing lights protects the environment and human health by reducing the release of mercury, a potent neurotoxin. Collection sites are listed on the program web site at http://www.lightrecyclewa.org/.

Tire Recycling

Used tires are accepted at transfer stations in the system and at Beacon Battery and Tires. In recent years, the County has been the recipient of multiple tire pile cleanup grants funded by Ecology. These programs are described in further detail in Section 8.1.9.

4.1.2 FACILITIES

The following list includes, but is not limited to, facilities that accept recyclable materials from the public:

- **Alrite Recycling Bellingham**—Accepts metals and electronics.
- **Beacon Battery & Tires—**Accepts recyclable scrap lead acid batteries of all sizes, as well as tires ranging in size from wheelbarrow to semi-trailer truck.
- **SSC Birch Bay-Lynden Drop Box Facility—**Accepts metal, antifreeze, oil, cardboard, glass, paper, plastic, cans.
- **Cando Recycling Transfer Station—**Accepts metal, oil, cardboard, glass, paper, plastic, cans, electronics, tires, yard waste, construction debris, wood, and motor oil.
- **SSC Cedarville Drop Box Facility—**Accepts metal, antifreeze, oil, cardboard, glass, paper, plastic, cans.
- **Granite Construction Company—**Recycles rubber, asphalt, and concrete into finished construction materials, including asphalt concrete and road base for local roadways.
- **Henifin Recycling Facility—**Accepts clean concrete, concrete rebar, and asphalt.

- **Lynden Christian School Recycling Center—**Accepts cardboard, mixed paper, and aluminum.
- **NVD Drop Box Facility—**Accepts metal, antifreeze, oil, cardboard, glass, paper, plastic, cans, tires, yard waste, and electronics.
- **Northwest Recycling and Northwest Recycling Warehouse—**Accepts metals, appliances, paper, cardboard, automobile bodies, electric motors, radiators, car batteries, and plastics. Provides drop boxes upon request for residential, commercial, and industrial accounts.
- **Safe and Easy Recycling**—Recycles e-waste, including all computers and computer accessories, as well as monitors, televisions, liquid crystal displays, plasma TVs, servers, laptops, cables, cords, cell phones, CD players, DVD players, and many other types of electronics.
- **SSC Roeder Avenue Drop Box Facility**—Accepts recycling of household materials, including metals, plastics, plastic film and miscellaneous plastics, and paper. Also accepts yard waste.
- **Scrap-It Recycling—**Provides free disposal of uncontaminated recyclable materials and buys scrap metal. Also provides demolition services for metal structures and removal of obsolete equipment.
- **RDC Transfer Station—**Accepts scrap metal, vehicle batteries, cardboard, scrap paper, and newspaper.
- **RDS Transfer Station—**Accepts aluminum, vehicle batteries, appliances, cardboard, glass, electronics, paper, tires, plastic, scrap metal, cans, porcelain, sheetrock, wood, and yard debris.
- **Whatcom Builders—**Accepts asphalt.
- **Z Recyclers**—Metal recycling center and scrap metal facility that accepts all types of metal.

A **Material Recovery Facility** (MRF) is located at the RDS Transfer Station in Ferndale. Potentially recoverable materials (recycling or diversion) are high-graded out of the transfer station tipping floor and sent to the MRF portion of the site. Construction material haulers may be directed to dump their loads directly at the MRF. The conveyor brings materials past a manual pickline where various construction materials may be sorted, including aluminum, vehicle batteries, appliances, cardboard, glass, electronics, paper, tires, plastic, scrap metal, cans, porcelain, sheetrock, and wood. This facility guarantees a diversion rate of 20 percent for the overall waste stream being processed by the transfer station as a result of the MRF capability.

4.1.3 DESIGNATED RECYCLABLE MATERIALS LIST

Recyclable materials are currently being collected in the county because of their potential for waste stream diversion, collection efficiency, processing requirements, and market demand. The list of materials that the County Council has designated as "recyclable" can be found in WCC 8.10.050, Section C. Changes in technology, political climate, and markets may necessitate changes in the designated recyclables. Items are reviewed for addition to or deletion from the designated recyclables list based on the following criteria:

- The market price for an existing material becomes so low that it is no longer feasible to collect, process, and/or ship 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.
- The potential for increased or decreased amounts of diversion.
- New technologies and innovative program approaches.
- Legislative mandate.

For instance, for several years, only plastic bottles with necks were accepted for recycling because of available markets for processing. However, in 2009, plastic tubs, such as yogurt and margarine containers, were added to the list as markets became available and processing these items because economically feasible for local haulers.

Any proposed changes to the designated recyclables list must be made to the Solid Waste Division and taken to the SWAC for review. The SWAC will make a recommendation to the County Council for review/approval on whether to add or remove the material from the designated recyclables list. If approved, the designated recyclables list is updated and submitted to Ecology.

4.2 NEEDS AND OPPORTUNITIES

4.2.1 RESIDENTIAL RECYCLING

Residential recycling programs in the county currently operate under a three-bin collection system. As stated in Ecology reports provided annually to the County, the County system has relatively high recycling participation rates (40 to 50 percent) and diversion rates (52 to 58 percent) when compared to the state and other Washington counties. Service providers and County staff generally agree that the community, specifically single-family residential users, has a strong understanding of the existing source-separated, three-bin system.

The County reports some of the lowest contamination rates in the state, which is commonly attributed to the curbside source separation. Contamination results when customers improperly sort recyclable materials, and results in higher customer costs and additional materials going to landfill.

Despite this, the Plan update process considered the benefits of alternative collection methods under a commingled (single-stream) system for recyclables, including the potential for even higher participation rates and improved compliance. However, stakeholders noted the significant challenges associated with conversion to a commingled recycling system, which would require the construction of high-end sorting facilities, a new truck fleet, and access to markets accepting degraded products. In addition, the value of recyclable commodities could decline as a result of increased contamination and increased competition from the many other communities that have already converted to commingled recyclables collection. Given the strong support for the existing three-bin system of collecting recyclables, other collection opportunities were not evaluated in the development of this Plan. Ecology supports the collection of source-separated materials through RCW 70.95.090 (7)(b).

Some providers reported issues of improper recycling of materials, including materials being placed in the wrong bins or experiencing overflow of the bins. These issues may be addressed through additional public education programs and advertising. Haulers may also provide notice to customers who repeatedly ignore recycling instructions.

There is also an opportunity to consider if the materials separated into the three bins are making the best use of the available space. Review of bin-specific materials should be undertaken, as warranted, by the County, haulers, and recyclers to potentially identify a more efficient use of bin space by combining lower-priority, lower-volume materials and identifying new materials for bins that are growing in quantity and volume. Recyclable material reconfiguration could reduce curbside overflow. An example of the evaluation might consider the continued value of dedicating one bin solely to newspaper as that material stream decreases because of consumer trends and the availability of news in digital formats, or collection of plastic bags and films or glass in order to reduce contamination in the paper and container recycling bins.

4.2.2 MULTI-FAMILY RESIDENTIAL RECYCLING

Approximately 44 percent of the county's population resides in multi-family residential units, representing a large share of the customer base (U.S. Census, 2009-2013). There is a general perception that recycling rates for multi-family residential are low relative to single-family residential rates. This is commonly attributed to the lack of understanding of the system by multi-family residential subscribers, limited or non-user-friendly recycling infrastructure at multi-family housing units, and a lack of outreach and education to multi-family residents. According to stakeholders interviewed during the Plan update, some building managers have suggested removing recycling bins altogether due to the inappropriate recycling of materials. Some service providers also indicated that the higher levels of contamination found in multi-family recycling bins and lower participation rates are a significant weakness of the existing system.

The Washington State Recycling Association (WSRA) recognized multi-family recycling as an issue for communities across the state in its 2014 report, "Sorting It Out: That State of Multi-family Recycling in Washington State." Multi-family recycling issues pertain to low participation rates and higher contamination rates than single-family residential. The report notes the lack of targeted focus on multi-family recycling as a primary cause of relatively low multi-family recycling rates.

4.3 GOALS AND ACTIONS

Recycling and diversion in the county is already highly successful when compared to the state goal of achieving waste stream reduction of 50 percent. In 2013, approximately 46 percent of the county's waste stream was recycled and 52 percent was recycled or diverted, as reported by Ecology. The County recognizes that while recycling remains relatively stable, diversion rates vary and can be easily skewed by one-time events, misrepresenting the success of the County's educational programs.

Goals and actions related to recycling focus on maximizing the benefits of the three-bin system; increasing public outreach, including a focus on multi-family residential recycling; and developing a better understanding of how users interact with the overall system.

TABLE 4-2 GOALS AND ACTIONS FOR RECYCLING

GOALS	ACTIONS	CONNECTING TO BEYOND WASTE*
Residential Recycling		Priorities of Plan ▪ Move upstream: increase the focus on manufacturing and use phases, not just on end-of-life issues. - Enable more reuse of materials and products. ▪ Increase the efficiency of recycling (including organic processing) systems, and maximize the effectiveness of existing solid and hazardous waste infrastructure. - Address curbside recycling contamination and MRF system loss. - Reduce sham recycling and provide enforcement. - Ensure clean, marketable end-products from organics and recyclables. ▪ Mitigate climate change. - Increase reuse, recycling, and waste reduction. Key Principles and Strategies 1) Build on what's already working, such as maximizing the use of existing infrastructure. 2) Take advantage of momentum and complementary actions. 3) Create collaborative partnerships with a variety of players. 4) Lead by example in government, especially through research, purchasing power, and model demonstration projects. 5) Strive for continuous improvement.
1. Enhance residential recycling.	A. Assess materials currently collected through the three-bin system, focusing on their relevance to overall solid waste system goals and commonly disposed-of recyclable materials.	
	B. Evaluate current alternate materials collected curbside and consider the potential to add or remove materials.	
	C. Educate the public on the purpose and benefits of a three-bin system, as well as the success of the local program.	
Multi-Family Recycling		
1. Gather information on multi-family disposal and recycling habits.	A. Conduct a waste audit to understand the recycling habits of multi-family customers. Findings could drive future action.	
2. Encourage manager/owner responsibility.	A. Education outreach to building/facility management. Suggest training of residents for facility waste bin system at move-in and require compliance in lease.	
3. Increase multi-family residential outreach.	A. Provide educational information to be distributed to multi-family residents, such as information on how to accommodate recycling bins.	
	B. Create a program to provide waste audits to building managers and provide support for follow-on education.	
	C. Provide clear labeling of acceptable materials with pictures for each container to address potential language barriers.	
	D. Ensure that the frequency of curbside service to multi-family buildings provides adequate capacity in each recycling bin at any time, minimizing potential for unnecessary disposal or contamination.	

*This column refers to the 2015 Draft Beyond Waste Plan. The numbering system for key goals and strategies is intended to reflect the number system in the Beyond Waste document.

5 ORGANIC MATERIAL MANAGEMENT

Significant reduction of waste generation is commonly accomplished through composting of organic materials. Organic materials (green waste and food waste) are a significant component of the County's solid waste stream. In 2013, recycling and diversion efforts accounted for the diversion of nearly 40,000 tons of organic materials (including 12,000 tons of food) from landfill disposal, which equated to about 29% percent of the total waste stream.

A seasonal waste sort in the County that was conducted by Ecology in 2009 found that organic material made up approximately 25 percent of the total MSW stream. More than half of the organic materials were attributed to residential and commercial food waste. Using the Ecology waste sort study information and the Ecology diversion reports, the organic material generation for the 2009 waste stream was approximately 62,000 tons of organic materials, with about 17,000 tons of food waste (food scraps) and wasted food (food allowed to spoil) disposed of at a landfill. These data suggest that more than half of the organic material generated in the county is ultimately disposed of at a landfill.

5.1 EXISTING CONDITIONS

5.1.1 PROGRAMS

Curbside Collection

Residential food and yard waste collection services are provided by SSC and NVD on an every-other-week basis; commercial collection frequency varies dependent upon customer need.[4]

- **SSC—**Provides residential curbside and commercial collection of yard waste, food waste, and compostable papers through the SSC Food Plus program. Materials are collected together in the same container. The service is provided throughout the SSC service area, with the exception of Lummi Island and the Lummi peninsula south of Cagey.
- **NVD—**Provides residential curbside and commercial collection of yard waste, food waste, and compostable papers within the city limits of Lynden, Nooksack, Everson and Sumas. Household waste and yard waste can also be disposed of at the NVD Drop Box Facility.

Cando does not provide curbside collection of organics. However, green waste is accepted at the Cando drop-box facility in Point Roberts.

[4] http://www.co.whatcom.wa.us/publicworks/solidwaste/yardwaste/disposal.jsp

Educational Programming

The **WSU Master Gardener Program** and the County Solid Waste Division provide a substantial amount of composting information on their web sites. These programs assist residents with the management of food waste scraps so that these scraps never enter the solid waste system but instead provide a beneficial product for use around the home.

The **SSC Food to Flowers!** is a school service available to elementary schools and other educational institutions. The program promotes student engagement in composting practices while they learn about the associated environmental benefits.

The County currently provides no outreach program to assist commercial entities in managing their organic material. Because the County cannot mandate commercial recycling or composting services, the SSC Food to Flowers! program is supported through a means of advertising and education during facility audits to enhance participation.

SSC and NVD also provide technical assistance to businesses requesting information, or that need support in setting up commercial composting services.

5.1.2 FACILITIES

Public Drop-off Locations

The following drop-box facilities accept organic materials from the public:

- **City of Bellingham Clean Green Drop Box Facility—**Operated by the City of Bellingham. Accepts yard waste only. Collected materials are transported to Lentz Enterprises in Snohomish County.
- **SSC Roeder Avenue Drop Box Facility—**Accepts yard waste only. Materials are transported to the Green Earth Technology Composting Facility.
- **RDS Transfer Station—**Accepts yard waste and food waste. Materials are transported to the Green Earth Technology Composting Facility.
- **Cando Recycling Transfer Station—**Accepts yard waste only. Materials are transported to the Green Earth Technology Composting Facility.
- **NVD Drop Box Facility—**Accepts yard waste only. Materials are transported to the Green Earth Technology Composting Facility.
- **Green Earth Technology Composting Facility**—Accepts residential and commercial yard waste and food waste. A description of the composting process is provided below.

Composting Facilities

Organic materials collected at curbside or at drop-box locations, with the exception of the City of Bellingham Clean Green Drop Box Facility, are transported to the privately operated Green Earth Technology facility in Lynden. Materials are composted using a Gore-based aerated pile system, which is capable of composting a green waste stream with a lighter amount of food waste mixed in through an eight-week production cycle. The facility currently manages 14,000 to 16,000 tons per year, with the capacity to manage up to 20,000 tons per year under its current configuration. The facility's existing infrastructure would require relatively few improvements to double the capacity to

40,000 tons per year, if a sustained need is foreseen. The facility cautiously accepts additional food waste from commercial sources, primarily because a more wet/putrescible food waste might overwhelm the system and result in the generation of significant odors.

Digesters

In addition to the composting facility, four anaerobic digesters are operated in the county. Digesters can be used to generate renewable energy biogas using various organic feedstocks, such as pre-consumer food waste, manure, sewage, grease trap waste, and agricultural waste. Biogas, biologically produced by an anaerobic digestion process, can be used to fuel combined heat and power engines that generate utility-scale electricity, and heat for use internally or by neighboring facilities. Liquid fertilizer, digestate fiber, and water are secondary by-products that potentially can be used in agricultural applications.

The anaerobic digestion process begins with bacterial hydrolysis of the input materials in order to break down insoluble organic polymers such as carbohydrates and make them available for other bacteria. Acidogenic bacteria then convert the sugars and amino acids into carbon dioxide, hydrogen, ammonia, and organic acids. Acetogenic bacteria then convert these resulting organic acids into acetic acid, along with additional ammonia, hydrogen, and carbon dioxide. Finally, methanogens convert these products to methane and carbon dioxide. The methane gas can then be combusted and turned into energy as described above.

An anaerobic digestion facility typically includes a receiving building for feedstock, anaerobic digestion tanks, digestate treatment facilities, and gas conditioning and power-generation equipment.

The four digesters in the county are:

- Edaleen Cow Power LLC
- Vander Haak Dairy
- Farm Power
- VanDyke Dairy

5.2 NEEDS AND OPPORTUNITIES

5.2.1 PROGRAMS

Organic materials in the county are managed through residential and commercial collection, local drop-off facilities, and composting. The existing program elements for collection or drop-off are accessible to all residents of the county. The residential curbside organic materials collection (yard waste plus food waste) is offered every other week; commercial collection is offered on a more frequent basis dependent upon customer needs. Commercial subscribers consist primarily of food processors and manufacturers, grocery stores, school districts, colleges and universities, and governmental entities, as well as retail and office users. Commercial subscribers also include some restaurants; however, only one restaurant chain restaurant participates (both SSC and NVD provide curbside collection services to this chain). SSC personnel indicate that commercial food waste is collected on the residential routes so that there is substantial mixing of food waste with yard waste prior to delivery to the composting facility.

Food waste prevention outreach is currently a significant topic discussed by the U.S. Environmental Protection Agency (USEPA) and by Washington jurisdictions. Educational materials are readily available to solid waste program managers through the "Food: Too Good to Waste"

campaign, which is focusing on consumer education to avoid waste by consuming what is purchased. Some counties are researching partnerships with community health groups to increase food security as a means of reducing wasted food, including subsidizing the purchase of refrigerated trucks to collect and transport perishable food to community kitchens and shelters.

5.2.2 FACILITIES

Commercial businesses account for a large percentage of the organic waste generation in the county, although a substantial portion of that material may be less preferred by the composting facility because of the material's overly wet or dense characteristics. The County has several food processors that may be able to divert their waste materials, including seafood, berries, and vegetables. An additional composting opportunity may include identification of a process to reliably compost heavy, wet food generated by restaurants, institutional cafeterias, and other food providers. Identifying additional organics processing techniques in the future may allow more of the County's organic waste stream to be diverted from disposal and processed for a higher use (such as biogas generation).

There are no issues regarding current composting facilities. The Green Earth Technologies Facility is able to rapidly double its operational capacity in order to meet the future needs of the public.

5.3 GOALS AND ACTIONS

Curbside composting has proven to be an effective program in the county, given its high participation rates. However, both prevention and recovery levels should be increased. To complement this success, future County programming will focus on the expansion of services and outreach to commercial business.

TABLE 5-1 GOALS AND ACTIONS FOR ORGANICS MANAGEMENT

GOALS	ACTIONS	CONNECTING TO BEYOND WASTE*
1. Consider accessibility of organic materials collection and management.	A. Evaluate flexibility of collection (frequency, container size, cost, etc.) and impact to the existing system.	Priorities of Plan ▪ Increase efficiency of recycling (including organic processing) systems, and maximize effectiveness of existing solid and hazardous waste infrastructure. - Ensure clean, marketable end-products from organics and recyclables. - Focus on facility compliance, technical assistance, and enforcement. ▪ Mitigate climate change. - Increase use of processed organics to sequester carbon. - Increase reuse, recycling, and waste reduction. - Prevent food waste. Key Principles and Strategies 1) Build on what's already working, such as maximizing the use of existing infrastructure. 2) Focus solutions on designing sustainable products and processes. 3) Take advantage of momentum and complementary actions. 4) Create collaborative partnerships with a variety of players. 9) Strive for continuous improvement.
2. Increase recovery of organic materials from commercial and industrial generators.	A. Target outreach to the food industry with the goal of separating more material appropriate for organics composting, or other organics management approaches as they become available.	
	B. Develop food waste management programs, including potential programs that connect restaurants with farmers who would use food waste as livestock feed.	
	C. Require compostable, single-serving containers at commercial locations—stadiums and fast-food venues.	
	D. Support industry opportunities to use anaerobic digesters for diversion of preconsumer food waste.	

*This column refers to the 2015 Draft Beyond Waste Plan. The numbering system for key goals and strategies is intended to reflect the number system in the Beyond Waste document.

6 SOLID WASTE COLLECTION

6.1 EXISTING CONDITIONS

WCC 8.10.040 and WCC 8.10.060 require that certified solid waste companies collect solid waste from residential and nonresidential entities. Only companies holding G-certificates or operating under municipal contract for that area may collect solid waste for a fee. Weekly curbside garbage and recycling collection service in the county is provided through three private collection companies, each providing service to a different region of the county and regulated by the WUTC and municipal contracts. In addition to garbage and recycling, and with the exception of Point Roberts and Lummi Island, all subscribers receive curbside collection of organic materials. Organic materials (yard waste and food waste) are picked up on a biweekly basis. East Whatcom County, including Newhalem and Diablo, is serviced by the Skagit County waste hauler and is included in the Skagit County Solid Waste Management Plan.

All cities in the county, with the exception of Bellingham, use traditional bag or customer-owned, 32-gallon can residential collection systems, or collector provided containers or totes. Customers of SSC and NVD also have the option of using collection-company-owned wheeled carts.

The three G-certified haulers are:

- **NVD (Permit G-000166)**—Located at 250 Birch Bay-Lynden Road in Lynden. Serves northern Whatcom County, including the cities of Lynden, Everson, Nooksack, and Sumas, and unincorporated portions of the county in that region.
- **SSC (Permit G-000014)**—Located at 1001 Roeder Avenue in Bellingham. Serves the cities of Bellingham, Ferndale, and the areas of unincorporated Whatcom County not served by NVD or Cando.
- **Cando (Permit G-063819)**—Located at 2005 Johnson Road in Point Roberts. Serves the unincorporated area of Point Roberts.

G-certified hauler territories are depicted in **Figure 6-1**. **Figure 6-2** shows the population density per square mile in relationship to each hauler territory.

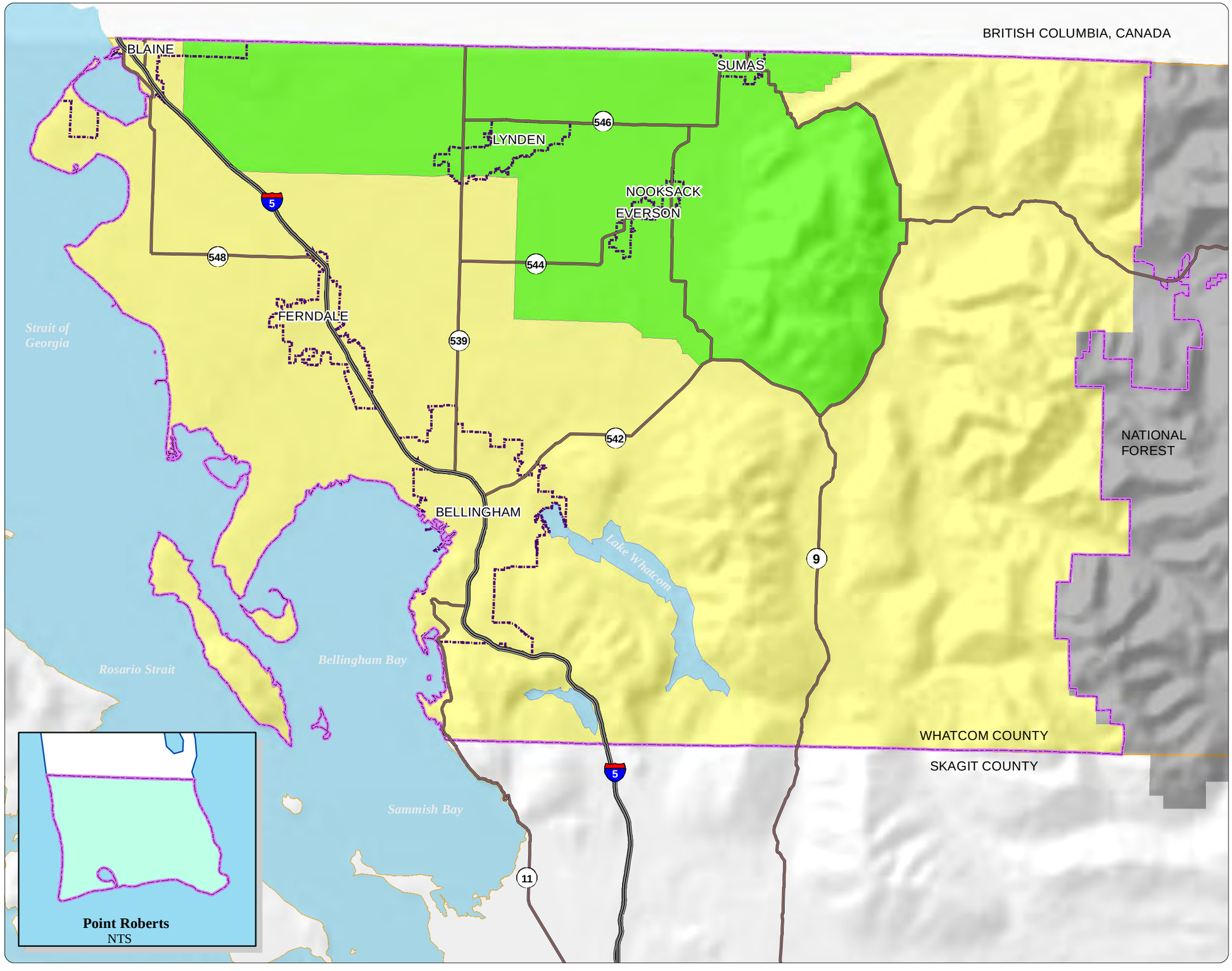
Incorporated cities in the county obtain their own solid waste collection services through independent contracts. Contracted services, by way of interlocal agreements, must meet the County's standards for curbside collection. Collected waste is delivered to County-designated transfer facilities, as described in Section 7.1.

As an alternative to curbside collection, there are a number of facilities available for public drop-off. These facilities are discussed in Section 7.

Comprehensive Solid and Hazardous Waste Management Plan Update

Figure 6-1
Hauler Territory Map

Whatcom County
Washington



Legend

- City Boundary
- Planning Area
- County Boundary
- National Forest (G00237. Not in plan.)

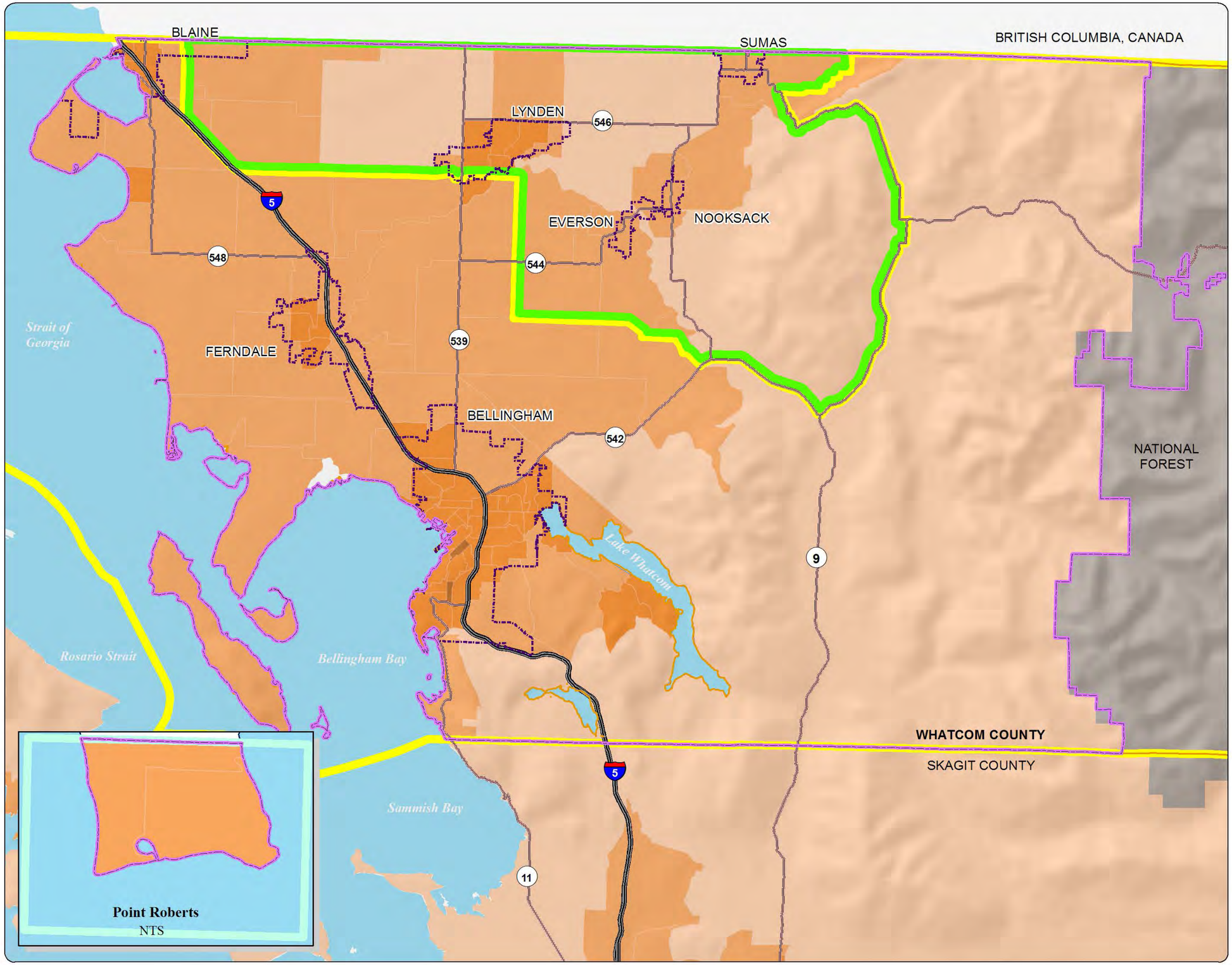
Certified Waste Hauler Territory

- Freedom 2000 LLC, dba Cando (G063819)
- Nooksack Valley Disposal, Inc. (G00166)
- Sanitary Service Co., Inc. (G00014)

0 9,000 18,000
Feet

Source: City Boundary, Waterbodies, National Forest Area, Planning Area from Whatcom County.
County Boundary from WSDOT.
Waste Hauler Territory from Utlities and Transportation Commission.

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com



Comprehensive Solid and Hazardous Waste Management Plan Update

Figure 6-2
Population Density Map

Whatcom County
Washington

Legend

- City Boundary
- Planning Area
- County Boundary
- National Forest (not in plan)

Certified Waste Hauler Territory

- Freedom 2000 LLC, dba Cando
- Nooksack Valley Disposal, Inc.
- Sanitary Service Co., Inc.

Population Density (per square mile)

- 100,001 or more people
- 25,001 to 100,000 people
- 10,001 to 25,000 people
- 1,001 to 10,000 people
- 101 to 1,000 people
- 100 or less people
- No population

0 9,000 18,000
Feet

Source:
City and County Boundaries from Whatcom County.
Population Density from Esri ArcGIS Online.
Waste Hauler Territory from Washinton Utilities & Transportation Commission

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

6.2 NEEDS AND OPPORTUNITIES

Curbside solid waste collection is an entirely privatized system, with each collector responsive to market demands and customer requests. Collectors adjust the size and routing of their fleet as necessary to provide the services required by the County and cities. Additional services requested by customers are considered by each collector and responded to directly.

Existing solid waste collection services adequately meet the current waste disposal needs of the community, and no significant issues were reported. At this time, the private service providers have not identified any needs requiring expanded capacity or infrastructure.

6.3 GOALS AND ACTIONS

This existing collection system meets the needs of the county customer base through market demands placed on the private collectors. The County will continue to monitor the program and engage the public to ensure continued functionality of the system.

TABLE 6-1 GOALS AND ACTIONS FOR COLLECTION

GOALS	ACTIONS	CONNECTING TO BEYOND WASTE*
1. Ensure that collectors are providing the required minimum service to all subscribers.	A. Investigate complaints regarding collection services and correct deficiencies.	Priorities of Plan ▪ Increase efficiency of recycling (including organic processing) systems, and maximize effectiveness of existing solid and hazardous waste infrastructure. - Focus on facility compliance, technical assistance, and enforcement. Key Principles and Strategies 5) Build on what's already working, such as maximizing the use of existing infrastructure.

*This column refers to the 2015 Draft Beyond Waste Plan. The numbering system for key goals and strategies is intended to reflect the number system in the Beyond Waste document.

7 TRANSFER AND DISPOSAL

Transfer systems consist of fixed facilities with drop boxes and/or transfer stations that receive waste from public and commercial sources. The purpose of a transfer system is to provide a centralized location for consolidation of numerous small waste loads, loading the waste into larger transfer containers, and transporting it to an appropriately permitted disposal site. Consolidation improves the economics of waste transport and reduces traffic impacts at land disposal sites. In addition to the consolidation of waste materials, transfer stations can serve as a location for the processing of recyclable materials. Material-processing activities include the separation, preparation, and consolidation of recyclable material collected through curbside programs or removed from incoming loads.

- **Transfer Station**—A transfer station is a facility that receives compact and loose waste from both residential and commercial sources. Transfer stations may use a dumping pit or tipping floor to consolidate waste material before transferring it into a trailer or compactor. In transfer stations with a dumping pit, a tractor typically crushes and compacts the waste before the waste is loaded into the trailer or compactor. Trailer loading usually requires the use of a knuckle-boom crane to evenly distribute and compact the waste in the trailer. Alternatively, a transfer station with a tipping floor may use a dozer to push the materials against a wall for crushing, followed by lifting into a trailer or pushing into a subfloor stationary compactor. Once the trailer is loaded, the load is secured and then the container is hauled to the landfill by truck or by rail.
- **Drop-Box Facility**—A drop-box facility is simply a solid waste facility where the public can directly deposit their own waste materials into a drop-box container. When the drop box is full, it is loaded onto a roll-off truck and transported to a transfer station where the waste is then transferred to disposal containers for transport to the landfill. Drop-box facilities are often provided in various urban and rural areas to reduce the distance that the public must travel to reach a transfer facility or to provide an option where there might be less congestion. In general, drop-box facilities are less expensive to operate because of reduced costs for structures, equipment, and, potentially, land. Drop-box facilities can also provide opportunities for recycling and for the separate collection of yard debris, woodwaste, and/or C/D waste.

7.1 EXISTING CONDITIONS

The County solid waste system is a transfer-based system consisting of several transfer stations and drop-box facilities that direct waste to two primary out-of-county landfills. There are no operational landfills in the county, although the County owns several closed landfills.

7.1.1 TRANSFER STATIONS

The county is served by three privately operated transfer stations, one of which is located on County-owned land leased to the operator (located in Point Roberts).

- **RDS Transfer Station—**The RDS Transfer Station is one of the two primary transfer stations in the county and accepts self-haul waste and waste collected by SSC and NVD. The RDS Transfer Station includes an MRF, one inbound scale, two outbound scales, and two truck bays. There is a self-service recycling center prior to the scales that accepts cardboard, newspaper, mixed paper, glass, tin cans, and aluminum. Waste for disposal is transported by truck to the Columbia Ridge Landfill in Arlington, Oregon. Recyclable materials are sold to the appropriate processing facilities, including Northwest Recycling. Wood is chipped and shipped to burners in Washington State and Canada. In 2013, RDS processed 105,788 tons of solid waste materials.
- **RDC Transfer Station—**The RDC Transfer Station is the other primary transfer station in the county and accepts self-haul waste and waste collected by SSC in the City of Bellingham. The facility includes one scale for inbound and outbound traffic. The tipping floor is contained entirely indoors and provides space for six vehicle hand unloaders and one tip truck. Waste for disposal is transported by rail to the Roosevelt Regional Landfill in Roosevelt, Washington. Recyclable materials, including cardboard, newspaper, and steel, are collected at the front of the facility (prior to the scales). In 2013, RDC processed 50,422 tons of solid waste materials.
- **Cando Recycling Transfer Station**—The Cando Recycling Transfer Station is on County-owned land, but is privately operated. Curbside and self-haul waste and recycling are collected and sorted. Waste for disposal is transported by truck to the Cowlitz County Headquarters Landfill in Castle Rock, Washington. Recyclable materials are sold to various entities through British Columbia, Canada. In 2013, Cando processed 1,020 tons of solid waste materials.
- **Bellingham Vactor Waste Facility—**The City of Bellingham owns, operates, and maintains a vactor waste transfer station for the purpose of processing street sweepings and vactor waste materials. The facility accepts street waste from the City of Bellingham, Whatcom County, the Washington Department of Transportation (WSDOT), and several private operators. The City currently contracts with a private party to transport the material to the Waste Management Greater Wenatchee Solid Waste Landfill. This facility is discussed in more detail in Section 8.1.8.

These transfer stations are open to the public. Current disposal rates for the transfer stations are provided in Table 7-1. Private operators adjust their rates as necessary to efficiently maintain their services. Private transfer stations are in direct competition with each other. Customers should contact the service providers directly for accurate and up-to-date information.

TABLE 7-1 CURRENT DISPOSAL RATES FOR TRANSFER STATIONS (APRIL 2015)

	Waste Type	Measured By	Flat Rate	Weight Rate		Volume Rate	Minimum
				Per Pound	Per Ton		
RDS							
	Garbage	Weight		$0.050	$100		
	Contractors (Accounts Only)	Weight		$0.045	$90		
	Wood	Weight		$0.050	$100		
	Yard Waste	Weight		$0.033	$66		
	Dirt and Sod	Weight		$0.025	$50		
	Metal	Weight		$0.020	$40		
	Concrete	Weight		$0.020	$40		
	All Passenger Tires	Flat Fee	$5/each				
	Semi Tires	Flat Fee	$20/each				
	Tractor Tires	Flat Fee	$50/each				
	Loader Tires	Flat Fee	$100/each				
	Propane Tanks	Flat Fee	$5/each				
	Hot Water Tanks, Dishwasher, Stoves, Washers, Dryers	Flat Fee	$5/each				
	Refrigerators, Freezers, Air Conditioner Units	Flat Fee	$35/each				
	Porcelain Toilets and Sinks	Flat Fee	$3/each				
	Mobile Homes (Manager Approval)	Volume				$1.25 per square foot	$1,000
RDC							
	Garbage	Weight	$6*	$0.048	$95		$6.00
	CDL	Weight	$6*	$0.048	$95		$6.00
	Yard Waste	Weight	$6*	$0.048	$95		$6.00
	Asbestos	Weight	$6*	$0.125	$250		$81.50
	Paper	Free					

	Waste Type	Measured By	Flat Rate	Weight Rate		Volume Rate	Minimum
				Per Pound	Per Ton		
Cando							
	Garbage	Weight		$0.14	$280		$5.50
	Recycling	Weight		$0.05	$100		$3.00
	Appliances	Flat Fee	$20/each				
	Fridge/Freezer	Flat Fee	$50/each				
	Tire w/ Rim	Flat Fee	$5/each				
	Tire no Rim	Flat Fee	$4/each				
	Propane Tank	Flat Fee	$1/each				
	Battery	Flat Fee	$1/each				
	Computer Monitor	Flat Fee	$10/each				
	TV	Flat plus weight	$1/each plus weight	$0.14			
	Microwave	Flat plus weight	$5/each plus weight	$0.14			
	Electronics	Flat Fee	$5.00				

Notes:
Private operators adjust their rates as necessary to efficiently maintain their services. Customers should contact the service providers directly for accurate and up-to-date information.
*Gate fee, regardless of weight or materials

In addition, the City of Bellingham maintains a vactor waste transfer station, which is not open to the public, but does receive vactor and street wastes from countywide commercial and municipal operators for a fee.

7.1.2 DROP-BOX FACILITIES

In addition to the transfer stations, county residents and businesses may dispose of waste at any of the drop-box facilities listed below.

- **SSC Birch Bay**-Lynden Drop Box Facility—The SSC Birch Bay-Lynden Drop Box Facility is County-owned and is operated by SSC. Waste is transported to the RDS Transfer Station. Recyclable materials are brought to the RDS Transfer Station and Recycling Northwest for sorting and shipment to the appropriate entities.
- **SSC Cedarville Drop Box Facility**—The SSC Cedarville Drop Box Facility is County-owned and operated by SSC. Waste is transported to the RDS Transfer Station. Recyclable materials are delivered to the RDS Transfer Station and Recycling Northwest for sorting and shipment to the appropriate entities.
- **SSC Roeder Avenue Drop Box Facility**—The SSC Roeder Avenue Drop Box Facility is located in downtown Bellingham on Roeder Avenue. Waste and recyclable materials are transported to the RDS Transfer Station or the RDC Transfer Station.
- **NVD Drop Box Facility**—Waste collected at the NVD Drop Box Facility is transported to the RDS Transfer Station for sorting. Recyclable materials are collected and shipped to the appropriate entities.

These drop-box facilities are open to the public. Current disposal rates for the drop-box facilities are provided in Table 7-2. Private operators adjust their rates as necessary to efficiently maintain their services. Private drop-off facilities are in direct competition with each other. Customers should contact the service providers directly for accurate and up-to-date information.

TABLE 7-2 CURRENT DISPOSAL RATES FOR DROP-BOX FACILITIES (APRIL 2015)

	Waste Type	Measured By	Flat Rate	Weight Rate		Volume Rate	Minimum
				Per Pound	Per Ton		
NVD							
	Garbage	Weight		$0.10	$200		
	Recycling	Volume**					$5.00
	Paper, Cardboard, Tin	Weight		$0.02	$40		
	Plastics	Volume				$1.00 per 32 gallon	
	Glass	Weight		$0.05	$100		
	Scrap Metal, Aluminum	Free		Free			
	Wood	Weight		$0.07	$140		
	Yard Waste	Weight		$0.04	$80		
SSC Cedarville							
	Garbage	Weight		$0.15	$300		$5.00
	Recycling	Weight		$0.05	$100		
SSC Birch Bay							
	Garbage	Weight		$0.15	$300		$5.00
	Recycling	Weight		$0.05	$100		
SSC Roeder							
	Garbage	Volume			$300***	$30.90 per cubic yard	$5.85
	Recycling	Volume		$0.05	$100	$5 per 30 gallon bag	$5.00

Notes:

Private operators adjust their rates as necessary to efficiently maintain their services. Customers should contact the service providers directly for accurate and up-to-date information.

**Volume defined as "normal residential amounts."

***Garbage disposal rate per ton is estimated from the volume rate based on a loose density of 190 to 220 lb/cubic yard.

7.1.3 LANDFILLS

MSW generated in the county is ultimately disposed of at one of the following landfills:

- **Columbia Ridge Landfill, Arlington, Oregon—**The Columbia Ridge Landfill, operated by Waste Management, is a modern Resource and Conservation Action (RCRA) Subtitle D-permitted landfill that accepts primarily MSW, as well as industrial and special wastes. It does not accept hazardous waste. Columbia Ridge is the final destination of waste originating from the RDS Transfer Station.
- **Roosevelt Regional Landfill, Roosevelt, Washington—**The Roosevelt Regional Landfill, operated by Republic Services, accepts MSW and specific types of special waste. Roosevelt Regional Landfill is the final destination of waste originating from the RDC Transfer Station.
- **Headquarters Landfill, Castle Rock, Washington—**Cowlitz County operates the Headquarters landfill in Castle Rock, Washington. The landfill is the final destination of waste collected by Cando.
- **Cemex Inert Waste Landfill, Everett, Washington—**The Cemex Inert Waste Landfill accepts materials that are neither chemically nor biologically reactive, such as petroleum contaminated soils generated from cleanup sites, and will not decompose.
- **Graham Road Recycling & Disposal, Medical Lake, Washington—**Graham Road Recycling & Disposal, operated by Waste Management, is a "limited purpose" facility that accepts primarily C/D debris, industrial waste, and special waste; it does not accept MSW or hazardous waste.
- **Greater Wenatchee Regional Landfill, East Wenatchee, Washington—**The Greater Wenatchee Regional Landfill, operated by Waste Management, accepts primarily MSW, C/D debris, and industrial waste. It does not accept hazardous waste.

The County owns and maintains five closed landfills:

- **Cedarville Landfill—**The 9-acre landfill opened in 1980 and was closed in 1990. The landfill is estimated to contain 400,000 cubic yards of refuse underlying the cover soil. The facility is monitored under permit during post-closure consistent with WAC 173-304. The facility has a system in place that controls landfill gas migration and odors; it also has a leachate collection system.
- **Birch Bay Landfill—**The 5-acre landfill was a County-operated landfill purchased in 1951 and closed in 1983.
- **Point Roberts Landfill—**The landfill accepted MSW from 1982 until 1985, when operation ceased because of the potential costs associated with meeting the then-new MFS. At the time of closure, the landfill was slightly less than 1 acre in size. The landfill area was then used solely for C/D waste until a separate area was designated for disposal of this waste type in 1988. In 1990, the landfill was closed in accordance with WAC 173-304. This is the current location of the Cando Recycling Transfer Station.
- **Y Road Landfill I**—The Y Road Landfill consists of two distinct landfills, Y Road I and Y Road II, located along opposite sides of the same road. Y Road Landfill I was acquired in

1995 from the Georgia Pacific Corporation for public safety reasons. Records indicate that it was used between 1967 and 1970. It is monitored and regulated as a MTCA cleanup site.

- **Y Road Landfill II**—Y Road Landfill II was closed to MSW in 1984 because of water quality concerns. The landfill was reopened as a limited-purpose landfill, which accepted only C/D waste. The landfill was closed to all waste types in 1989. Closure improvements were completed in 1991 and included installation of monitoring wells for gas and water. The MSW cells were closed to WAC 173-301 standards in 1984 and the C/D waste later placed on both the MSW cell footprint and the separate cell was later covered and closed to WAC 173-304 standards, and is monitored and regulated as a MTCA cleanup site.

7.2 NEEDS AND OPPORTUNITIES

The existing transfer and drop-box facilities adequately meet the current waste-disposal needs of the community. These facilities are privately owned by entities that consistently evaluate the respective facilities from an efficiency standpoint. At this time, the private entities have not identified any needs that require expanded capacity, but have expressed the ability to expand their own operations under short timeframes.

7.3 GOALS AND ACTIONS

Transfer and disposal of solid waste are managed through the private sector. The County will continue to monitor compliance of private-sector activities, as well as maintaining and monitoring the County's closed landfills.

TABLE 7-3 GOALS AND ACTIONS FOR TRANSFER AND DISPOSAL

GOALS	ACTIONS	CONNECTING TO BEYOND WASTE*
1. Continue to maintain and support transfer and disposal system facilities.	A. Provide ongoing post-closure monitoring and maintenance of closed landfills. B. Work with existing private transfer stations to ensure compliance with solid waste handling facility permits.	Priorities of Plan ▪ Increase efficiency of recycling (including organic processing) systems, and maximize effectiveness of existing solid and hazardous waste infrastructure. - Focus on facility compliance, technical assistance, and enforcement. Key Principles and Strategies 6) Build on what's already working, such as maximizing the use of existing infrastructure.

*This column refers to the 2015 Draft Beyond Waste Plan. The numbering system for key goals and strategies is intended to reflect the number system in the Beyond Waste document.

8 SPECIAL WASTE

Special wastes are materials that require special or separate handling because of their unique characteristics, such as bulk, water content, or dangerous constituents. Special wastes discussed in this chapter include:

- Agricultural waste
- Asbestos
- Biosolids (sewage and septage)
- Contaminated soils and dredged materials
- Disaster debris
- Food-related, grease not containing petroleum
- Biomedical waste and pharmaceuticals
- Vactor waste
- Waste tires
- C/D waste

This chapter discusses the current management practices for special waste and establishes goals and actions for encouraging recovery and reducing environmental impacts.

8.1 EXISTING CONDITIONS

8.1.1 AGRICULTURAL WASTE

Agricultural waste, such as manure and crop residues, is typically returned to the land as soil conditioners. Annual volumes and seasonal variation differ by agricultural sector. Guidelines for the proper handling of livestock waste in western Washington have been published by the WSU Agricultural Extension Service and codified under WCC 16.28.010, Manure and Agricultural Nutrient Management. Deceased animals and animal parts can be disposed of by Tri-County Dead Stock, Inc. Allowances can also be made by the Health Department for animal burials and composting.

8.1.2 ASBESTOS

The term "asbestos" represents a group of naturally occurring minerals that historically were used in building products such as cement siding, sprayed-on ceiling texture, and the paper backing of vinyl floor coverings. Asbestos is not considered a hazardous waste under either federal or state regulations, but is regulated under the federal Toxic Substances Control Act. Asbestos is also regulated under the federal Clean Air Act as an air pollutant that poses human health hazards. Local regulation is provided by the Northwest Clean Air Agency (NWCAA), Regulation Section 570. Properly packaged and labeled asbestos waste is collected at the RDS and RDC transfer stations, placed in special containers or bags, and transferred to out-of-county landfills for proper disposal as asbestos-containing material. The final disposal sites require that a copy of the NWCAA's asbestos abatement or demolition permit accompany asbestos waste deliveries.

8.1.3 BIOSOLIDS (SEWAGE SLUDGE AND SEPTAGE)

Sewage sludge that has been treated to meet standards for beneficial use (such as in land application) is called "biosolids." This type of material is specifically excluded from the definition of solid waste, although other wastes from the wastewater treatment process are classified as solid wastes. Biosolids are defined by WAC 173-308-080 as:

> Municipal 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 this chapter. Biosolids includes a material derived from biosolids, and septic tank sludge, also known as septage, that can be beneficially recycled and meets all applicable requirements.

Biosolids are further categorized by federal regulations into Class A and Class B, based on pathogen-reduction measures and metals contamination levels. The federal and state regulations are self-implementing, which means that the requirements must be met regardless of the permit status of a facility.

There are three biosolids land application facilities in the county:

- Shannon Tjoelker Biosolids Facility
- Lil John Biosolids Facility
- Tjoelker Enterprises Biosolids Facility

8.1.4 PETROLEUM-CONTAMINATED SOIL AND DREDGED MATERIAL

Contaminated soil is soil removed during the cleanup of a MTCA site, during a dangerous waste facility closure, or from corrective actions or other cleanup activities, and which contains harmful substances but is not designated as dangerous waste. Contaminated dredge materials come from the dredging of waterways where contaminants are present at concentrations not suitable for open water disposal, but not designated as dangerous waste. The primary statute governing cleanup of petroleum-contaminated soil in Washington State is the Model Toxics Control Act (MTCA), Chapter 70.105D RCW. Chapter 173-340 WAC contains regulations to implement MTCA, including sections on corrective action requirements for leaking underground storage tanks and on cleanup standards. Materials that also contain lead, benzene, polycyclic aromatic hydrocarbons, or polychlorinated biphenyls may trigger a designation as dangerous waste. Treatment, transportation, and disposal of dangerous wastes are subject to the state dangerous waste regulations, Chapter 173-303 WAC. Dangerous wastes can be transported only to specifically permitted facilities for treatment, storage, or disposal.

Disposal of petroleum-contaminated materials is subject to the requirements of WAC 173-350; these materials must be disposed of at a permitted solid waste handling facility such as a landfill or incinerator. No landfills in the county are currently permitted to accept contaminated soil. Generators of contaminated dredged materials who wish to dispose of the materials must either construct and permit a limited-purpose landfill (WAC 173-350-400) or use an approved solid waste landfill site or incinerator (CEMEX) located outside the county. Use of the County waste management system for disposal of contaminated dredged materials typically is conducted only for small projects (i.e., less than 10 cubic yards). Small project contaminated dredged materials will be accepted into the County system, provided that they have been adequately characterized and have

been dewatered adequately to meet criteria specified under the USEPA paint filter test (see Federal Register, Vol. 50, No. 83, Tuesday, April 30, 1985).

8.1.5 DISASTER DEBRIS

Whatcom County could be impacted by a number of natural disasters, including floods, earthquakes, volcanos, windstorms, and landslides, all of which can create an enormous quantity of material requiring management and/or disposal. According to the Federal Emergency Management Agency, natural disasters generally create the following types of debris:

- Windstorms may leave behind waste consisting primarily of trees and other vegetation, construction materials from damaged or destroyed structures, and personal property.
- Flood debris consists of sediment, wreckage, personal belongings, and sometimes hazardous materials deposited on public and private property. Additionally, heavy rains and floods may produce landslides, the debris consisting primarily of soil, gravel, rock, and some construction materials.
- Earthquakes generate damaged building materials, personal property, and sediment caused by landslides.
- Ice storm or snowstorm debris consists of significant amounts of woody debris from broken tree limbs and branches.
- Fire debris consists of burned-out structures, metal objects, ash, and charred woodwaste.

Oil spills or other disasters associated with large industry or refineries are generally addressed by plans already put in place by the appropriate industries and agencies.

Disaster debris will be managed through the appropriate existing facilities, including transfer facilities, permitted inert waste landfills, building materials recovery centers, and composting facilities. In the future, the County may need to designate certain locations and facilities for accumulating large volumes of disaster debris, as needed, specifically drop-box and transfer station locations.

8.1.6 FOOD-RELATED, NONPETROLEUM GREASE

Grease is generated primarily by restaurants, cafeterias, and other food services. Because it is semiliquid, it should not be disposed of into a sewer or on-site sewage system, and is not easily handled as solid waste. County residents can properly dispose of cooking oil by taking it to the MRW Facility (Disposal of Toxics). Rendering companies usually handle the collection of grease from businesses, recycling it into such products as an animal feed supplement or biodiesel fuel.

If grease is improperly disposed of, several different agencies or companies may deal with it. Grease dumped into sewers is addressed by municipal wastewater agencies, while grease improperly disposed of in the garbage is addressed by the private MSW collectors. Improper handling of grease by restaurants is addressed by the County Health Department.

8.1.7 BIOMEDICAL WASTE AND PHARMACEUTICALS

In the medical industry, a number of definitions exist for biomedical waste because of overlapping and inconsistent local, state, and federal regulations governing its management. This has a critical

impact on the management of material, since each generator's quantity of biomedical waste is greatly influenced by how inclusive the definition may be.

In response, the State of Washington has developed a statewide definition of biomedical waste to simplify compliance with local regulations while preserving local control of biomedical waste management (70.95 RCW). Furthermore, biomedical waste is regulated by WCC 24.06.04. The state definition of biomedical waste is to be the sole definition for biomedical waste in the state, and will preempt biomedical waste definitions established by local health departments or local governments. Biomedical waste is defined and limited to the following types of waste:

Animal Waste is waste animal carcasses, body parts, and bedding of animals that are known to be infected with, or that have been inoculated with, pathogenic microorganisms infectious to humans.

Biosafety Level 4 Disease Waste is waste contaminated with blood, excretions, exudates, or secretions from humans or animals that are isolated to protect others from highly communicable infectious diseases that are identified as pathogenic organisms assigned to biosafety level 4 by the current edition of the Centers for Disease Control manual *Biosafety in Microbiological and Biomedical Laboratories*.

Cultures and Stocks are wastes infectious to humans, and include specimen cultures, cultures and stocks of etiologic agents, wastes from production of biologicals and serums, discarded live and attenuated vaccines, and laboratory waste that has come into contact with cultures and stocks of etiologic agents or blood specimens. Such waste includes but is not limited to culture dishes; blood specimen tubes; and devices used to transfer, inoculate, and mix cultures.

Human Blood and Blood Products are discarded waste human blood and blood components, and materials containing free-flowing blood and blood products.

Pathological Waste is waste human-source biopsy materials, tissues, and anatomical parts that are derived from surgery, obstetrical procedures, and autopsy. Pathological waste does not include teeth, human corpses, remains, and anatomical parts that are intended for interment or cremation.

Sharps Waste is all hypodermic needles, syringes with needles attached, IV tubing with needles attached, scalpel blades, and lancets that have been removed from the original sterile package.

The major sources of biomedical waste include hospitals, medical laboratories, research laboratories, commercial diagnostic laboratories, outpatient medical clinics, dental clinics, nursing homes, and veterinary hospitals and schools.

Transportation of biomedical waste requires a solid waste certificate from the WUTC. Stericycle and Waste Management Healthcare Solutions are the two collection companies in the state. In general, biomedical wastes must be categorized, segregated, and packaged separately from other waste in containers that are clearly labeled "biohazard" or "biomedical waste." Sharp objects, such as needles and blades, must be packaged in rigid, impervious, properly labeled containers designed for this purpose. With prior approval of the Health Department, disposal of treated infectious solid waste in the solid waste stream is allowed.

The City of Bellingham began collecting unused household medications in April 2010. Since that date, over 7,000 pounds of pharmaceutical waste has been securely collected and safely transported to a hazardous waste incinerator for destruction. This waste is kept out of the waste stream, protecting surface water, groundwater, and Bellingham Bay. Properly collecting and destroying unwanted medications keeps them out of the wrong hands and reduces the potential for poisoning and unintended overdose.

Expired and unwanted medications may be dropped off in original packaging at participating pharmacies. Examples of accepted items include household prescriptions and samples, over-the-counter medications, medicine for pets, medicated ointments and lotions, vitamins, inhalers, and unopened EpiPens. Narcotic pain relievers and prescribed controlled substances, such as codeine, hydrocodone, OxyContin, Percocet, Ritalin, Vicodin, and Xanax, are not accepted at pharmacies and must be taken to the Bellingham Police Department. There is no fee for this service. The program is funded by the City of Bellingham through a combination of Ecology grants and Solid Waste Tax revenues.

Participating pharmacies in Bellingham include:

- Haggen Pharmacy-Fairhaven Market, 1401 12th Street
- Haggen Pharmacy-Meridian, 2814 Meridian Street
- Haggen Pharmacy-Barkley, 2900 Woburn Street
- Hoagland Pharmacy, 2330 Yew Street
- Interfaith Pharmacy, 218 Unity Street

Since the success of the City of Bellingham's program, additional entities throughout the county have begun receiving similar items. Examples of this include the Haggen Pharmacy in Ferndale, which collects household prescriptions and over-the-counter medications, and the Ferndale Police Station, which accepts controlled substances.

The MRW Facility (Disposal of Toxics Program) accepts unused pharmaceuticals from households (including controlled substances) at no charge, and from small-quantity generator businesses (not including controlled substances)..

8.1.8 VACTOR WASTE

The City of Bellingham owns, operates, and maintains a vactor waste transfer station in the Irongate Industrial Area for the purpose of processing street sweepings and vactor waste materials in accordance with regulatory guidelines. The County pays a proportionate share of operations and maintenance cost for its use. The facility also accepts street waste from other municipal jurisdictions and private parties for a fee on a per-ton basis. Customers include the City of Bellingham, Whatcom County, the WSDOT, and several private operators. The smaller cities of the county either dispose of their street sweepings and vactor waste at a permitted disposal facility, or process it at a wastewater treatment plant.

Wet material is stockpiled and allowed to passively drain or decant under a covered structure. Decanted wastewater is collected and discharged to the municipal sewer system for treatment at the wastewater treatment plant.

Material is received at the vactor waste transfer station as low- to moderate-risk solid waste. Due to the classification of the material, efforts to recycle or reuse the material have been unsuccessful. The City of Bellingham currently contracts with a private hauler to transport the material to the Waste Management Greater Wenatchee Solid Waste Landfill. Use as daily landfill cover has been determined to not meet the definition of recycling. The City of Bellingham continues to pursue avenues to reuse and recycle vactor waste and street sweepings for local beneficial use. The City of Bellingham is also exploring options to encourage the development of additional privately operated vactor waste and street sweeping transfer stations.

8.1.9 WASTE TIRES

Used tires generated in the county are generally handled by the retail tire industry. Usable tire casings are either shipped directly to retreading plants or combined with unusable casings for later sorting at processing sites. Unusable tires are shipped by state-permitted tire haulers to approved processing, storage, or disposal sites. Tires disposed of in the MSW stream by individuals and businesses are handled at local transfer stations, Cando Recycling Transfer Station, the NVD Drop Box Facility, or Beacon Battery and Tires.

In addition, Ecology maintains a Waste Tire Removal Account to fund tire pile cleanups. This account is funded with a $1 fee collected for each new vehicle tire sold in Washington. The account funds waste tire efforts identified by local governments and other public entities for waste tire pile prevention, cleanup, and education. Whatcom County was a recipient of funds in FY2009-2010 for tire pile cleanup on four properties and in FY2012-2013 for tire pile prevention activities, such as the cleanup of 80,000 tires at the Foothills Recycling landfill and the Upriver Tire Amnesty Collection Event. More information can be found on the program's web page: http://www.ecy.wa.gov/programs/swfa/tires/cleanup.html.

8.1.10 CONSTRUCTION AND DEMOLITION WASTE

There are several private for-profit and not-for-profit facilities that accept construction waste throughout the county. These facilities are described in more detail in Sections 3.1 and 4.1.

- RE Store
- RDS Transfer Station
- SSC facilities
- Cando Recycling Transfer Station
- Northwest Recycling
- Granite Construction Company
- Whatcom Builders
- Henifin Recycling Facility

8.2 NEEDS AND OPPORTUNITIES

The purpose of the solid waste system is to protect public health and environmental quality. Unfortunately, if generators do not have a convenient means of disposing of their waste, some generators will be more likely to dispose of their waste illegally. Others may store the waste while they seek disposal. Such storage or dumping is illegal and often creates environmental and/or human health risks.

Managing these risks and ensuring that there are disposal opportunities for special waste is a critical role of the county. Although special wastes represent only a relatively small proportion of the total solid waste generated, the Health Department receives a significant number of inquiries about a variety of unusual and new wastes. It is the County's responsibility to ensure that a safe and reasonable disposal option exists.

All special waste types are being handled consistent with the description in Section 8.1. The County will continue to remain active with all identified special waste handlers to ensure compliant disposal

practices. In certain cases, such as with C/D debris and vactor waste, special waste may be repurposed.

8.2.1 CONSTRUCTION AND DEMOLITION DEBRIS RECYCLING

C/D waste comprises a significant portion of the waste stream. The 2009 waste sort study conducted by Ecology found that approximately 30 percent of all solid waste consisted of C/D debris. Of this, approximately 50 percent consisted of wood, 16 percent asphalt paving and roofing, 7.5 percent drywall, 6 percent ceramics and bricks, 5 percent carpeting, 4 percent insulation, and 11 percent residual materials. Based on these data, C/D waste represents a significant portion of the waste stream and recovery efforts may effectively increase county diversion rates.

Since completion of the study, RDS installed and has been operating an MRF to recover C/D-related materials, which are dropped off in a designated area or manually sorted from the transfer station tipping floor. Therefore, a significant amount of diversion is now occurring that was not accounted for in the Ecology study.

The County's Flow Control Ordinance (FCO) (Ordinance No. 91-041) requires that solid waste generated in the county be processed or disposed of at a designated waste facility. The ordinance also establishes priority levels for waste disposal sites that favor recycling or other means of diversion over landfilling of unseparated solid waste. However, the ordinance exempts C/D debris. A subsequent ordinance (Ordinance No. 96-037) further exempts C/D waste from the FCO. This amendment allows disposal of C/D waste at undesignated disposal sites, including sites located outside the county. It is difficult for the County to determine the current recycling levels of these materials, given their out-of-county disposal location. More investigation would be required to better understand the situation. Alternatively, revising the current exemption may encourage better management at existing in-county facilities to ensure material recovery prior to disposal.

8.2.2 VACTOR WASTE

Materials from the City of Bellingham's vactor waste facility are sent to a landfill to be used as landfill cover. Since much of the material contains some level of contamination, reuse of the material requires careful consideration. However, some opportunities may exist to repurpose the material as fill for road projects where the fill will then be capped with asphalt and isolated from any potential exposure pathways. The City of Bellingham and the County should work with regulatory agencies to identify appropriate and safe beneficial reuse alternatives.

8.3 GOALS AND ACTIONS

The County will continue to evaluate the potential for disposal, recycling, and reuse of special waste sources. Programs for special waste will focus on the evaluation of alternatives for management of construction demolition, street sweepings, and pharmaceutical waste.

TABLE 8-1 GOALS AND ACTIONS FOR SPECIAL WASTE

GOALS	ACTIONS	CONNECTING TO BEYOND WASTE*
1. Increase C/D waste recycling.	A. Conduct outreach to building associations and other construction-related entities to educate contractors about the benefits of a self-regulating industry.	Priorities of Plan ▪ Increase efficiency of recycling (including organic processing) systems, and maximize effectiveness of existing solid and hazardous waste infrastructure. - Enforce compliance, technical assistance, and enforcement. ▪ Mitigate climate change. - Increase reuse, recycling, and waste reduction. Key Principles and Strategies 2) Focus solutions on designing sustainable products and processes. 4) Create collaborative partnerships with a variety of players. 6) Lead by example in government, especially through research, purchasing power, and model demonstration projects. 9) Strive for continuous improvement.
	B. Evaluate potential for instituting recycling requirements for construction sites through the building permit program.	
	C. Implement provisions for governmental construction projects to require recycling of waste and a preference to use recycled building products.	
2. Control sham recycling, if it is taking place.	A. Develop monitoring program to evaluate sham recycling. Understand if there is an issue of recyclables from construction sites being disposed of in landfills illegally in other counties.	
	B. Evaluate changes to the Flow Control exemption for C/D waste.	
3. Work within state regulatory structure to effectively manage street sweepings and contaminated soil.	A. Evaluate growing need to manage street sweepings and regulatory barriers to beneficial reuse and/or management of street sweepings.	
4. Provide effective management options for pharmaceutical waste.	A. Continue to support and/or enhance existing programs for pharmaceutical take-back.	

*This column refers to the 2015 Draft Beyond Waste Plan. The numbering system for key goals and strategies is intended to reflect the number system in the Beyond Waste document.

9 ADMINISTRATION AND ENFORCEMENT

Administration and enforcement of solid waste regulations in Whatcom County are carried out by various agencies in the county. Administration of solid waste regulations is the joint responsibility of Ecology, the Health Department, and the incorporated cities in the county. Responsibilities for the enforcement of solid waste regulations are distributed between Ecology and the Health Department.

This chapter identifies the statutes and regulations that form the basis for solid waste administration and enforcement and the agencies responsible for implementing them, discusses their effectiveness, and offers recommendations for improvements.

9.1 EXISTING CONDITIONS

9.1.1 AGENCY ROLES AND RESPONSIBILITIES

Whatcom County Health Department

The solid waste system is managed by the Whatcom County Health Department, which includes the following responsibilities: solid waste enforcement; solid waste facility permitting; education and outreach for waste prevention and recycling; ensuring economically efficient recycling and disposal systems; litter control; hazardous waste education and disposal; and monitoring of the County's closed landfills. They also facilitate SWAC committee meetings. Funding for the Solid Waste Division is provided by the collection of an excise tax on garbage hauled by certificated haulers, as well as by multiple Ecology Coordinated Prevention Grants. The Health Department administers several contracts to provide solid waste education and outreach services to enhance County programs.

The Solid Waste Division was transferred to the Health Department from the County's Public Works Department on January 1, 2015.

Whatcom County Public Works Department

As the agency formerly overseeing the Solid Waste Division, the Public Works Department was responsible for drafting previous solid waste plans, including the 2008 Comprehensive Solid and Hazardous Waste Management Plan and the 1991 Hazardous Waste Plan. The Public Works Department has remained engaged in the planning process of the current 2015 Plan, although they no longer hold any responsibility for solid waste activities in the county.

Solid Waste Advisory Committee

The Whatcom County SWAC was established in 1985 to provide input and review for the Plan that was under development at that time. The SWAC has continued to meet to review and update solid and hazardous waste management plans, County policies and ordinances, and other issues related to local solid waste management. SWAC meetings are open to the public and are recorded with written minutes. All documents and meeting minutes are distributed to the mayors of the cities, affected agencies and organizations, and interested individuals.

Solid Waste Executive Committee

The SWEC is responsible for estimating quarterly and annual revenues, recommending annual budgets to the County Council, and monitoring expenses to ensure budget compliance. The SWEC is composed of the mayors representing each city within the county, as well as the County Executive. The SWEC is responsible for reviewing the Plan and providing recommendations to County Council.

Cities

Pursuant to interlocal agreements with the County, all cities have instituted mandatory garbage and recycling collection. Solid waste collection in the county is regulated under municipal contracts and through contracts with certain tribal businesses on the Lummi Reservation, in addition to regulation under the WUTC. Cities in the WUTC-regulated areas have the option of providing for solid waste collection either through municipal crews or through contracted services. If cities do not elect to exert local authority over collection, collection services will be provided by the collection company with the underlying certificate for the geographical area that includes the city.

The cities of Everson, Ferndale, Lynden, Nooksack, and Sumas have municipal contracts for both residential and commercial solid waste collection. The City of Bellingham has a municipal contract with SSC for collection, and an independent disposal contract. No other cities in Whatcom County currently have independent disposal agreements, although the City of Ferndale previously had separate disposal contracts. The City of Blaine has asserted no local authority and consequently is fully serviced under WUTC authority. Coincidentally, all cities that contract for collection services at this time have contracted with a collection company that holds the underlying WUTC certificate covering that city.

With the exception of Blaine, cities in the county undertake solid waste collection and determine collection rates, frequency of service, billing, and recordkeeping systems through ordinances and contracts with private collection companies. City-contracted collection companies provide direct billing services. No city in Whatcom County has a municipally operated collection system.

The City of Bellingham also has a formal, staffed, litter-control program. A deputized city staff member performs all litter and illegal dumping control activities, including investigating litter and illegal dumping complaints, providing enforcement, and cleaning up dumping sites. Other cities also have litter-control programs, although litter-control activities are often informal and are generally performed by public works or parks crews, as needed.

Washington State Department of Ecology

Ecology is responsible for promulgating and enforcing state regulations associated with solid waste disposal, air emissions, and wastewater and leachate discharges. The state solid waste regulations that Ecology enforces result from state legislation (RCW 70.95) and in response to federal law such as RCRA.

Ecology reviews and approves local solid waste management plans, works with local health departments to enforce the state's MFS (WAC 173-304), and permits incinerator ash disposal as authorized by RCW 70.138. Ecology may periodically revise facility standards for demolition landfills, compost facilities, and MRW facilities as part of the MFS revisions.

Northwest Clean Air Agency

The NWCAA has regional responsibility for regulating and enforcing air quality. Solid waste management activities that impact air quality fall under NWCAA jurisdiction. NWCAA regulatory activities in local solid waste management historically have been focused on the regulation of emissions for solid waste incinerators; the permitting of controlled burns of woody debris, including burns at landfills and transfer sites; and enforcement related to the use of burn barrels to burn solid waste.

There are no active incinerators in the county.

Washington Utilities and Transportation Commission

The WUTC regulates solid waste collection companies under the authority of Chapter 81.77 RCW. In brief, the law provides for regulated garbage collection companies with monopolies in specified geographical (certificated) areas. The WUTC regulates collection fees and operating standards, as well as requiring annual revenue and expense reports for certificated collection companies. Collectors charge uniform rates subject to WUTC approval across each certificated area. Collection companies must provide collection services at the specified tariffs to all customers in their certificated area. The original certificates were awarded in 1961. These certificates are perpetual unless a collection company fails to offer adequate service, or cedes or sells all or part of their certificated area to another collection company. In the event that a collection company decides to cease business, their certificate could be sold to a competing entity, under review of the WUTC, which would then provide collection services to the same jurisdiction. The WUTC provides temporary authorization during the review period to ensure uninterrupted service to customers.

With the passage of the County's 1990 Service Level Ordinance (Ordinance No. 90-95), the County took an active role in defining local solid waste collection services. Through the Ordinance and successive amendments, the County defined minimum garbage and recycling collection services and set collection charge rate policies. The WUTC is responsible for regulating the certificated services within the framework of the County's Service Level Ordinance.

The WUTC also reviews the Plan during the approval process and evaluates probable financial impacts to county rate-payers.

9.1.2 FLOW CONTROL ORDINANCE

Flow controls are legal provisions that allow state and local governments to designate the places where MSW is taken for processing, treatment, or disposal. County Ordinance 91-041, adopted June 25, 1991, establishes County control over the disposal of solid waste in the county and requires designated disposal sites to have disposal agreements with the County. The FCO establishes priorities for the flow of materials through the county solid waste system, prioritizing recycling as the primary means of solid waste handling. In September 1996, the County Council passed an ordinance (No. 96-037) to exempt C/D waste from the flow-control requirements.

9.1.3 FINANCING

Until 1990, the County financed solid waste activities from disposal revenues received at County disposal facilities. These activities included landfill operations, transfer operations (e.g., subsidizing the Maple Falls and Point Roberts drop-box sites), the closure and maintenance of old landfill sites,

and planning and administration. With the establishment of the FCO and the temporary disposal site agreement with the former Recomp facility (now RDC) in 1990, the County funded its solid waste activities with the $9-per-ton surcharge collected by Recomp. These surcharge funds allowed the County to formally close past County landfills, enhance waste reduction and recycling program design and implementation, and address other County solid waste funding obligations. When FCO-based disposal site agreements became unenforceable in early 1997, disposal sites ceased to collect and remit the disposal surcharge and the County lost its solid waste revenue source.

The County then reviewed a number of financing options, including "no funding" (i.e., ceasing any solid waste functions); reactivating a 1987 county ordinance [No. 87-17] authorizing the collection of pass-through fees at private disposal facilities; implementing a percentage collection excise tax through the disposal district; implementing a per-container collection excise tax through the disposal district; and shifting to general tax funding through the County's "current expense" fund.

The "no funding" option was rejected because of the County's need to meet statutory obligations, including planning, ordinance enforcement, and postclosure responsibilities for closed County landfills. The implementation of the 1987 "pass-through" ordinance was deemed inadvisable, since many of the same flow-control legal issues that challenged the disposal site agreements would apply to the earlier pass-through ordinance. The percentage excise tax through a disposal district was considered feasible, but potentially inequitable, since customers paid varying amounts to different haulers for the same level of service, and would thus pay varying amounts of excise tax while receiving the same service. The shifting to general tax funding was rejected because of the limited availability and competition for current expense funds.

The County determined that a weight-based excise tax based on disposal district taxing authority would be the best funding mechanism. This approach would avoid the perceived inequity of a percentage tax and would link tax payments to container size and anticipated container weight. The County's disposal district (WCC 8.13) was revised to reflect this excise tax approach and others updated through Ordinance 97-041, adopted July 29, 1997. The collection of the excise tax began in October 1997. According to WCC 8.13.30, the excise tax is levied on all solid waste collection at each residence, business, and institution at the rate of $8.50 per ton. The County levies this tax to administer solid waste management planning and a portion of the education and community outreach in the county. This excise fee is collected by the collection companies.

9.1.4 ADMINISTRATION

The Health Department provides staff to administer the contracts for solid waste education and outreach programs. In addition to contract administration, County staff respond to public questions and serve as a resource to the community. Except for defining the terms of the Service Level Ordinance, the County does not take an active role in administering the collection, transfer, or disposal of solid waste generated in the county. These actions are managed through municipal contracts, WUTC G-Permits, and private contract mechanisms between service providers.

9.1.5 ENFORCEMENT AND COMPLIANCE

The Health Department maintains responsibility for permit compliance and solid waste enforcement activities in the county and the solid waste system. Health Department staff routinely administer solid waste permits to facilities in the county and periodically assess compliance. Staff, along with the

sheriff's office, address the need to periodically enforce solid waste ordinances, including instances of illegal dumping.

Although disposal rates have been stable or have moderately increased for years, illegal disposal continues to be a problem in rural county areas. Given the size of the county, the possibility of multiple sites scattered throughout the county, and the difficulty of gathering sufficient evidence, enforcement activities related to illegal disposal are very time-consuming. Staff only responds to complaints, and does not actively patrol the county looking for illegal disposal sites. On average, there are 110 complaints per year.

The Health Department's complaint tracking consists of an initial site visit for documentation and verification of illegal dumping; research of ownership, property owner, etc.; outreach to the property owner and enforcement letters; follow-up public contacts, correspondence, and inspections; and court preparation and appearances, if needed. It is Health Department policy to encourage voluntary compliance and avoid the use of law enforcement agencies. If there is a lack of progress, the sheriff's department becomes involved, which may result in a civil action and subsequent court date.

In addition to the general problem of adequately responding to complaints of illegal disposal, bringing charges against violators is further complicated by the evidence requirements for prosecution based on state law. The current system can consume numerous man-hours to gather sufficient evidence, conduct repeated inspections/investigations, and possibly bring court action.

9.2 NEEDS AND OPPORTUNITIES

Financing for the solid waste system is provided through the County excise tax collected by collection companies, various Ecology grants (as made available), and landfill leases. Current funding levels are enough to support minimum programming, but more funding may be needed to expand the County's education, outreach, and business technical assistance. The County should periodically assess programs in development and the funds available and reallocate funds on an as-needed basis in order to meet the implementation priorities for waste reduction, recycling, and composting.

9.2.1 ENFORCEMENT AND COMPLIANCE

Enforcement of solid waste disposal provisions is a critical component of the County's solid waste management program. While the community as a whole prides itself on disposal compliance and a relatively high rate of diversion, specific challenges exist in two somewhat more rural portions of the county. In particular, the Point Roberts area is geographically separated by Canada, and the Kendall-Maple Valley Area requires urban levels of service even though it is located in a more rural area.

The Kendall-Maple Valley Area

The Kendall-Maple Valley area is located in unincorporated Whatcom County, but requires near urban area levels of service because of its relatively high residential development density. In addition to demographic factors, the area is challenged by its distance to typical urban services. As a result, there is frequent illegal dumping of solid waste on vacant lots, off logging roads, and in culverts. Health Department staff implement a compliance and enforcement program, but because of limited resources and countywide demands, additional infrastructure may be necessary to better serve this area. In the past, the Health Department has worked with community groups, including Kendall Kleen, to provide special attention to these issues and has facilitated various cleanup activities.

Point Roberts

There is also a new compliance issue being investigated in Point Roberts, which may be exacerbated by international travel restrictions that are enforced on the only road leading from this isolated community, which happens to be the point of entry into Canada.

Point Roberts is located just south of the United States-Canadian border and is isolated from the mainland United States. The community includes a large number of seasonal residents who must travel into Canada to return to their primary place of residence, whether in the United States or Canada. Providing urban services in this area is a challenge for a number of reasons. For example, the area's relatively small population makes it difficult to provide waste management services on economies of scale. Also, whereas residents and visitors in other seasonal communities around the United States would be permitted to transport household solid waste to dispose of at their primary place of residence, international border regulations prohibit the importation of solid waste into Canada. As a result, residents must dispose of garbage before leaving Point Roberts. Other factors include the fact that some seasonal residents use their Point Roberts address to receive packages and must dispose of the packaging before leaving the area. In some cases, garbage is disposed of illegally at public parks and facilities.

County staff have undertaken steps to curb illegal disposal through the Health Department enforcement program. The issue, which has only recently been brought to County enforcement staff, is currently being examined in greater detail.

9.3 GOALS AND ACTIONS

Beyond educational programming, administrative and enforcement activities represent a significant role for the County in the largely privatized system. As funding for these roles expands, the County will consider alternatives to increasing compliance and participation in the appropriate recycling and waste management programs.

TABLE 9-1 GOALS AND ACTIONS FOR ADMINISTRATION AND ENFORCEMENT

GOALS	ACTIONS	CONNECTION TO BEYOND WASTE
1. Evaluate regulatory changes to increase efficiency and management.	A. Evaluate the existing exemption program for solid waste collection effectiveness. B. Evaluate the existing civil penalty structure for waste violations, with consideration to develop alternative structures to incentivize compliance. C. Evaluate and create effective County solid waste enforcement tools countywide, with emphasis on highly developed, unincorporated areas (such as Limited Area of More Intense Rural Development [LAMIRD]).	Priorities of Plan ▪ Increase efficiency of recycling (including organic processing) systems, and maximize effectiveness of existing solid and hazardous waste infrastructure. - Enforce compliance, technical assistance, and enforcement. ▪ Increase efficiency of recycling (including organic processing) systems, and maximize effectiveness of existing solid and hazardous waste infrastructure. - Reduce sham recycling and provide enforcement. - Focus on facility compliance, technical assistance, and enforcement. - Increase capacity and diversity of recycling (including organics processing) infrastructure. ▪ Mitigate climate change. - Increase reuse, recycling, and waste reduction. Key Principles and Strategies 3) Focus solutions on designing sustainable products and processes. 5) Create collaborative partnerships with a variety of players. 7) Lead by example in government, especially through research, purchasing power, and model demonstration projects. 9) Strive for continuous improvement.
2. Develop and implement community-specific programs in highly developed unincorporated areas (e.g., LAMIRDs) to address compliance challenges.	A. Provide programming and support to local community watch groups in areas with compliance challenges and host events to raise awareness. B. Assess the need for additional drop-box facilities in unincorporated areas in order to encourage legal disposal practices. C. Evaluate the potential need for additional enforcement staff.	

10 IMPLEMENTATION SCHEDULE

The purpose of this section is to outline the planning process followed in the development of this Plan, and identify implementation responsibilities, actions, and an overall implementation schedule.

10.1 IMPLEMENTATION RESPONSIBILITY

Solid waste management is governed by the laws and regulations of federal, state, and local governments. These laws and regulations create the legal framework defining roles and responsibilities. The following section discusses the roles and responsibilities of local government in the management of solid waste in the county.

Waste Reduction and Recycling

Waste reduction and recycling is a fundamental strategy and top priority for solid waste management in the county, and is a critical element of the Plan. The County is responsible for implementing education and recycling programs countywide, with its partners, to reduce waste disposal. Private solid waste companies will continue to support recycling education and enforcement as a basic part of their customer services efforts.

Collection

With the exception of the City of Blaine, the cities in the county manage the solid waste collection system, including the establishment of rates to pay for the service. Cities are responsible for ensuring that their solid waste collection systems, albeit privately owned, are in compliance with the Plan. The WUTC is responsible for ensuring that the services provided and the rates charged by the regulated haulers are in compliance with the Plan.

Disposal

It is the responsibility of the County to ensure that a long-term disposal system is available for MSW. Private entities operating transfer stations in the county use their operating contracts to ensure that properly permitted disposal facilities are utilized for the disposal of county-generated waste. The Plan is required to describe existing solid waste disposal handling facilities, which, in Whatcom County, are all privately owned. The County is responsible for assessing the need for additional solid waste handling facilities over the 20-year planning horizon.

Education and Public Involvement

Comprehensive education is to be conducted throughout the county so that people are informed of the need to reduce, source separate, and recycle solid waste. Development of educational programs is required as part of the Plan (Chapter 70.95 RCW).

The County is responsible for ensuring that the public has a chance to participate in the decision-making process. This has been accomplished by holding public meetings on the Plan and other solid waste issues, providing adequate public notice of SWAC meetings, establishing a comment period during which citizens submitted written comments on the proposed plan, distributing informational brochures, and soliciting ideas from citizens.

Solid Waste Permits

As described in Sections 9.1.1 and 9.1.5, the Health Department is responsible for permitting solid waste facilities. The department issues permits for transfer stations, drop boxes, biosolid facilities, vactor waste facilities, recycling facilities, digesters, and MRW facilities.

Applicants must also apply for permit approval from the County Department of Planning & Development Services. The Department of Planning & Development Services reviews proposal to make sure they are consistent with County land use codes, zoning, and the County's comprehensive plan. Potential approvals required include building permits, grade/fill permits, and conditional use permits.

Solid Waste Management Planning

The County is responsible for solid waste planning and management. The County, in cooperation with the cities, is required to prepare a coordinated, comprehensive plan, which must comply with Chapter 70.95 RCW, Ecology's Guidelines for the Development of Local Solid Waste Management Plans and Revisions, and the Cost Assessment Guidelines published by WUTC in accordance with RCW 70.95.090(8).

Implementation

It is the responsibility of the County and cities to implement programs following the adoption and approval of the 2015 Plan. The County and the cities are required to adopt regulations ordinances governing solid waste handling to implement the 2015 Plan (Chapter 70.95 RCW).

Reporting

Municipalities that provide their own solid waste disposal are required to report annual tonnage information to Ecology.

Solid Waste Advisory Committee

The County is required to establish a local SWAC to assist in the development of programs and policies concerning solid waste management. The SWAC also reviews and comments on proposed rules, policies, and ordinances before their adoption. The SWAC is advisory only, making recommendations to the County Council, which makes final decisions after considering SWAC recommendations and other available information. The County SWAC elects its own chairperson, adopts its own bylaws, and conducts its own meetings in accordance with the Ecology Solid Waste Planning Guidelines. County staff provide information to the SWAC and facilitate meetings.

10.2 SUMMARY OF GOALS AND ACTIONS

The following table provides a list of implementation actions for the County, cities, private haulers, private businesses, and institutions in the county. The list is derived from the goals and actions section of each chapter contained in this Plan.

Table 10-1 IMPLEMENTATION SCHEDULE

GOALS	ACTIONS	2016	2017	2018	2019	2020	Future
Education and Community Outreach							
1. Increase community knowledge and expertise of waste reduction methods by providing educational opportunities to targeted populations using existing public and private resources.	A. Increase current youth and primary school education programming.	✓	✓	✓	✓	✓	✓
	B. Expand school education programming to include middle and high school levels with age-appropriate projects, information, and messaging.		✓	✓	✓	✓	✓
	C. Support and fund commercial education through targeted outreach, commercial waste audits, and technical assistance.	✓	✓	✓	✓	✓	✓
	D. Target development of educational materials for multi-family customers.			✓	✓	✓	✓
	E. Increase support and advertising for the WSU composting education program through the Master Gardeners.		✓	✓	✓	✓	✓
	F. Sponsor community events and use a theme of zero waste to educate participants. Make arrangements for waste management and describe the decisions that were made to accommodate the choice.				✓	✓	✓
	G. Publish educational materials of the solid waste system in response to community requests.	✓	✓	✓	✓	✓	✓
2. Utilize appropriate and relevant tools for mass communication and outreach to further promote implementation of waste reduction methods, using an integrated public/private approach.	A. Continue distribution of educational materials digitally and make available in paper form, as requested.	✓	✓	✓	✓	✓	✓
	B. Integrate existing public and private social media profiles and a structure for effective advertisement and information sharing.		✓	✓	✓	✓	✓
	C. Develop a cohesive branding for the solid waste system, recognizing public and private roles, and develop a relevant and attention-getting advertising campaign that creates a vision in the collective public mind and appeals to the senses of the public.			✓	✓	✓	
	D. Consider development of other digital tools for communication of waste management information (e.g., mobile Web site, phone app, QR codes on advertising).					✓	✓
	E. Consider a marketing campaign that meets the public where they already are (e.g., on public transit, at events, or in movie theaters).				✓	✓	
3. Develop relevant educational materials for residential, commercial, and institutional consumers.	A. Educate on waste generation habits/trends.	✓	✓	✓	✓	✓	✓
	B. Educate on waste reduction and home waste management (material reuse opportunities, purchasing products with less packaging, purchasing more durable goods, home composting, and food waste prevention).		✓	✓	✓	✓	✓
	C. Educate on the environmental impact of waste and waste management.		✓	✓	✓	✓	✓
	D. Promote the theme of zero waste.				✓	✓	✓
4. Review solid waste data on an annual basis to understand ongoing solid waste trends and prioritize County solid waste initiatives.	A. Review annual solid waste data provided by Ecology and track effectiveness of County programming.		✓	✓	✓	✓	✓
	B. Request more detailed data, as needed, from material handlers to better understand the effectiveness of County programming.		✓	✓	✓	✓	✓
Residential Recycling							
1. Enhance residential recycling.	A. Assess materials currently collected through the three-bin system, focusing on their relevance to overall solid waste system goals and commonly disposed-of recyclable materials.		✓	✓	✓		✓
	B. Evaluate current alternate materials collected curbside and consider the potential to add or remove materials.		✓		✓		
	C. Educate the public on the purpose and benefits of a three-bin system, as well as the success of the local program.		✓	✓	✓	✓	✓

Multi-Family Recycling							
1. Gather information on multi-family disposal and recycling habits.	A. Conduct a waste audit to understand the recycling habits of multi-family customers. Findings could drive future action.				✓		
2. Encourage manager/owner responsibility.	B. Education outreach to building/facility management. Suggest training of residents for facility waste bin system at move-in and require compliance in lease.			✓			
3. Increase multi-family residential outreach.	C. Provide educational information to be distributed to multi-family residents, such as information on how to accommodate recycling bins.			✓	✓	✓	✓
	D. Create a program to provide waste audits to building managers and provide support for follow-on education.				✓	✓	✓
	E. Provide clear labeling of acceptable materials with pictures for each container to address potential language barriers.			✓	✓	✓	
	F. Ensure that the frequency of curbside service to multi-family buildings provides adequate capacity in each recycling bin at any time, minimizing potential for unnecessary disposal or contamination.	✓	✓	✓	✓	✓	✓
Organics Management							
1. Consider accessibility of organic materials collection and management.	A. Evaluate flexibility of collection (frequency, container size, cost, etc.) and impact to the existing system.		✓		✓		
2. Increase recovery of organic materials from commercial and industrial generators.	A. Target outreach to the food industry with the goal of separating more material appropriate for organics composting, or other organics management approaches as they become available.	✓		✓		✓	
	B. Develop food waste management programs, including potential programs that connect restaurants with farmers who would use food waste as livestock feed.				✓		
	C. Require compostable, single-serving containers at commercial locations—stadiums and fast-food venues.						✓
	D. Support industry opportunities to use anaerobic digesters for diversion of pre-consumer food waste.						✓
Solid Waste Collection							
1. Ensure that collectors are providing the required minimum service to all subscribers.	A. Investigate complaints regarding collection services and correct deficiencies.	✓	✓	✓	✓	✓	✓
Transfer and Disposal							
1. Continue to maintain and support transfer and disposal system facilities.	A. Provide ongoing post-closure monitoring and maintenance of closed landfills.	✓	✓	✓	✓	✓	✓
	B. Work with existing private transfer stations to ensure compliance with solid waste handling facility permits.	✓	✓	✓	✓	✓	✓
Compliance Management and Enforcement							
1. Evaluate regulatory changes to increase efficiency and management.	A. Evaluate the existing exemption program for solid waste collection effectiveness.		✓				
	B. Evaluate the existing civil penalty structure for waste violations, including the possibility of developing alternative structures to incentivize compliance.		✓				
	C. Evaluate and create effective County solid waste enforcement tools countywide, with emphasis on highly developed unincorporated areas (such as LAMIRD).			✓			
2. Develop and implement community-specific programs in highly developed unincorporated areas (e.g., LAMIRDs) to address compliance challenges.	A. Provide programming and support to local community watch groups in areas with compliance challenges, and host events to raise awareness.			✓		✓	
	B. Assess the need for additional drop-box facilities in unincorporated areas in order to encourage legal disposal practices.	✓	✓				
	C. Evaluate the need for additional enforcement staff.		✓		✓		

Special Waste Programs							
1. Increase C/D waste recycling.	A. Conduct outreach to building associations and other construction-related entities to educate contractors about the benefits of a self-regulating industry.	✓	✓				
	B. Evaluate potential for instituting recycling requirements for construction sites through the building permit program.		✓	✓	✓		
	C. Implement provisions for governmental construction projects to require recycling of waste and a preference to use recycled building products.			✓			
2. Control sham recycling, if it is taking place.	A. Develop monitoring program to evaluate sham recycling. Understand if there is an issue of recyclables from construction sites being disposed of in landfills illegally in other counties.			✓			
	B. Evaluate changes to the Flow Control exemption for C/D waste.	✓			✓		
3. Work within state regulatory structure to effectively manage street sweepings and contaminated soil.	A. Evaluate growing need to manage street sweepings and regulatory barriers to beneficial reuse and/or management of street sweepings.	✓	✓				
4. Provide effective management options for pharmaceutical waste.	A. Continue to support and/or enhance existing programs for pharmaceutical take-back.	✓			✓		✓
Administration and Enforcement							
1. Evaluate regulatory changes to increase efficiency and management.	A. Evaluate the existing exemption program for solid waste collection effectiveness.		✓				
	B. Evaluate the existing civil penalty structure for waste violations, with consideration to develop alternative structures to incentivize compliance.		✓				
	C. Evaluate and create effective County solid waste enforcement tools countywide, with emphasis on highly developed, unincorporated areas (such as Limited Area of More Intense Rural Development [LAMIRD]).			✓			
2. Develop and implement community-specific programs in highly developed unincorporated areas (e.g., LAMIRDs) to address compliance challenges.	A. Provide programming and support to local community watch groups in areas with compliance challenges and host events to raise awareness.	✓	✓	✓	✓	✓	✓
	B. Assess the need for additional drop-box facilities in unincorporated areas in order to encourage legal disposal practices.			✓			
	C. Evaluate the potential need for additional enforcement staff.			✓			

10.3 BUDGET

The County maintains an annual solid waste budget of approximately $1,260,000 More than half of the solid waste budget is funded through the County solid waste excise tax. This tax is collected by private haulers through curbside collection fees. There is no self-haul disposal tax collected at the current time. The balance of funding is secured through Ecology grants.

County solid waste handling facilities and collection services are largely privatized and do not require direct County investment. Two of the three transfer facilities in the County, RDC and RDS, are privately owned and operated. The Cando transfer facility is County-owned, but leased to a private party for operation. Drop-box facilities in the County include both publically and privately owned drop boxes; however, public drop-box facilities (Cedarville and Birch Bay) are also leased to private entities and require only periodic maintenance. As a result, expenditures for solid waste infrastructure development, maintenance, and operation represent very little of the County's overall solid waste budget.

Exceptions to this are the five closed, County-owned landfills and the Whatcom County MRW Facility (Disposal of Toxics Program). Approximately five percent of the solid waste budget is expended for post-closure maintenance and monitoring associated with the Cedarville, Birch Bay, Point Roberts, and Y Road Landfills (Y Road I and II). The Whatcom County MRW Facility (Disposal of Toxics Program) represents a much larger portion of the budget, at approximately 25 percent.

Funding for community education and outreach programs are critical to achieving waste reduction goals. In the 2015 fiscal year, funding will be enhanced to increase composting and recycling education and education programming in schools. Additional programming will be added for commercial technical assistance programs pertaining to organics management, construction and demolition debris recycling, and single and multi-family residential recycling.

The County also plays a significant role in litter control and illegal-disposal enforcement. Approximately 20 percent of the budget is allocated to enforcement programs, addressing reports of illegal disposal and contracting with the Sheriff's office for jail litter crews.

11 LOCAL HAZARDOUS WASTE MANAGEMENT PLAN

11.1 MASTER SECTION

This section provides the framework of the County's existing hazardous waste management system, current program services associated with hazardous waste collection, public education, and technical assistance, and identifies opportunities and constraints for improving those services. This section also serves as a foundation for program goals that are presented in Section 11.2, Implementation.

11.1.1 INTRODUCTION

As an overall component of the County's solid and hazardous waste management system, this section is specific to hazardous waste management system components and is intended to

demonstrate compliance with RCW 70.105, the Hazardous Waste Management Act. The format of this section follows the Ecology-recommended outline provided in Guidelines for Developing and Updating Local Hazardous Waste Plans (Ecology, 2010).

The County adopted its initial hazardous waste management plan in 1991 to comply with requirements stipulated under RCW 70.105. Since then, updates to the Plan have included reference to the 1991 Hazardous Waste Management Plan, with no substantial revisions to that plan completed.

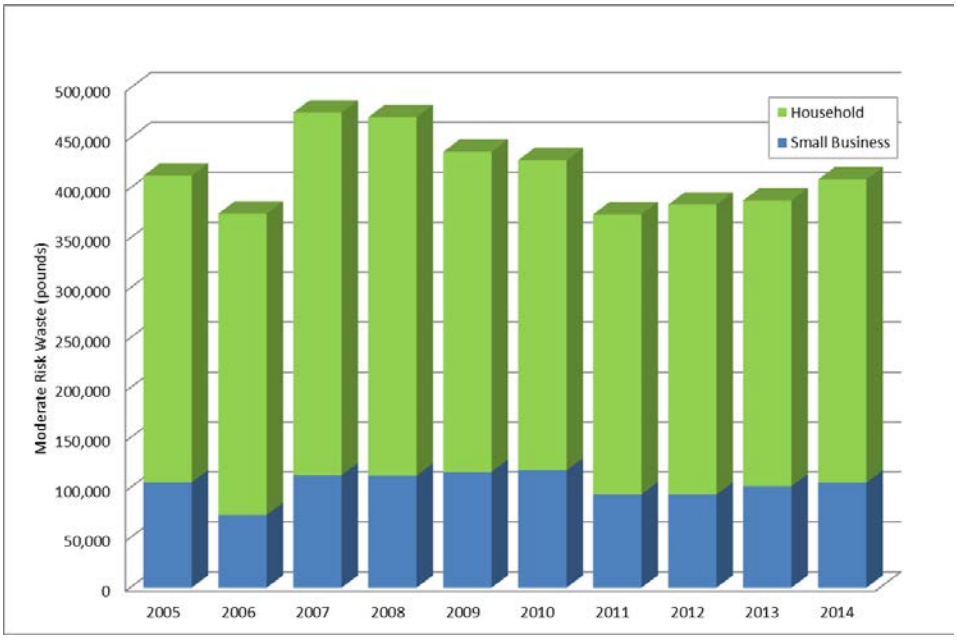
11.1.2 ANALYSIS OF CURRENT CONDITIONS

This section provides information on the current quantities, types, and management of hazardous waste generated by households and businesses in the county.

11.1.2.1 Hazardous Waste Inventory

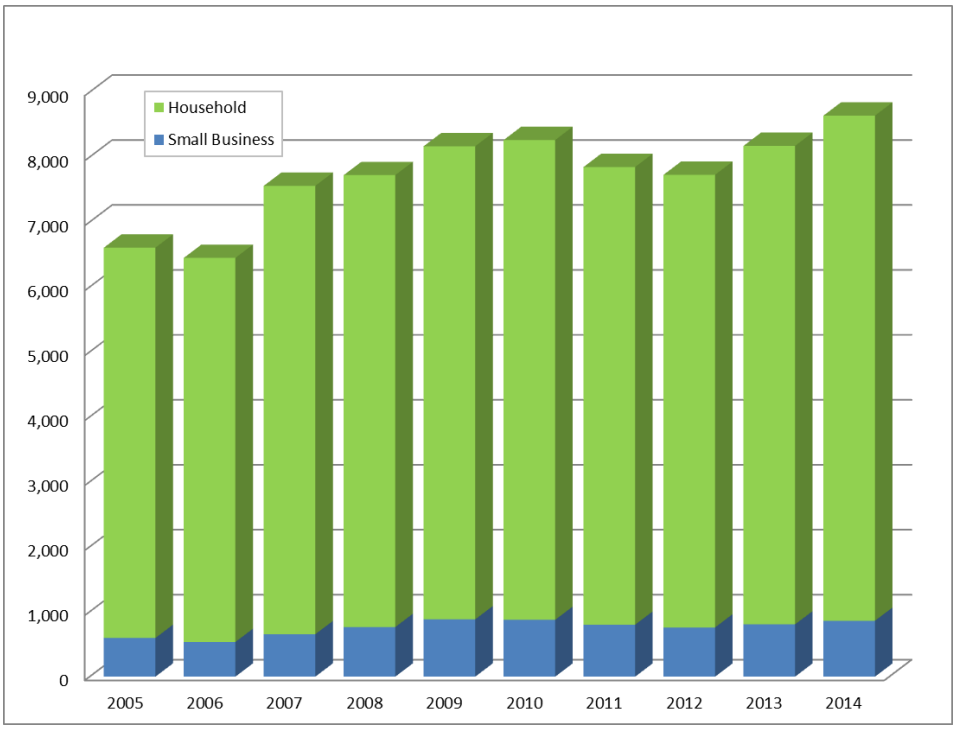
MRW is regulated as solid waste, and is defined as hazardous waste (waste chemicals) generated from households and qualified CESQG businesses. The County owns the Whatcom County Moderate Risk Waste Facility, also known as the Disposal of Toxics Program facility, located at 3505 Airport Drive in Bellingham (Figure 1-1), which accepts MRW from county households and qualifying small businesses. The facility is operated under contract by Stericycle Environmental Solutions. Automobile-related MRW (motor oil, antifreeze, and oil filters) are also accepted at satellite facilities (Cedarville Road transfer station, Birch Bay transfer station, and NVD Lynden transfer station). The County collected 408,629 pounds of MRW in 2014 (105,260 pounds from CESQGs and 303,369 pounds from county residents). Figure 11-1 presents the annual MRW received over the past ten years.

Figure 11-1
Annual Moderate Risk Waste Received



The County served 8,637 customers at the MRW facilities in 2014 (861 visits by CESQGs and 7,776 visits by county residents). Figure 11-2 presents the annual number of users of the County's MRW facilities over the past ten years.

Figure 11-2
Annual Customers—Moderate Risk Waste Facilities



Ecology's records indicate how many of the following numbers of businesses and institutions in the county were registered as hazardous waste generators as of June 2014:

- Nineteen large-quantity generators
- Eighteen medium-quantity generators
- Forty-three small-quantity generators (includes only those small-quantity generators that have chosen to obtain a USEPA identification number [which is not required for CESQGs]; the actual number of CESQGs may be higher)
- Twenty-four nongenerating sites and transporters that have active USEPA or state identification numbers but that did not generate waste in the most recent year.

Ecology's list of confirmed and suspected contaminated sites in the 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 October 2014):

1. Brownfield Sites—ten sites. Brownfield sites are abandoned or underutilized properties where potential liability due to environmental contamination and cleanup costs complicates redevelopment.

2. Environmental Covenants Register—nine sites. This registry is a list of sites that have residual contamination after the cleanup has been completed. These sites have environmental covenants or deed restrictions limiting the types of uses on the property.
3. Leaking Underground Storage Tanks—119 (active) sites. This report contains information on underground storage tank facilities that require cleanup, as well as their cleanup history.
4. State Cleanup Sites:
    a. Confirmed and Contaminated Sites Report—220 records. This report contains information about sites that are undergoing cleanup and sites that are awaiting further investigation and/or cleanup.
    b. No Further Action Sites—204 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—136 (active) sites with 360 tanks. Washington State regulates active storage tanks on different properties, including gas stations, industries, commercial properties, and government entities.

Transporters and facilities in the county that provide transportation and disposal services are listed on Ecology's Hazardous Waste and Toxics Reduction Services Directory at http://www.ecy.wa.gov/programs/hwtr/index.html.

11.1.2.2 Public Education

The County is dedicated to educating the public about hazardous waste issues. Educational programs are designed to increase awareness and to reduce use, misuse, improper storage and disposal, and risks to human health and the environment related to hazardous products. The County prioritizes specific topics, audiences, and education methods according to hazards, community needs, and outreach effectiveness, so specific campaign elements change over time. The County also strategically teams with community partners to cost-effectively reach a wider range of the public in its educational messaging.

The County identifies and implements effective means of connecting hazardous materials education to related environmental, health, and resource concerns, such as restoring Puget Sound, protecting indoor air quality, protecting drinking water, preventing chronic disease, and broader community health improvement.

In addition to educational materials on the County's Web site specific to hazardous material management (http://www.co.whatcom.wa.us/674/Solid-Waste-Management), the County maintains printed brochures and posters for distribution at the public's request. Tours of the MRW facility are provided to various community groups, as well as to middle-school-age students, and Stericycle Environmental Solutions and County staff are available to speak at various public meetings (e.g., small business associations, neighborhood associations, real estate professional associations).

11.1.2.3 Technical Assistance

The County is committed to assisting the public in safely storing and using hazardous chemicals, as well as appropriately disposing of MRW. In additional to information provided on its Web site (see Section 11.1.2.2) relative to appropriate disposal options, the County, through Stericycle Environmental Solutions, maintains a telephone hotline (360-384-4640) for additional technical assistance. Assistance is typically provided in the form of over-the-phone technical advice and referrals to information available on the Internet. In cases where additional, on-site technical assistance is warranted for small businesses, County staff source control specialists are available to conduct business tours and consultations.

11.1.2.4 Service Improvement Opportunities and Constraints

In light of budgetary constraints created through significant reductions in state funding levels beginning with the 2015-2017 biennial budget, the County plans to focus its limited available funding on program maintenance, and if necessary, strategic service reductions. Partnerships with both the private sector and nonprofit organizations will be explored to an even greater level than in the past to identify potential means of cost-effective service enhancement.

11.1.3 LEGAL AUTHORITY FOR THE PROGRAM

The 1976 RCRA addresses the management of solid and hazardous waste at the federal level. RCRA exempts small-quantity generators and household hazardous waste from hazardous waste regulation at the federal level to allow greater focus on large-quantity generators of hazardous waste. At the state level, the management of solid and hazardous waste is delegated to Ecology by the USEPA through the RCRA State Authorization rulemaking process. The RCRA program is administered by Ecology through the Washington State Dangerous Waste Regulations in WAC Chapter 173-303, Solid Waste Handling Standards in WAC Chapter 173-350 (which includes moderate risk waste), and Criteria for Municipal Solid Waste in Landfills in WAC Chapter 173-351. Relevant federal laws and regulations include the following:

- RCRA
- Universal Waste Rule
- Mercury-containing and Rechargeable Battery Management legislation
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA/Superfund)
- Emergency Planning and Community Right-to-Know Act (which establishes the Toxics Release Inventory program)

Solid and hazardous wastes are regulated in the state through multiple statutes and regulations:

- Hazardous Waste Management Act (RCW Chapter 70.105)
- Solid Waste Management Act (RCW Chapter 70.95)
- MTCA

- Pollution Prevention Planning Act
- Used Oil Recycling Act

Under RCW Chapter 70.105, local governments are assigned the responsibility to develop and implement plans for managing MRW. The County's Department of Health is the lead agency for implementation and enforcement of local hazardous waste regulations, which include:

- Whatcom County Code Chapter 24.06, Solid Waste Rules and Regulations—Standards and Permits

11.1.4 FINANCING THE PROGRAM

The County's programs to address MRW are funded primarily through:

- Excise tax on solid waste hauled by certified haulers
- Ecology grants (primarily Coordinated Prevention Grant funds)

11.1.5 GOVERNANCE STRUCTURE

As presented in Section 11.1.3, local governments are delegated the responsibility by the state to prepare and carry out comprehensive management plans for small quantities of hazardous waste through adoption of the Hazardous Waste Management Act in 1985. The County, through the Health Department's Disposal of Toxics Program, is assigned the lead responsibility for operating and maintaining the hazardous waste management system. Consistent with the solid waste management governance structure, the County has adopted interlocal agreements with the cities of Bellingham, Blaine, Everson, Ferndale, Lynden, Nooksack, and Sumas for the County's management of hazardous waste.

11.1.6 PROGRAM PHILOSOPHY

The primary objective of the hazardous waste management program is to protect the health and safety of the public and the environment from the potential adverse effects of exposure to hazardous waste.

11.1.7 PROGRAM SERVICES

The County provides services in the following six required elements associated with hazardous waste management:

- Household hazardous waste collection
- Household and public education
- Small business technical assistance
- Small business collection assistance
- Enforcement
- Used-oil collection and public education

Goals associated with maintenance of existing services, as well as strategic expansion of services, as warranted, specific to each of these elements are discussed in Section 11.2.2.

11.1.7.1 Household Collection

The County currently accepts hazardous waste at its MRW facility located at 3505 Airport Drive in Bellingham (Figure 1-1). The facility accepts the following hazardous waste substances from county residents:

- Automotive products
- Cleaners
- Fluorescent lamps
- Good, usable latex-based paint (1/2+ full cans)
- Lawn and garden chemicals
- Mercury thermometers
- Oil-based paint and associated products
- Solvents
- Use oil and fuels

Annual Collection Events. In an effort to promote appropriate disposal of MRW in underserved areas of the county, up to two collection events have been held annually at locations that are geographically removed from the MRW facilities. Because of international transport challenges, one MRW collection event is held in the Point Roberts area at least once every two years.

Household Waste Pharmaceuticals Collection. Waste pharmaceuticals disposal services are provided to county residents at the MRW facility. Residents wishing to dispose of waste pharmaceuticals are encouraged to call the telephone hotline (360-676-6724) before transporting the substance(s) to the facility.

MRW Re-Use Program. To reduce MRW disposal rates, reuse of appropriate materials is provided at the MRW facility. For example, latex-based paint that is received by the facility is made available to the public for reuse. This program annually reduces the amount of MRW requiring disposal by 10 to 15 percent.

11.1.7.2 Household and Public Education

Section 11.1.2.2 provides a description of current household and public education services provided by the County specific to hazardous waste management.

11.1.7.3 Small Business Technical Assistance

In additional to information provided on its Web site relative to appropriate disposal options (see Section 11.1.2.2), the County, through Stericycle Environmental Solutions, maintains a telephone hotline (360-676-6724) for additional technical assistance. Assistance is typically provided in the form of over-the-phone technical advice and referrals to information available on the Internet. In cases where additional, on-site technical assistance is warranted for small businesses, County staff source control specialists are available to conduct business tours and consultations.

11.1.7.4 Small Business Collection Assistance

CESQGs may dispose of hazardous wastes at the MRW facility. Wastes accepted from CESQGs at the facility are consistent with those identified in Section 11.1.7.1 for household collection.

The County, as well as the cities of Bellingham and Ferndale, also provides pharmaceutical collection services to CESQGs through a specific program. Participating small businesses must be precertified to participate in the disposal program.

11.1.7.5 Enforcement

The County's Health Department leads enforcement of local hazardous waste regulations for CESQGs and households, and investigates approximately 250 complaints per year. When appropriate, the County coordinates with Ecology and other agencies on enforcement, inspections, and technical assistance. The three main activities of the local enforcement program are:

- Complaint response and enforcement
- Regulatory coordination
- Site investigation

11.1.7.6 Used-Oil Education and Collection

Used motor oil is currently collected curbside by MSW collectors for appropriate disposal. As an alternative, used oil may also be disposed of at the MRW facility, as well as at satellite sites (SSC Cedarville Road and Birch Bay transfer stations, and NVD Lynden transfer station). The County relies primarily on service description content on its Web site in public education specific to used-oil collection services.

11.1.8 PROCESS FOR UPDATING THE HAZARDOUS WASTE SECTION

With inclusion of this hazardous waste management section in the Plan, the process for completing revisions to this section specific to the hazardous waste system components is described in Section 1.8.

11.2 IMPLEMENTATION

This section describes programs to help the County achieve the goals related to its hazardous waste management program for the 2015–2020 planning period.

11.2.1 GUIDING PRINCIPLES

The County will:

1. In priority order, promote the following hazardous waste management strategies:
    a. Waste prevention
    b. Waste reduction
    c. Reuse
    d. Recycling
    e. Physical, chemical, and biological treatment
    f. Incineration
    g. Solidification or stabilization
    h. Landfill
2. Establish program priorities, target resources, and focus efforts accordingly.

3. Ensure that program services are available to and easily accessed by all residents and businesses regardless of income levels or where they reside.
4. Use emerging information technologies to the program's advantage. At the same time, use alternative communication methods to ensure that no group or community is excluded from program information or services.
5. Be adaptive to changing conditions, such as:
    a. Community values
    b. Environmental and health indicators
    c. Political priorities
6. Be responsive and accountable to ratepayers.
7. Continually improve the program efficiency and effectiveness by measuring performance.
8. To minimize risks to human health and the environment, foster an ethic of responsibility among those who produce, sell, and use hazardous products.
9. Be strategic in developing partnerships that advance the program's mission, including nontraditional partnerships.
10. Work "upstream" to reduce human and environmental exposure to hazardous material and products and reliance on publicly funded services. Examples include:
    a. Promoting greater producer responsibility
    b. Encouraging businesses to use existing and emerging "green" technologies
11. Encourage greater coordination of effort by government and nongovernmental organizations, businesses, and residents.
12. Facilitate interagency coordination and cooperation to:
    a. Improve regulatory oversight and enforcement
    b. Minimize regulator gaps
    c. Reduce duplication of effort

11.2.2 STRATEGIC GOALS

There are six elements specific to the County's local hazardous waste system under which future system preferred programs and alternatives are categorized. The following subsections present the County's goals specific to each element.

11.2.2.1 Household Collection

Household Collection (HC) element objective: Provide or facilitate convenient collection services for household hazardous waste and key special wastes.

HC Goal 1: Disposal Facility Operation	
Action	Operate MRW facility and associated satellite collection facilities for residents.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County (through contract with Stericycle Environmental Solutions).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers.

HC Goal 2: Collection Event	
Action	Host at least one annual mobile collection event for residents in underserved areas of the county.
Timeframe	Ongoing, 2015-2020
Implementing Agency	County (through contract with Stericycle Environmental Solutions.)
Funding Source(s)	Excise tax on solid waste hauled by certified haulers.
HC Goal 3: Waste Pharmaceuticals Disposal Program	
Action	Operate waste pharmaceuticals collection and disposal program.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County (through contract with Stericycle Environmental Solutions).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers; Coordinated Prevention Grant (CPG) funds.

11.2.2.2 Household and Public Education

Household and Public Education (HPE) element objective: Educate and motivate residents to understand the environmental risks posed by hazardous products, reduce purchase and use of hazardous products, and properly use, store, and dispose of hazardous products.

HPE Goal 1: MRW Reduction Education and Outreach	
Action	Deliver household hazardous materials education programs designed to increase awareness and reduce use, misuse, improper storage and disposal, and risks to human health and the environment.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County.
Funding Source(s)	Excise tax on solid waste hauled by certified haulers; CPG funds.
HPE Goal 2: Environmental Health Hotline	
Action	Operate a hotline (360-380-4640) for residents to provide information about environmental health, including hazardous materials prevention, use, storage, disposal, and cleanup.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County (through contract with Stericycle Environmental Solutions).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers; CPG funds.

11.2.2.3 Small Business Technical Assistance

Small Business Technical Assistance (SBTA) element objective: Educate and motivate small businesses to understand the environmental risks posed by hazardous products, reduce purchase and use of hazardous products, and properly use, store, and dispose of hazardous products.

SBTA Goal 1: MRW Reduction Education and Outreach	
Action	Deliver technical assistance services that result in measurable changes in waste management, compliance, and best management practice implementation.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County.
Funding Source(s)	Excise tax on solid waste hauled by certified haulers; CPG funds.

SBTA Goal 2: Environmental Health Hotline	
Action	Operate a hotline (360-380-4640) for small businesses to provide information about environmental health, including hazardous materials prevention, use, storage, disposal, and cleanup.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County (through contract with Stericycle Environmental Solutions).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers; CPG funds.

11.2.2.4 Small Business Collection Assistance

Small Business Collection Assistance (SBCA) element objective: Provide or facilitate collection services to small-quantity generators for business hazardous waste and key special wastes.

SBCA Goal 1: MRW Collection	
Action	Accept business hazardous waste from small-quantity generators for a fee at the existing MRW facility.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County.
Funding Source(s)	Excise tax on solid waste hauled by certified haulers.

11.2.2.5 Enforcement

Enforcement (E) element objective: Provide protection of human health and the environment for all residents and workers.

E Goal 1: Complaint Response and Enforcement	
Action	Respond to hazardous- and solid-waste-related complaints, and conduct enforcement activities, as warranted.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County.
Funding Source(s)	Excise tax on solid waste hauled by certified haulers; CPG funds.
E Goal 2: Regulatory Coordination	
Action	Coordinate with Ecology, other agencies, and County departments involved in hazardous materials regulations that relate to prevention and proper use, storage, and disposal of hazardous materials.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County.
Funding Source(s)	Excise tax on solid waste hauled by certified haulers; CPG funds.

11.2.2.6 Used-Oil Education and Collection

Used-oil education and collection (USEC) element objective: For residents and small-quantity generators, provide and facilitate collection of used oil and related automotive wastes.

USEC Goal 1: Used Oil Collection Sites	
Action	Operate the MRW facility and associated satellite facilities.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County (through contract with Stericycle Environmental Solutions).

Funding Source(s)	Excise tax on solid waste hauled by certified haulers; CPG funds.
USEC Goal 2: Oil Filter and Antifreeze Collection	
Action	Operate the MRW facility and associated satellite facilities.
Timeframe	Ongoing, 2015-2020.
Implementing Agency	County (through contract with Stericycle Environmental Solutions).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers; CPG funds.

11.2.3 PROGRAMS AND MILESTONES

All program goals presented in Section 11.2.2 are intended to be ongoing efforts during the planning horizon, with no specific milestone-associated dates.

11.2.4 ANNUAL BUDGETS

Section 11.1.4 presents the current sources of funding specific to operation and maintenance of the hazardous waste management program (Disposal of Toxics program).

The Disposal of Toxics Program, which is responsible for management of all hazardous waste-related system components and services, was allocated an operating budget of $401,000 in 2015. The budget was supported in 2015 by CPG funds in the amount of $281,000. The current CPG fund allocation has been reduced to $171,000 annually for the next two year term. It is anticipated that the reduction in grant support will result in changes to service delivery, such as elimination of remote collection events, and reallocation of solid waste disposal excise tax revenue.

GLOSSARY

Anaerobic Digestion: The process by which organic material is broken down by microorganisms in the absence of oxygen. This process results in emission of a carbon dioxide- and methane-rich biogas that can be collected and used as an energy source. The digestate can then be landfilled or composted. Advantages of this process include volume reduction of landfilled organic waste, as well as decreased landfill gas production.

Beyond Waste: The ultimate message behind the state Solid Waste Management Plan. Beyond Waste focuses on achieving a state where waste is viewed as inefficient and toxic substances have been eliminated. The *Beyond Waste Plan* lays out key initiatives to address as the state moves in the direction of *Beyond Waste*.

Biosolids: Municipal sewage sludge that is a primarily organic, semisolid product resulting from the wastewater treatment process and that can be beneficially recycled.

Commingled Recycling: A method of recovery and/or collection where recyclable commodities are mixed together and sorted at a material recovery facility (MRF).

Composting: The biological degradation and transformation of organic solid waste under controlled conditions designed to promote aerobic decomposition. Natural decay of organic solid waste under uncontrolled conditions is not composting.

Construction and Demolition (C/D) Waste: Those wastes that are typically associated with the construction industry; these can include stone, concrete, brick, metal, lumber, and shingles.

Designated Recyclables: Wastes separated for recycling or reuse, such as paper, metals, and plastics that are identified as recyclable material pursuant to a local comprehensive solid waste plan. Prior to the adoption of the local comprehensive solid waste plan, adopted pursuant to RCW 70.95.110(2), local governments may identify recyclable materials by ordinance from July 23, 1989.

Disposal: The discharge, deposit, injection, dumping, leaking, or placing of any solid waste into or on any land or water.

Diversion: Any method of recycling, energy production, or beneficial use that prevents disposal of material in landfills or incinerators. This definition includes all materials that are reported as recyclable.

Drop Box: A "drop box" facility means a facility used for the placement of a detachable solid waste container, such as a drop box, including the area adjacent for necessary entrance and exit roads, and unloading and turnaround areas. A drop-box facility normally serves self-haulers with loose loads and receives waste from off site. A drop-box facility may also include containers for separated recyclable materials.

E-Cycle Washington: Washington's producer-funded recycling program for computers, monitors, laptops and televisions. www.ecy.wa.gov/programs/swfa/eproductrecycle/index.html

Food Waste: Organic waste derived from food products.

G-Certificate: A certificate of public convenience and necessity issued by the WUTC under the provisions of Chapter 81.77 RCW for the operation of solid waste collection. This certificate defines

the territory and level of service required for solid waste collection in unincorporated areas of Washington State.

Garbage: General unsorted household waste that goes to a landfill. Garbage may include scrap paper, food, metal, plastic, wood, glass, dirt, fabric, and other materials that are considered not recoverable because of the size of the material, presence of contamination, lack of a market, or lack of separation effort by the generator.

Green Building: Design or construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in the areas of site selection, and promote conservation of materials and resources, energy efficiency, water efficiency, and indoor environmental quality.

Hazardous Substance: Any liquid, solid, gas, or sludge, including any material, substance, product, commodity or waste, regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste as described in rules adopted under Chapter 70.105 RCW.

Hazardous Waste: All dangerous and extremely hazardous waste, including substances composed of both radioactive and hazardous components.

Household Hazardous Waste (HHW): Those substances identified by Ecology as hazardous household substances in the guidelines developed under RCW 70.105.220 (Local Hazardous Waste Management Program Guidelines). HHW is any waste that exhibits the properties of dangerous wastes but is exempt from the Dangerous Waste Regulations solely because it is generated by households.

Hog Fuel: Wood chips ranging in size between 2 and 5 inches that are used as a fuel source in a combustion process, such as firing a boiler.

Incineration: Reducing the volume of solid wastes by use of an enclosed device using controlled flame combustion.

Industrial Waste: Industrial waste includes by-products from manufacturing operations, food processing, and other industrial processes, such as scraps, trimmings, packaging, boiler ash, wood-product residuals, and other discarded materials not otherwise designated as a dangerous waste under Chapter 173-303 WAC.

Interlocal Agreement: An interlocal agreement is a formal agreement between any two or more public agencies to work cooperatively. In the world of solid waste planning, this usually refers to an agreement where the county and participating cities enter into an interlocal agreement to designate the county as the solid waste planning authority.

Landfill: A disposal facility or part of a facility at which solid waste is permanently placed in or on land, including facilities that use solid waste as a component of fill.

Material Recovery Facility (MRF): Any facility that collects, compacts, repackages, sorts, or processes for transport source-separated solid waste for recycling.

Model Toxics Control Act (MTCA): MTCA is the legislation that created the toxics accounts that now fund a significant portion of solid waste management at the state and local levels. More detail on the act can be found in Chapter 70.105D RCW.

Moderate-Risk Wastes (MRW): MRW are composed of chemical materials that are poisonous, toxic, flammable, reactive, or corrosive. These products include but are not limited to pesticides, herbicides, mercury and mercury thermometers, some types of batteries, gasoline, kerosene, motor oil, antifreeze, oil-based paint, paint thinner, turpentine, pool chemicals, and drain cleaners. MRW

are divided into two categories: household hazardous waste and small-quantity generator hazardous waste.

Municipal Solid Waste (MSW): A subset of solid waste that includes unsegregated garbage, refuse and similar solid waste material discarded from residential, commercial, institutional, and industrial sources and community activities, including residue left after recyclables have been separated.

Organics (organic materials): Substances and products of biological origin that have the potential to be returned to the soil or turned into biofuels, bioenergy, or other products. Organic materials include landscaping and yard waste, food waste, manures, crop residues, wood, soiled/low-grade paper, and biosolids.

Per capita waste generation: The average amount of waste generated by a single person in a year. The per capita waste generation rate is calculated by dividing the total waste generation in an area by the total population of that area.

Planning Area: The geographical boundaries in which a solid waste plan will be implemented.

Recovery: Material removed from the waste stream for the purpose of recycling and/or composting.

Recyclable Materials: Solid wastes that are separated for recycling or reuse, including, but not limited to, papers, metals, and glass that are identified as recyclable material pursuant to a local comprehensive solid waste plan.

Recycling: Transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration. Recycling does not include collection, compacting, repackaging, and sorting for the purpose of transport.

Resolution of Adoption: In solid waste planning, a resolution passed by the local executive or legislative authority to adopt the local solid waste management plan. A combination of an interlocal agreement and a resolution of adoption is generally required for all participating jurisdictions in order for a solid waste management plan to be approved by Ecology.

Revised Code of Washington (RCW): A compilation of all Washington State laws now in force, created and modified through bills passed by the Legislature.

Solid Waste Advisory Committee (SWAC): An advisory committee established at the local level in each planning jurisdiction. The local SWAC should assist in development of programs and policies concerning solid waste handling and disposal and should review and comment on proposed rules, policies, or ordinances prior to their adoption.

Solid Waste: All putrescible and nonputrescible solid and semisolid wastes, including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, C/D wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

Source Separation: The separation of different kinds of solid waste at the place where the waste originates.

State Environmental Policy Act (SEPA): A way to identify possible environmental impacts that may result from governmental decisions. These decisions may be related to issuing permits for private projects; constructing public facilities; or adopting regulations, policies, or plans.

Transfer Station: A facility where wastes are transferred from smaller vehicles (cars, pickup trucks, contractor trucks, and collection vehicles) into larger transport trailers prior to transport to the landfill for disposal.

Toxics or Toxic Substances: A general term that refers to hazardous substances and hazardous wastes that have properties that may cause or significantly contribute to death, injury, or illness of humans, animals, or other living things.

USEPA: The U.S. Environmental Protection Agency is a federal agency that leads the nation's environmental science, research, education, and assessment efforts. Created in 1970, the USEPA's mission is to protect human health and the environment.

Vactor Waste: A common term used to describe street waste. "Vactor" is a brand name for a vacuum truck that is capable of picking up many types of waste. Currently, a wide variety of wastes are collected by Vactor trucks and treated as street wastes. However, not all wastes picked up by Vactor truck qualify as street waste.

Washington Administrative Code (WAC): Regulations of executive branch agencies are issued by authority of statutes. Like legislation and the Constitution, regulations are a source of primary law in Washington State.

Waste Characterization: The composition and ratio of materials in the total waste stream. Also sometimes referred to as a "waste audit."

Waste Reduction: Also sometimes referred to as "precycling." Waste reduction is the practice of minimizing waste through responsible purchasing and consumerism. It is, essentially, removing waste from the waste stream by not creating it in the first place. Waste reduction is typically achieved through better product or packaging design, by improved efficiency of use by the end user, and/or by process management.

Woodwaste: Solid waste consisting of wood pieces or particles generated as a by-product or waste from the manufacturing of wood products, construction, demolition, and handling and storage of raw materials. This includes, but is not limited to, sawdust, chips, shavings, bark, pulp, hogged fuel, and log sort yard waste, but does not include wood pieces or particles containing paint, laminates, bonding agents, or chemical preservatives such as creosote, pentachlorophenol or copper-chrome-arsenate.

Yard Waste/Debris: Plant material commonly created in the course of maintaining yards and gardens and through horticulture, gardening, landscaping, or similar activities. Yard debris includes, but is not limited to, grass clippings, leaves, branches, brush, weeds, flowers, roots, windfall fruit, and vegetable garden debris.

REFERENCES

BERK. 2013. Whatcom County population and employment projections and urban growth area allocations. Phase I technical report. November 1.

Ecology. 2010. Guidelines for development of local comprehensive solid waste management plans and plan revisions. Publication No. 10-07-005. Washington State Department of Ecology. February.

Ecology. 2013. Waste 2 Resources Program. Solid waste in Washington State, 22nd annual status report. Publication No. 13-07-070. Washington State Department of Ecology. https://fortress.wa.gov/ecy/publications/publications/1307070.pdf. December.

Ecology. 2015. 2nd draft state solid and hazardous waste plan update, moving Washington beyond waste and toxics. http://www.ecy.wa.gov/wasteplan/pdf/2ndDraft010815.docx. January 8.

OFM. 2012. County growth management population projections by age and sex, 2010-2040. Washington State Office of Financial Management. August.

OFM. 2014. April 1, 2015 population of cities, towns, and counties used for allocation of selected state revenues. Washington State Office of Financial Management. April. http://www.ofm.wa.gov/pop/april1/ofm_april1_population_final.pdf

U.S. Census Bureau. 2013. American community survey 5-year estimates, 2009-2013. http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t.

Whatcom County. 1991. Hazardous waste management plan. May.

Whatcom County. 1999. Comprehensive solid waste management plan. November.

Whatcom County. 2008. Comprehensive solid waste management plan.

Whatcom County. 2013. Whatcom County comprehensive plan. February.

WSRA and Washington Multifamily Recycling Study Group. 2014. Sorting it out: the state of multi-family recycling in Washington State. July 3.

APPENDIX A

WHATCOM COUNTY SOLID WASTE HANDLING FACILITIES

Whatcom County Solid Waste Handing Facilities
Whatcom County

Facility	Materials Type				Materials Accepted*	Permitted
	Reuse	Recycling	Organics	Waste		
Reuse Drop-off Locations						
Appliance Depot	✓				small and large household appliances made of metal	
ARC of Washington State	✓				household items and appliances, clothing, furniture, functioning electronics	
Goodwill Bellingham	✓				clothing, household items, electronics	
Habitat for Humanity	✓				building materials, furniture, appliances	
Northwest Center's Big Blue Truck (in-home pick up)	✓				small appliances, household items, small furniture, electronics	
The RE Store	✓				building materials	
Salvation Army Bellingham Corps Community Center	✓				clothing, household items, electronics, furniture	
Salvation Army Family Store	✓				clothing, household items, electronics, furniture	
Value Village Bellingham	✓				clothing, household items, electronics	

Whatcom County Solid Waste Handing Facilities
Whatcom County

Facility	Materials Type				Materials Accepted*	Permitted
	Reuse	Recycling	Organics	Waste		
Recycling Drop-off Locations						
Alrite Recycling Center		✓			scrap metal, electronics, batteries, electric motors, appliances	
Beacon Battery & Tires (2 locations)		✓			batteries, tires of all size	
Granite Construction Company (2 locations)		✓			rubber, asphalt, concrete	
Henifin Construction		✓			concrete, rebar, asphalt	✓
Lynden Christian School Recycling Center		✓			cardboard, mixed paper, aluminum	
Northwest Recycling & Northwest Recycling Warehouse (2 locations)		✓			scrap metal, appliances, paper, cardboard, automotive bodies, electric motors, radiators, car batteries, plastics	
Ryzex						
Safe and Easy Recycling (2 locations)		✓			electronics	✓
Scrap-It Recycling		✓			scrap metal, obsolete equipment	
Whatcom Builders		✓			asphalt	
Z Recyclers		✓			scrap metal	
Drop Box Facilities (recycling, waste, organics)						
NVD Drop Box Facility		✓	✓	✓	scrap metal, antifreeze, oil, yard waste, cardboard, glass, paper, plastic, cans, tires, electronics, yard waste	✓
SSC Birch Bay - Lynden Drop Box Facility		✓		✓	scrap metal, antifreeze, oil, cardboard, glass, paper, plastic, cans	✓
SSC Cedarville Drop Box Facility		✓		✓	scrap metal, antifreeze, oil, cardboard, glass, paper, plastic, cans	✓
SSC Roeder Ave Drop Box Facility		✓	✓	✓	scrap metal, building materials, plsatics, plastic film, paper, yard waste	✓
City of Bellingham Clean Green Drop Box			✓		yard waste	✓
Organics Drop-off Locations						
Green Earth Technology			✓		yard waste and food scraps	✓
Transfer Stations (with public drop-off)						
Cando Recycling Transfer Station		✓		✓	yard waste	✓
RDC Transfer Station		✓		✓	scrap metal, batteries	✓
RDS Transfer Station		✓	✓	✓	scrap metal, batteries, electronics, yard waste, food scraps	✓
Hazardous Waste Facility						
Disposal of Toxics		✓		✓	hazarous household waste, including motor oil, antifreeze, cooking oils, and other chemicals	✓
Vactor Waste Facility						
City of Bellingham Vactor Waste Facility - not open to the public				✓	vactor waste only, not open to public	✓
* Contact the facility for a full list of materials accepted						

APPENDIX B

COMPLIANCE CHECKLIST

Plan Requirements	Plan Location
1) A detailed inventory and description of all existing solid-waste-handling facilities, including an inventory of any deficiencies in meeting current solid-waste-handling needs.	Sections 3.1- Waste Reduction and Public Education, Existing Conditions Section 3.2- Waste Reduction and Public Education, Needs and Opportunities Section 4.1 – Recycling, Existing Conditions Section 4.2 – Recycling, Needs and Opportunities Section 5.1 – Organic Material Management, Existing Conditions Section 5.2 – Organic Material Management, Needs and Opportunities Section 7.1 – Transfer and Disposal, Existing Conditions Section 7.2 – Transfer and Disposal, Needs and Opportunities
2) The estimated long-range needs for solid-waste-handling facilities projected 20 years into the future.	Section 2.3.8 – Planning Area, Quantity and Characterization of Solid Waste, Waste Projections Section 3.2- Waste Reduction and Public Education, Needs and Opportunities Section 4.2 – Recycling, Needs and Opportunities Section 5.2 – Organic Material Management, Needs and Opportunities Section 6.2 – Solid Waste Collection, Needs and Opportunities Section 7.2 – Transfer and Disposal, Needs and Opportunities Section 8.2 – Special Waste, Needs and Opportunities
3) A program for the orderly development of solid-waste-handling facilities in a manner consistent with the plans for the entire county, which shall: (a) Meet the minimum functional standards for solid-waste handling adopted by the department and all laws and regulations relating to air and water pollution, fire prevention, flood control, and protection of public health; (b) Take into account the comprehensive land use plan of each jurisdiction; (c) Contain a six-year construction and capital acquisition program for solid-waste-handling facilities; and (d) Contain a plan for financing both capital costs and operational expenditures of the proposed solid-waste management system.	The county solid waste facilities are privately owned and operated, and will be permitted on an as-needed basis. This is addressed throughout the entirety of the Plan.
4) A program for surveillance and control.	Section 9.1.5- Administration and Enforcement, Existing Conditions, Enforcement and Compliance

5) A current inventory and description of solid-waste collection needs and operations within each respective jurisdiction, which shall include: (a) Any franchise for solid-waste collection granted by the WUTC in the respective jurisdictions, including the name of the holder of the franchise and the address of his or her place of business and the area covered by the franchise; (b) Any city solid-waste operation within the county and the boundaries of such operation; (c) The population density of each area serviced by a city operation or by a franchised operation within the respective jurisdictions; (d) The projected solid-waste collection needs for the respective jurisdictions for the next six years.	Section 6.1 – Solid Waste Collection, Existing Conditions Section 6.2- Solid Waste Collection, Needs and Opportunities
6) A comprehensive waste-reduction and recycling element that, in accordance with the *priorities* (listed in next cell) established in Revised Code of Washington (RCW) 70.95.010, provides programs that (a) reduce the amount of waste generated, (b) provide incentives and mechanisms for source separation, and (c) establish recycling opportunities for the source-separated waste.	Section 3- Waste Reduction and Public Education Section 4- Recycling

Plan Requirements	Plan Location
7) The waste-reduction and recycling element shall include the following: (a) Waste-reduction strategies; (b) Source-separation strategies, including: (i) Programs for the collection of source-separated materials from residences in urban and rural areas. In urban areas, these programs shall include collection of source-separated recyclable materials from single and multiple family residences, unless the department approves an alternative program, according to the criteria in the planning guidelines. Such criteria shall include: Anticipated recovery rates and levels of public participation, availability of environmentally sound disposal capacity, access to markets for recyclable materials, unreasonable cost impacts on the ratepayer over the six-year planning period, utilization of environmentally sound waste-reduction and recycling technologies, and other factors as appropriate. In rural areas, these programs shall include but not be limited to drop-off boxes, buy-back centers, or a combination of both, at each solid-waste transfer, processing, or disposal site, or at locations convenient to the residents of the county. The drop-off boxes and buy-back centers may be owned or operated by public, nonprofit, or private persons; (ii) Programs to monitor the collection of source-separated waste at nonresidential sites where there is sufficient density to sustain a program; (iii) 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; and (iv) Programs to educate and promote the concepts of waste reduction and recycling; (c) Recycling strategies, including a description of markets for recyclables, a review of waste-generation trends, a description of waste composition, a discussion and description of existing programs and any additional programs needed to assist public and private sector recycling, and an implementation schedule for the designation of specific materials to be collected for recycling, and for the provision of recycling collection services.	Section 3- Waste Reduction and Public Education Section 4- Recycling
(d) Other information the county or city submitting the plan determines is necessary.	None
8) 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 WUTC. The commission shall cooperate with the Washington State association of counties and the association of Washington cities in establishing such guidelines.	WUTC Cost Assessment Questionnaire
9) A review of potential areas that meet the criteria as outlined in RCW 70.95.165. (Disposal Facility Siting)	This information will be prepared during the facility site selection process when a new facility is sited. Existing facilities are permitted and therefore meet the criteria of RCW 70.95.165.

APPENDIX C

RESOLUTIONOF ADOPTION AND INTERLOCAL AGREEMENTS

The adopting resolution to be included following approval of the Comprehensive Solid and Hazardous Waste Management Plan by Whatcom County Council.

FIRST AMENDED INTERLOCAL AGREEMENT

This agreement is executed by and between Whatcom County ("County") and the City of Sumas ("City") (hereinafter jointly referred to as "the parties") for the purposes of establishing an integrated and coordinated solid waste management program for Whatcom County; fulfilling the City's and County's obligations under Chapter 70.95 RCW, and other state and federal laws and regulations governing solid waste management; and contributing to the health and safety of all Whatcom County residents. The parties make and enter into this First Amended Interlocal Agreement ("Agreement") effective as amended the 15 day of October, 1991 for the purposes and under the terms contained herein. This Agreement supersedes the Interlocal Agreement between the parties bearing an effective date of July 25, 1989, and the Addendum of Clarification and Second Addendum of Clarification thereto.

Definitions

For the purposes of this Agreement and any related agreements, contracts, and documents executed, adopted, or approved pursuant to this Agreement, the parties shall use the definitions found in

RCW 70.95.030; 70.138.020, and WAC 173-304-100, unless the context indicates otherwise.

Recitals

WHEREAS, the parties recognize the need and obligation to meet federal and state mandates for solid waste planning and management; and

WHEREAS, the parties believe that the comprehensive solid waste management plan ("Plan") can best be accomplished under the leadership of Whatcom County in cooperation with the City; and

WHEREAS, the City agrees that to implement the County's Plan the County must control the flow and disposal of all solid wastes originating within the City; and

WHEREAS, programs of solid waste reduction and recycling can be most effective when carried out pursuant to a coordinated Plan; and

WHEREAS, the County must have adequate funding to support its solid waste management activities and meet its financial

obligations for solid waste planning and management as required by law; and

WHEREAS, the parties are authorized and empowered to enter into this Agreement pursuant to Chapter 39.34 RCW.

THEREFORE, in consideration of mutual promises and covenants herein, it is hereby agreed:

1. Authority and Responsibilities of the County: The City hereby delegates and grants to the County the following authorities and obligations to be exercised and assumed by the County on behalf of the City with only such limits as are herein specifically enumerated or provided by law. The County shall:

A. Prepare and submit for approval on behalf of the City and County a comprehensive solid waste management plan as provided in RCW 70.95.080 and related provisions of law. Such plan as finally prepared, amended, or modified shall, following referral to the Executive Committee as provided in Section 7 of this Agreement, be binding upon the City in its solid waste management;

B. Include within the Plan the official position of the County and signatory cities on the disposal of special incinerator ash in the County. The County Executive shall be the sole spokesman of participating local governments for the purpose of commenting to the Department of Ecology on ash management plans prepared pursuant to RCW 70.138.030(1), and disposal permit applications prepared pursuant to RCW 70.138.030(4). Notwithstanding the foregoing, the County recognizes that final determination of special incinerator ash disposal resides within the jurisdiction of the Department of Ecology;

C. Implement, in cooperation with the City, waste reduction and recycling programs within such City, as well as in unincorporated areas, all as enumerated in the Plan. Where appropriate and agreed, the County may provide funding to the City to implement such waste reduction and recycling program;

D. Include the City in a solid waste disposal district if such district is formed under the provisions of RCW 36.58.100 - .150. Any excise tax levied under the provisions of RCW 36.58 shall be a uniform percentage for all parties within the District. In the event that no such tax is imposed, the County may instead impose a fee upon disposal of waste from incorporated and

unincorporated areas through agreements with owners or operators of disposal facilities. The City is permitted to use County-approved disposal sites which have negotiated an agreement with the County. Said agreement may provide for a surcharge to be collected and paid to the County;

E. Acquire, construct, and operate within the corporate limits of the City, where provided for in Plan implementation, solid waste facilities including, but not limited to, transfer stations and recycling facilities, subject, however, to City zoning, building codes, and related land use ordinances.

2. Responsibilities of the City: The City hereby agrees:

A. That its cooperation with the County shall include, where appropriate, provisions in its franchise agreements with waste haulers to implement curbside recycling or other waste reduction and recycling programs of the adopted Plan;

B. To provide for mandatory solid waste collection within such City during the term of the Agreement;

C. Pursuant to the County flow control ordinance, the City agrees that commencing upon the effective date of such

ordinance, all solid waste generated within the City shall be processed or disposed of only as provided in such ordinance;

D. That, subject to law, the City grants to the County exclusive and complete jurisdiction over any solid waste originating outside of the County and imported into the City for disposal, or originating in the City and exported for disposal outside the County. Such jurisdiction is granted commencing upon the effective date of such ordinance. Any such import or export of solid waste shall only be on terms and conditions approved by the County; and

E. To cooperate in implementing Plan elements, particularly those related to solid waste reduction and recycling.

3. Financing: The County shall finance the programs provided for in the Plan by a combination of "tipping" fees, transfer station charges, taxes authorized by law (including RCW 36.58.140), and such other revenues, fees imposed pursuant to flow control ordinance, and charges as the County Council may authorize from time to time to fund its solid waste utility. If any excise tax as authorized by RCW 36.58.140 or fee as authorized by flow control ordinance is levied, it shall be calculated and utilized to pay costs related to:

A. Construction, operation, maintenance and closure of any landfill that may be developed in the future;

B. Funding of approved waste reduction and recycling programs when recommended by the Executive Committee or when adopted to implement the approved Comprehensive Solid Waste Management Plan;

C. Funding of moderate risk waste programs when recommended by the Executive Committee or when adopted to implement the approved Hazardous Waste Management Plan;

D. Public educational programs related to the management of solid waste;

E. Construction, maintenance and operation of transfer stations;

F. Landfill closure and post closure improvements when recommended by the Executive Committee;

G. Administration and overhead expenses;

H. Such other programs as the Executive Committee may recommend pursuant to the approved Solid Waste Management Plan.

4. County Flow Control: The County shall control by County flow control ordinance all solid waste originating within the unincorporated areas of the County.

5. Universal Garbage Collection: The County shall establish universal garbage collection in unincorporated areas of Whatcom County if a solid waste disposal district is formed under the provisions of RCW 36.58.100-.150 which includes the City.

6. Termination of Agreement: The City or County may terminate this Agreement after June 1, 1991 by giving written notice no less than six (6) months prior to the last day of the County's budget year. Under current state law the last day of the County's budget year is December 31. The parties agree: (1) that termination will not absolve them of responsibility for meeting financial and other obligations outstanding at the time of termination and through the current County budget year; and (2) that prior to termination, a withdrawing city will prepare and receive Ecology approval of its own solid waste management plan.

7. Formation of Executive Committee; The parties agree to form an Executive Committee to consider various matters in the management of the Plan that require the cooperation and joint action of each signatory to an interlocal agreement. The members of the Executive Committee shall be the County Executive and the mayor or mayor's representative from each city executing an interlocal agreement. The Executive Committee shall:

A. Meet at least annually, and more often as necessary, at the call of the County Executive or a majority of the mayors;

B. Approve the Plan or revisions or amendments thereto by majority vote for submission to the County Council; provided, that any member may file a minority report with the County Council or the Department of Ecology; provided further, that if a majority of members cannot agree on a plan revision or update, the County Executive may submit the Plan with the alternatives or objections of the mayors noted on the record;

C. Consider the direct implementation strategies for the Plan, including funding allocations as may be recommended to the County Council;

D. Review and recommend annually to the County Council whether there should be any revision to either (i) the tax rate assessed by the Solid Waste Disposal District, it being specifically agreed that the tax rate shall not exceed ten percent (10%) of any collection charge or (ii) the fee established pursuant to the flow control ordinance, it being specifically agreed that the rate shall not exceed nine dollars ($9.00) per ton of mixed solid waste disposed of or ten percent (10%) of the basic fee for disposal of demolition and construction waste.

E. Prior to October 1 of each year, review and approve each program item in that portion of the County Executive's proposed solid waste budget which will be financed by revenues from either method referenced in section 7(D) of this Agreement. The program items so approved shall be contained in the budget which the County Executive recommends to the County Council. In the event that the County Council adopts a budget in excess of the recommended amount for any such approved program items, the Council and the Executive Committee shall submit to binding arbitration to determine the amounts that shall be financed by revenues from either method referenced in section 7(D) of this Agreement. The arbitration shall be conducted by a panel of three arbitrators, one

selected by the County Council, one selected by the Executive Committee, and the third selected by the other two. At the direction of the Executive Committee, the County shall remit any revenues in excess of the amount required to fund the approved portion of the County's solid waste budget, including any reserve accounts, to the cities to finance city solid waste programs. In any remittance, priority shall be given to city programs that provide County-wide benefits.

F. Review and approve any proposed revisions or amendments to the County's flow control ordinance. The County Executive shall propose to the County Council only those revisions or amendments that the Executive Committee has approved.

The County Council will issue a letter of intent to each city executing an interlocal agreement indicating its willingness to negotiate in good faith issues brought to the Council by the Executive Committee and to give good faith consideration/weight to the Executive Committee's recommendations.

8. Assets and Liabilities: On termination of this Agreement, any assets owned separately by a party shall remain the property of that party. In entering into this Agreement, neither

party assumes liability for the actions or activities of the other, except as provided by law or as may be agreed by the parties from time to time.

9. Implementing Agreements: The parties agree that routine operating agreements may be required from time to time to accomplish the purpose of this Agreement and the Plan. Any such operating agreement or understanding executed to implement this Agreement or the Plan which is signed by the County Executive and the Mayor shall be presumed to be binding on the parties unless contrary to law.

IN WITNESS HEREOF, this Agreement is executed this 1st day of Oct., 1991.

Subscribed and sworn to me this 1st day of Oct, 1991.

Notary Public in and for the State of Washington, residing at Bellingham.
My commission expires 10/24/92

WHATCOM COUNTY

Shirley Van Zanten
SHIRLEY VAN ZANTEN
County Executive

APPROVED AS TO FORM:

Randall J. Watts, Chief Civil
Deputy Prosecuting Attorney

ATTEST:

CITY OF Sumas

By
Mayor

J:\et\25552-89.001\2fa.21v

Ed. June 27, 1991

Bellingham

Solid Wastes

WHATCOM COUNTY
CONTRACT NO.
9112043

FIRST AMENDED
INTERLOCAL AGREEMENT

This agreement is executed by and between Whatcom County ("County") and the City of Bellingham ("City") (hereinafter jointly referred to as "the parties") for the purposes of establishing an integrated and coordinated solid waste management program for Whatcom County; fulfilling the City's and County's obligations under Chapter 70.95 RCW, and other state and federal laws and regulations governing solid waste management; and contributing to the health and safety of all Whatcom County residents. The parties make and enter into this First Amended Interlocal Agreement ("Agreement") effective as amended the 30th day of Dec., 1991 for the purposes and under the terms contained herein. This Agreement supersedes the Interlocal Agreement between the parties bearing an effective date of July 25, 1989, and the Addendum of Clarification and Second Addendum of Clarification thereto.

Definitions

For the purposes of this Agreement and any related agreements, contracts, and documents executed, adopted, or approved pursuant to this Agreement, the parties shall use the definitions found in RCW 70.95.030; 70.138.020, and WAC 173-304-100, unless the context indicates otherwise.

Recitals

WHEREAS, the parties recognize the need and obligation to meet federal and state mandates for solid waste planning and management; and

9. Implementing Agreements: The parties agree that routine operating agreements may be required from time to time to accomplish the purpose of this Agreement and the Plan. Any such operating agreement or understanding executed to implement this Agreement or the Plan which is signed by the County Executive and the Mayor shall be presumed to be binding on the parties unless contrary to law.

IN WITNESS HEREOF, this Agreement is executed this 30th day of Dec, 1991.

Subscribed and sworn to me this 30th day of December 1991.

Notary Public in and for the State of Washington, residing at Bellingham. My commission expires 10/24/92.

WHATCOM COUNTY

SHIRLEY VAN ZANTEN
County Executive

APPROVED AS TO FORM:

Randall J. Watts, Chief Civil
Deputy Prosecuting Attorney

ATTEST:

CITY OF BELLINGHAM

By
Tim Douglas, Mayor

Departmental Approval

APPROVED AS TO FORM
BELLINGHAM CITY ATTORNEY
BY

FIRST AMENDED INTERLOCAL AGREEMENT

This agreement is executed by and between Whatcom County ("County") and the City of Blaine ("City") (hereinafter jointly referred to as "the parties") for the purposes of establishing an integrated and coordinated solid waste management program for Whatcom County; fulfilling the City's and County's obligations under Chapter 70.95 RCW, and other state and federal laws and regulations governing solid waste management; and contributing to the health and safety of all Whatcom County residents. The parties make and enter into this First Amended Interlocal Agreement ("Agreement") effective as amended the 3rd day of Sept., 1991 for the purposes and under the terms contained herein. This Agreement supersedes the Interlocal Agreement between the parties bearing an effective date of July 25, 1989, and the Addendum of Clarification and Second Addendum of Clarification thereto.

Definitions

For the purposes of this Agreement and any related agreements, contracts, and documents executed, adopted, or approved pursuant to this Agreement, the parties shall use the definitions found in

party assumes liability for the actions or activities of the other, except as provided by law or as may be agreed by the parties from time to time.

9. Implementing Agreements: The parties agree that routine operating agreements may be required from time to time to accomplish the purpose of this Agreement and the Plan. Any such operating agreement or understanding executed to implement this Agreement or the Plan which is signed by the County Executive and the Mayor shall be presumed to be binding on the parties unless contrary to law.

IN WITNESS HEREOF, this Agreement is executed this 3rd day of September, 1991.

Subscribed and sworn to me this 5th day of Sept June, 1991.

Patricia A. Lundquist

Patricia A. Lundquist, Notary Public
in and for the State of Washington
residing at Bellingham
My commission expires 10/24/92

WHATCOM COUNTY

Shirley Van Zanten 9/9/91

SHIRLEY VAN ZANTEN
County Executive

APPROVED AS TO FORM:

Randall J. Watts

Randall J. Watts, Chief Civil
Deputy Prosecuting Attorney

ATTEST:

Laura Simonson

CITY OF Blaine

By Dana E. Wagner
Mayor

J:\et\25552-89.001\2fa.21v

Ed. June 27, 1991

Councils
WHATCOM COUNTY
CONTRACT NO.
9109020

12

FIRST AMENDED INTERLOCAL AGREEMENT

This agreement is executed by and between Whatcom County ("County") and the City of Everson ("City") (hereinafter jointly referred to as "the parties") for the purposes of establishing an integrated and coordinated solid waste management program for Whatcom County; fulfilling the City's and County's obligations under Chapter 70.95 RCW, and other state and federal laws and regulations governing solid waste management; and contributing to the health and safety of all Whatcom County residents. The parties make and enter into this First Amended Interlocal Agreement ("Agreement") effective as amended the 18th day of September, 1991 for the purposes and under the terms contained herein. This Agreement supersedes the Interlocal Agreement between the parties bearing an effective date of July 25, 1989, and the Addendum of Clarification and Second Addendum of Clarification thereto.

Definitions

For the purposes of this Agreement and any related agreements, contracts, and documents executed, adopted, or approved pursuant to this Agreement, the parties shall use the definitions found in

party assumes liability for the actions or activities of the other, except as provided by law or as may be agreed by the parties from time to time.

9. Implementing Agreements: The parties agree that routine operating agreements may be required from time to time to accomplish the purpose of this Agreement and the Plan. Any such operating agreement or understanding executed to implement this Agreement or the Plan which is signed by the County Executive and the Mayor shall be presumed to be binding on the parties unless contrary to law.

IN WITNESS HEREOF, this Agreement is executed this 13th day of August, 1991.

Subscribed and sworn to me this 18th day of ~~June~~ Sept, 1991.

Patricia A. Lundquist, Notary Public
in and for the State of Washington
residing at Bellingham
My commission expires 10/24/92

APPROVED AS TO FORM:

Randall J. Watts, Chief Civil
Deputy Prosecuting Attorney

ATTEST:

Mary E. Branham, Asst. Clerk

J:\et\25552-89.001\2fa.21v

WHATCOM COUNTY

Shirley Van Zanten 9/18/91.
SHIRLEY VAN ZANTEN
County Executive

CITY OF Everson

By Matt Lozenway
Mayor

Councils
WHATCOM COUNTY
CONTRACT NO.
9109023

FIRST AMENDED INTERLOCAL AGREEMENT

This agreement is executed by and between Whatcom County ("County") and the City of FERNDALE ("City") (hereinafter jointly referred to as "the parties") for the purposes of establishing an integrated and coordinated solid waste management program for Whatcom County; fulfilling the City's and County's obligations under Chapter 70.95 RCW, and other state and federal laws and regulations governing solid waste management; and contributing to the health and safety of all Whatcom County residents. The parties make and enter into this First Amended Interlocal Agreement ("Agreement") effective as amended the 17 day of SEPT, 1991 for the purposes and under the terms contained herein. This Agreement supersedes the Interlocal Agreement between the parties bearing an effective date of July 25, 1989, and the Addendum of Clarification and Second Addendum of Clarification thereto.

Definitions

For the purposes of this Agreement and any related agreements, contracts, and documents executed, adopted, or approved pursuant to this Agreement, the parties shall use the definitions found in

party assumes liability for the actions or activities of the other, except as provided by law or as may be agreed by the parties from time to time.

9. Implementing Agreements: The parties agree that routine operating agreements may be required from time to time to accomplish the purpose of this Agreement and the Plan. Any such operating agreement or understanding executed to implement this Agreement or the Plan which is signed by the County Executive and the Mayor shall be presumed to be binding on the parties unless contrary to law.

IN WITNESS HEREOF, this Agreement is executed this 19th day of Sept., 1991.

Subscribed and sworn to me this 19th day of Sept, 199_.

Notary Public in and for the State of Washington, residing at Bellingham
My commission expires 10/29/92

WHATCOM COUNTY

Shirley Van Zanten

SHIRLEY VAN ZANTEN
County Executive

APPROVED AS TO FORM:

Randall J. Watts, Chief Civil Deputy Prosecuting Attorney

ATTEST:

CITY OF FERNDALE

By Ronald A Pet
Mayor CITY MANAGER

J:\et\25552-89.001\2fa.21v

Ed. June 27, 1991

Vol: 232 Page: 1588
File No: 9201300660

FIRST AMENDED
INTERLOCAL AGREEMENT

This agreement is executed by and between Whatcom County ("County") and the City of LYNDEN ("City") (hereinafter jointly referred to as "the parties") for the purposes of establishing an integrated and coordinated solid waste management program for Whatcom County; fulfilling the City's and County's obligations under Chapter 70.95 RCW, and other state and federal laws and regulations governing solid waste management; and contributing to the health and safety of all Whatcom County residents. The parties make and enter into this First Amended Interlocal Agreement ("Agreement") effective as amended the 1ST day of October 1991 for the purposes and under the terms contained herein. This Agreement supersedes the Interlocal Agreement between the parties bearing an effective date of July 25, 1989, and the Addendum of Clarification and Second Addendum of Clarification thereto.

Definitions

For the purposes of this Agreement and any related agreements, contracts, and documents executed, adopted, or approved pursuant to this Agreement, the parties shall use the definitions found in

party assumes liability for the actions or activities of the other, except as provided by law or as may be agreed by the parties from time to time.

9. Implementing Agreements: The parties agree that routine operating agreements may be required from time to time to accomplish the purpose of this Agreement and the Plan. Any such operating agreement or understanding executed to implement this Agreement or the Plan which is signed by the County Executive and the Mayor shall be presumed to be binding on the parties unless contrary to law.

IN WITNESS HEREOF, this Agreement is executed this 1st day of Oct., 1991.

Subscribed and sworn to me this 15th day of Oct, 1991.

Notary Public in and for the State of Washington, residing at Bellingham
My commission expires 10/24/92

WHATCOM COUNTY

SHIRLEY VAN ZANTEN
County Executive

APPROVED AS TO FORM:

Randall J. Watts, Chief Civil Deputy Prosecuting Attorney

ATTEST:

CITY OF Lynden

By
Mayor

J:\et\25552-89.001\2fa.21v

Council 12

WHATCOM COUNTY
BELLINGHAM, WA
01/31/92 10:06 AM
REQUEST OF: WHATCOM C
Shirley Forslof, AUDITOR
BY: MRT, DEPUTY
$.00 AMAGR

WHATCOM COUNTY
CONTRACT NO. JAN 1991
9110010

FIRST AMENDED INTERLOCAL AGREEMENT

This agreement is executed by and between Whatcom County ("County") and the City of NOOKSACK ("City") (hereinafter jointly referred to as "the parties") for the purposes of establishing an integrated and coordinated solid waste management program for Whatcom County; fulfilling the City's and County's obligations under Chapter 70.95 RCW, and other state and federal laws and regulations governing solid waste management; and contributing to the health and safety of all Whatcom County residents. The parties make and enter into this First Amended Interlocal Agreement ("Agreement") effective as amended the 7th day of October, 1991 for the purposes and under the terms contained herein. This Agreement supersedes the Interlocal Agreement between the parties bearing an effective date of July 25, 1989, and the Addendum of Clarification and Second Addendum of Clarification thereto.

Definitions

For the purposes of this Agreement and any related agreements, contracts, and documents executed, adopted, or approved pursuant to this Agreement, the parties shall use the definitions found in

Ed. June 27, 1991

party assumes liability for the actions or activities of the other, except as provided by law or as may be agreed by the parties from time to time.

9. Implementing Agreements: The parties agree that routine operating agreements may be required from time to time to accomplish the purpose of this Agreement and the Plan. Any such operating agreement or understanding executed to implement this Agreement or the Plan which is signed by the County Executive and the Mayor shall be presumed to be binding on the parties unless contrary to law.

IN WITNESS HEREOF, this Agreement is executed this 17th day of September, 1991.

Subscribed and sworn to me this 11th day of Oct, 1991.

Notary Public in and for the State of Washington, residing at Bellingham.
My commission expires 10/24/92

APPROVED AS TO FORM:

Randall J. Watts, Chief Civil Deputy Prosecuting Attorney

ATTEST:

J:\et\25552-89.001\2fa.21v

WHATCOM COUNTY

Shirley Van Zanten 10/7/91
SHIRLEY VAN ZANTEN
County Executive

CITY OF NOOKSACK

By Maxine Jones
Mayor

Ed. June 27, 1991

APPENDIX D

SEPA CHECKLIST

SEPA ENVIRONMENTAL CHECKLIST

UPDATED 2014

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

***Instructions for applicants*:** [help]

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals: [help]

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. background [help]

1. Name of proposed project, if applicable: [help]

Whatcom County Solid Waste Management Plan (SWMP) Update and Whatcom County Hazardous Waste Management Plan (HWMP)

2. Name of applicant: [help]

Whatcom County Health Department

3. Address and phone number of applicant and contact person: [help]

Jeff Hegedus, Environmental Health Supervisor
Whatcom County Health Department
1500 North State Street
Bellingham, WA 98225
360-676-6724 ext. 50895
jhegedus@co.whatcom.wa.us

4. Date checklist prepared: [help]

July 15, 2015

5. Agency requesting checklist: [help]

Whatcom County Health Department

6. Proposed timing or schedule (including phasing, if applicable): [help]

Proposed implementation of the Whatcom County SWMP Update will begin upon adoption and proceed through plan revision in 2021. The SWMP recommends various solid waste management programs to be developed and implemented over the next six years. The HWMP is included as Chapter 11 of the revised SWMP.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]

Yes, the SWMP will be reviewed every two years after its implementation and updated as necessary, as required by state law (WAC 173-304-011). The HWMP will be updated on an as needed basis.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]

Washington State law requires that local governments develop a local SWMP and HWMP. Whatcom County or the appropriate city within Whatcom County will conduct an environmental assessment of each element of the selected program prior to implementation. Each assessment will be conducted in compliance with State Environmental Policy Act. Specific sites associated with the SWMP are operated independently by private parties in accordance with permits. These permits require measures for protection of the environment as a condition of operation.

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. [help]

No.

10. List any government approvals or permits that will be needed for your proposal, if known. [help]

In order to participate in the SWMP, each local jurisidiction will need to approve and adopt the SWMP. These jurisidictions include the Washington State Department of Ecology; Whatcom County Council; Washington Utilities and Transportation Commission; and the cities of Bellingham, Blaine, Everson, Ferndale, Lynden, Nooksack, and Sumas.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]

The Whatcom County SWMP defines goals and action items for the management and disposal of municipal solid waste (MSW) produced by households and commercial generators. The SWMP discusses all aspects of solid waste management in the county in both incorporated and unincorporated areas, including waste reduction, recycling, composting, collection, transfer, waste disposal, public education, enforcement, and administration. Due to the nature of the County's privatized system, most action items are targeted towards programs or policy refinements.

The primary goal of the HWMP is to reduce the generation of hazardous waste and to reduce illegal hazardous waste dumping, including the improper dispsosal of hazardous waste in public landfills, sewers, storm drains, and septic systems. All local governments or combination of contiguous local governemnts are required to develop a local hazardous waste plan.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [help]

The jurisidiction of the SWMP will include all incorporated and unincorporated areas in Whatcom County, Washington, with the exception of the Lummi and Nooksack reservations, which are excluded from the planning area, and the far eastern portion of Whatcom County, which is serviced by the Skagit County waste hauler. Certain plan action items are intended for specific areas within the County.

B. ENVIRONMENTAL ELEMENTS [help]

1. Earth

a. General description of the site [help]

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____

This criterion does not apply. There are no site-specific actions recommended in the Plan. If a need for any public facilities arises, the County will identify a site per the County's Comprehensive Plan and all applicable land use regulations and evaluate site conditions as part of a distinct SEPA review process.

b. What is the steepest slope on the site (approximate percent slope)? [help]

Does not apply. There are no site-specific recommendations in the Plan. Future solid waste facilities or programs will be required to evaluate slope as part of SEPA documentation.

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 agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils**. [help]

Does not apply. There are no site-specific recommendations in the Plan. Future solid waste facilities or programs will be required to evaluate soils as part of SEPA documentation.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]

Does not apply. There are no site-specific recommendations in the Plan. Future solid waste facilities or programs will be required to evaluate soils as part of SEPA documentation.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]

Does not apply. There are no site-specific recommendations in the Plan. Future solid waste facilities or programs will be evaluated as aseparate SEPA review process.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]

Does not apply. There are no site-specific recommendations in the Plan. Future solid waste facilities or programs will be evaluated as aseparate SEPA review process.

g. **About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?** [help]

Does not apply. There are no site-specific recommendations in the Plan. Future solid waste facilities or programs will be evaluated as aseparate SEPA review process.

h. **Proposed measures to reduce or control erosion, or other impacts to the earth, if any**: [help]

Does not apply. There are no site-specific recommendations in the SWMP. Future solid waste facilities or programs will be evaluated as aseparate SEPA review process.

2. Air

a. **What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.** [help]

No significant amounts of emissions to the air are anticipated as a result of any recommendations made by the SWMP. Actions in the plan are oriented towards reduction of solid waste disposal, thus reduction in transportation of solid waste and greenhouse gas emissions.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]

There are no off-site sources of emissions or odor anticipated as part of the SWMP.

c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]

Does not apply.

3. **Water**

a. Surface Water: [help]

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.** [help]

Future solid waste facilities or programs will be required to evaluate surface water as part of SEPA documentation.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [help]

Does not apply. There are no site-specific recommendations as part of the SWMP.

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. [help]

Does not apply. There are no site-specific recommendations as part of the SWMP.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]

Does not apply. There are no site-specific recommendations as part of the SWMP.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]

Does not apply. There are no site-specific recommendations as part of the SWMP.

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. [help]

Does not apply. There are no site-specific recommendations as part of the SWMP.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [help]

Neither groundwater withdrawal for use as drinking water or other purposes, nor discharge of water to groundwater is contemplated as part of the SWMP. Future solid waste facilities or programs will be required to evaluate ground water as part of SEPA documentation.

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. [help]

Does not apply.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) 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. [help]

Future solid waste facilities or programs will be required to evaluate water runoff as part of SEPA documentation.

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]

Does not apply.

2) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

Does not apply.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

Does not apply.

4. **Plants** [help]

a. Check the types of vegetation found on the site: [help]

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
____shrubs
____grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

Does not apply. Future solid waste facilities or programs will be required to identify and evaluate impacts to plants as part of SEPA documentation.

b. What kind and amount of vegetation will be removed or altered? [help]

Does not apply.

c. List threatened and endangered species known to be on or near the site. [help]

Does not apply.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]

Does not apply.

e. List all noxious weeds and invasive species known to be on or near the site.

Does not apply.

5. **Animals**

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include: [help]

birds: hawk, heron, eagle, songbirds, other:

mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Does not apply. Future solid waste facilities or programs will be required to identify and evaluate impacts to animals as part of SEPA documentation.

b. List any threatened and endangered species known to be on or near the site. [help]

Does not apply.

c. Is the site part of a migration route? If so, explain. [help]

Does not apply.

d. Proposed measures to preserve or enhance wildlife, if any: [help]

Does not apply.

e. List any invasive animal species known to be on or near the site.

Does not apply.

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. [help]

Fuel use is supplemental to the transportation aspect of this Plan. Waste disposed of outside of the County is transported to landfills in Arlington, Oregon; Roosevelt, Washington; and Cowlitz County, Washington. This Plan addresses the need to manage the county's waste stream. The Plan has a particular focus on reducing the need for disposal through material reuse, composting, and recycling, offsetting the need for waste disposal that occurs at out-of-county landfills several hundred miles away.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]

Does not apply.

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: [help]

The SWMP emphasizes waste reduction and recycling, which results in the conservation of energy and natural resources. The SWMP also recommends evaluating the potential use of biogas as a renewable energy source.

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. [help]

No environmental risks are anticipated as a result of new or additional programs proposed by the SWMP. Potential environmental health hazards specific to existing facilities have been addressed by the third-party operations through operation plans or healthy and safety plans. Future solid waste facilities or programs will be required to identify and evaluate potential environmental health hazards as part of SEPA documentation.

1) Describe any known or possible contamination at the site from present or past uses.

Does not apply. There are no site-specific actions recommended as part of the SWMP.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Does not apply. There are no site-specific actions recommended as part of the SWMP.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

There are no facility construction projects proposed as part of the SWMP. Storage of hazardous materials at the third-party facilities are managed through individual health and safety plans.

4) Describe special emergency services that might be required.

Additional emergency services are not required by any of the SWMP recommendations.

5) Proposed measures to reduce or control environmental health hazards, if any:

There are no net increases in risk caused by the SWMP recommendations. Existing site-specific emergency procedures are addressed by the individual facilities as part of the sites' safety plans.

b. **Noise**

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]

There are no facilities proposed as part of the SWMP. Any future solid waste facilities or programs will be required to evaluate noise as part of SEPA documentation.

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. [help]

Does not apply.

3) Proposed measures to reduce or control noise impacts, if any: [help]

Does not apply.

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help]

Future solid waste facilities or programs will be required to evaluate land use as part of SEPA documentation.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [help]

Does not apply.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

Does not apply.

c. Describe any structures on the site. [help]

Does not apply.

d. Will any structures be demolished? If so, what? [help]

Does not apply.

e. What is the current zoning classification of the site? [help]

Does not apply.

f. What is the current comprehensive plan designation of the site? [help]

Does not apply.

g. If applicable, what is the current shoreline master program designation of the site? [help]

Does not apply.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]

Does not apply.

i. Approximately how many people would reside or work in the completed project? [help]

Does not apply.

j. Approximately how many people would the completed project displace? [help]

Does not apply.

k. Proposed measures to avoid or reduce displacement impacts, if any: [help]

Does not apply.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]

Does not apply.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

Does not apply.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]

Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]

Does not apply.

c. Proposed measures to reduce or control housing impacts, if any: [help]

Does not apply.

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? [help]

Does not apply. No structures are being proposed as part of the SWMP. Future solid waste facilities or programs will be required to evaluate aesthetics as part of the SEPA review.

b. What views in the immediate vicinity would be altered or obstructed? [help]

Does not apply. No structures are being proposed as part of the SWMP.

c. Proposed measures to reduce or control aesthetic impacts, if any: [help]

Does not apply. No structures are being proposed as part of the SWMP.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]

Does not apply. No actions are being proposed that would create light or glare impacts. Future solid waste facilities or programs will be required to evaluate light and glare as part of the SEPA review.

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]

Does not apply.

c. What existing off-site sources of light or glare may affect your proposal? [help]

Does not apply.

d. Proposed measures to reduce or control light and glare impacts, if any: [help]

Does not apply.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]

Does not apply. There are no site-specific actions recommended as part of the SWMP. Future solid waste facilities or programs will be required to evaluate recreation as part of the SEPA review process.

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]

Does not apply.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]

Does not apply.

13. Historic and cultural preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. [help]

Does not apply. There are no site-specific actions recommended as part of the SWMP. Future solid waste facilities or programs will be required to evaluate historic and cultural preservation as part of the SEPA review process.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [help]

Does not apply.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [help]

Does not apply.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Does not apply.

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [help]

Does not apply. There are no site-specific actions recommended as part of the SWMP. Future solid waste facilities or programs will be required to evaluate transportation as part of the SEPA review process.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [help]

Does not apply.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [help]

Does not apply.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [help]

Does not apply.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [help]

Does not apply.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]

Does not apply.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

Does not apply.

h. Proposed measures to reduce or control transportation impacts, if any: [help]

Does not apply.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [help]

Does not apply. There are no site-specific actions recommended as part of the SWMP. Future solid waste facilities or programs will be required to evaluate public services as part of the SEPA review process.

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]

Does not apply.

16. Utilities

a. Circle utilities currently available at the site: [help]
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

Does not apply. No site-specific actions are recommended as part of the SWMP. Future solid waste facilities or programs will be required to evaluate utilities as part of the SEPA review process.

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. [help]

Does not apply.

C. Signature [HELP]

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: _____

Name of signee _____

Position and Agency/Organization _____

Date Submitted: _____

D. supplemental sheet for nonproject actions [help]

(**IT IS NOT NECESSARY to 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?

Implementation of the proposed SWMP and the associated HWMP should result in an overall decrease in discharges to the environment as a result of management strategies developed to prevent or minimize problems associated with solid waste and household hazardous waste. By providing for secure disposal of solid wastes and increased recycling activities, the SWMP is expected to decrease impacts and discharges to water and air, and to provide for more secure handling of toxic or hazardous substances that may be part of the solid waste stream. No substantial increases or decreases in noise levels are expected as a result of the SWMP's recommendations.

Recycling, waste reduction, composting, and educational programs, along with the construction and demolition debris diversion incentives, recommended in the SWMP should increase public awareness and contribute to decreasing the discharge of contaminants into the environment.

Proposed measures to avoid or reduce such increases are:

Goals and actions established during the planning process will reduce impacts to water, air, and noise, and will minimize the release of toxic or hazardous substances into the environment. In addition to enhancing programing for recycling, waste reduction, composting, and educational programming, the County will look at ways to better manage special waste steams, in particular, beneficial reuse alternatives for street sweeings and contaminated soil.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Implementation of the proposed SWMP and the associated HWMP should result in improved quality of habitat for plant and animal species in the county by reducing pollution discharged to lakes, streams, groundwater, and air through proper management strategies, source reduction, recycling, and improved disposal methods for solid waste.

Under the County's plan to keep disposal rates low and provide for community education, occurrences of illegal dumping is expected to remain low. Dumping in uninhabited areas not only contributes the pollution of the area, but the exposed waste can contribute to the pollution of stormwater which runs off into streams and rivers or can make its way into groundwater.

The recommended educational programs should result in increased public awareness, and should further result in the reduction of land, water and air contamination, improving environmental quality for plants, animals, fish, marine life, and humans.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

Does not apply.

3. How would the proposal be likely to deplete energy or natural resources?

Implementation of the SWMP's strategies for recycling and waste reduction will result in conservation of energy and natural resources. The use of recycled materials generally requires less energy to produce the final product. Replacing virgin resources with recycled materials in the manufacturing process also reduces the demand on natural resources. Reducing the amount of construction and demolition debris going to landfills will conserve building materials and landfill space. Implementation of the HWMP should conserve energy in that much of the collected waste stream such as solvents, oil based paint and motor oil are actually utilized in energy recovery processes for the disposal mechanism.

Proposed measures to protect or conserve energy and natural resources are:

The proposal will conserve energy and natural resources.

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?

The SWMP recommendations will enhance environmentally sensitive areas by improving water quality through the education of the public to properly manage and dispose of solid and hazardous waste, and the positive impact of low disposal fees on illegal dumping.

Proposed measures to protect such resources or to avoid or reduce impacts are:

Proposed measures to reduce impacts to sensitive areas include extensive public education on proper waste disposal, source reduction, and recycling of solid waste. In addition, the County will use existing enforcement mechanisms to understand and address existing illegal disposal issues occurring in unincorporated areas. Curbing these behaviors will result in greater protection of the County's parks and natural areas.

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?

The SWMP does not make any recommendations for land and shoreline use that are incompatible with existing plans or regulations.

Proposed measures to avoid or reduce shoreline and land use impacts are:

No impacts are anticipated.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Transportation impacts in the solid waste system are reflected by the number of hauler trips for curbside collection. Demand for more truck trips will increase with the county growth in population. However, the SWMP establishes the framework for additional public education and waste reduction programs that aim to reduce the amount of per capita waste generated. These programs will mitigate the transportation needs for the solid waste system.

Proposed measures to reduce or respond to such demand(s) are:

Centralized curbside collection minimizes transportation impacts related to solid waste recycling and disposal by eliminating the need for individualized customer trips to drop box and transfer facilities. In addition, the SWMP waste reduction programs aim to reduce per capita waste generation, thereby mitigating the need for additional curbside collection trucks.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

The SWMP and HWMP were prepared in response to State requirements for the proper management of solid waste and household hazardous waste, and they comply with all applicable local, state, and federal laws and requirements regarding environmental protection.

APPENDIX E

COST ASSESSMENT QUESTIONNAIRE

COST ASSESSMENT QUESTIONNAIRE

Please provide the information requested below:

PLAN PREPARED FOR THE COUNTY OF: Whatcom

PLAN PREPARED FOR THE CITY OF: _____

PREPARED BY: Erik Bakkom, PE

CONTACT TELEPHONE: **503-312-0094** **DATE:** **July 15, 2015**

DEFINITIONS

Please provide these definitions as used in the Solid Waste Management Plan and the Cost Assessment Questionnaire.

Throughout this document:

YR.1 shall refer to **2015.**
YR.3 shall refer to **2017.**
YR.6 shall refer to **2020.**

Year refers to (circle one) **calendar** (Jan 01 - Dec 31)
fiscal (Jul 01 - Jun 30)

1. **DEMOGRAPHICS:** *To assess the generation, recycling and disposal rates of an area, it is necessary to have population data. This information is available from many sources (e.g., the State Data Book, County Business Patterns, or the State Office of Finance and Management)*

1.1 Population

1.1.1 *What is the **total** population of your County/City?*

YR.1 _210,050_ YR.3 _216,228_ YR.6 _225,307_

1.1.2 *For counties, what is the population of the area **under your jurisdiction?** (Exclude cities choosing to develop their own solid waste management system.)*

YR.1 _206,543_ YR.3 _212,678_ YR.6 _221,545_

Note that the population under jurisdiction of the plan does not include East Whatcom County, which is covered under the Skagit County solid waste management plan.

1.2 References and Assumptions

Population projections have been provided from the OFM 2012 County Growth Management Projections 2010-2040 report.

2. **WASTE STREAM GENERATION:** *The following questions ask for total tons recycled and total tons disposed. Total tons disposed are those tons disposed of at a landfill, incinerator, transfer station or any other form of disposal you may be using. If other please identify.*

2.1 Tonnage Recycled

2.1.1 *Please provide the total tonnage **recycled** in the base year, and projections for years three and six.*

YR.1 _1,140_ YR.3 _1,172_ YR.6 _1,220_

2.2 Tonnage Disposed

2.2.1 *Please provide the total tonnage **disposed** in the base year, and projections for years three and six.*

YR.1 _1,328_ YR.3 _1,343_ YR.6 _1,366_

2.3 References and Assumptions

Recycling is based on the medium projection [Total Waste Generation] – [Total MSW Disposed] and represents materials that are considered recycled and diverted by the Department of Ecology.

3. SYSTEM COMPONENT COSTS: *This section asks questions specifically related to the types of programs currently in use and those recommended to be started. For each component (i.e., waste reduction, landfill, composting, etc.) please describe the anticipated costs of the program(s), the assumptions used in estimating the costs and the funding mechanisms to be used to pay for it. The heart of deriving a rate impact is to know what programs will be passed through to the collection rates, as opposed to being paid for through grants, bonds, taxes and the like.*

3.1 Waste Reduction Programs

3.1.1 *Please list the solid waste programs which have been implemented and those programs which are proposed. If these programs are defined in the SWM plan please provide the page number. (Attach additional sheets as necessary.)*

<u>IMPLEMENTED</u>

- Waste Reduction & Recycling Education – School and Community (Contract with ReSources)
- WSU Extension Compost Program (through Interlocal Agreement)

<u>PROPOSED</u>

- Increased Educational Programming (Through Professional Services Contract)
- Increased Support to WSU Extension Compost Program (increase funding)

3.1.2 *What are the costs, capital costs and operating costs for waste reduction programs implemented and proposed?*

See attached budget summary and projected budget (Question 3.8).

3.1.3 *Please describe the funding mechanism(s) that will pay the cost of the programs in 3.1.2.*

Whatcom County provides all external services through outside parties – through contract with private companies, through Interlocal Agreement with WSU, or through services provided by solid waste providers. The funding for all County led efforts (primarily contract or Interlocal Agreement) are derived from the excise tax that is assessed on solid waste collected within the county.

3.2 Recycling Programs

3.2.1 *Please list the proposed or implemented recycling program(s) and, their costs, and proposed funding mechanism or provide the page number in the draft plan on which it is discussed. (Attach additional sheets as necessary.)*

All Whatcom County recycling programs are education and outreach based and are administered through the same contracts that are described in Section 3.1.

See attached budget summary and projected budget (Question 3.8).

3.3 Solid Waste Collection Programs –SSC, NVD and Cando

3.3.1 Regulated Solid Waste Collection Programs

*Fill in the table below for each **WUTC regulated** solid waste collection entity in your jurisdiction. (Make additional copies of this section as necessary to record all such entities in your jurisdiction.)*

- Customer annual growth rate at 1.2% is based on Whatcom County Comprehensive Plan (Berk, pending).
- Waste annual growth rate is estimated at 0.98% per waste projections.
- Residential and commercial accounts are reported together since materials are collected on shared routes.

WUTC Regulated Hauler Name Sanitary Service Company, Inc.
G-permit #G000014

	2015	2017	2020
Residential Customers	20,784	21,286	22,062
Commercial Customers	4,507	4,616	4,784
Total Tons Collected	68,054	69,395	71,455

WUTC Regulated Hauler Name Freedom 2000, LLC
G-permit #G063819

	2015	2017	2020
Residential Customers	533	546	566
Commercial Customers	35	36	38
Total Tons Collected	598	610	628

WUTC Regulated Hauler Name Nooksack Valley Disposal, Inc.
G-Permit #G000166

	2015	2017	2020
Residential Customers	2,302	2,358	2,444
Commercial Customers	693	2,002	10,223
Total Tons Collected	4,515	4,604	4,740

3.3.2 Other (non-regulated) Solid Waste Collection Programs *Fill in the table below for other solid waste collection entities in your jurisdiction. (Make additional copies of this section as necessary to record all such entities in your jurisdiction.)*

Hauler Name Sanitary Services Company, Inc – Contract to City of Bellingham

	2015	2017	2020
Residential Customers	18,913	19,370	20,076
Total Tons Collected	10,806	11,019	11,346

Hauler Name Sanitary Services Company, Inc – Contract to City of Ferndale

	2015	2017	2020
Residential Customers	3,177	3,253	3,372
Commercial Customers	346	354	367
Total Tons Collected	4,299	4,383	4,514

Hauler Name Nooksack Valley Disposal – Contract to City of Lynden

	2015	2017	2020
Residential Customers	3,532	3,617	3,749
Commercial Customers	699	2,873	25,261
Total Tons Collected	6,019	6,138	6,320

Hauler Name Nooksack Valley Disposal – Contract to City of Everson

	2015	**2017**	**2020**
Residential Customers	510	522	541
Commercial Customers	79	93	120
Total Tons Collected	698	712	733

Hauler Name Nooksack Valley Disposal – Contract to City of Nooksack

	2015	**2017**	**2020**
Residential Customers	347	355	368
Commercial Customers	18	20	24
Total Tons Collected	483	492	507

Hauler Name Nooksack Valley Disposal – Contract to City of Sumas

	2015	**2017**	**2020**
Residential Customers	302	309	320
Commercial Customers	76	114	212
Total Tons Collected	1,727	1,761	1,813

3.4 Energy Recovery & Incineration (ER&I) Programs

(If you have more than one facility of this type, please copy this section to report them.)

There are no ER&I facilities in Whatcom County

3.5 Land Disposal Program

There are no operational landfills or other land disposal facilities in Whatcom County. Maintenance of close landfills is presented in Question 3.7.

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

See attached budget summary and projected budget (Question 3.8).

Funding Source

Solid waste collections excise tax

3.6.2 *Which cost components are included in these estimates?*

Labor and benefits, facility expenses, staff training, vehicle and insurance, solid waste management plan

3.6.3 *Please describe the funding mechanism(s) that will recover the cost of each component.*

Solid waste collections excise tax

3.7 Other Programs

For each program in effect or planned which does not readily fall into one of the previously described categories please answer the following questions. (Make additional copies of this section as necessary.)

3.7.1 *Describe the program, or provide a page number reference to the plan.*

Landfill Post-Closure (Section 7.1.3)

3.7.2 *Owner/Operator:* Whatcom County

3.7.3 *Is WUTC Regulation Involved? If so, please explain the extent of involvement in section 3.8.*

No

3.7.4 *Please estimate the anticipated costs for this program, including capital and operating expenses.*

See attached budget summary and projected budget (Question 3.8).

3.7.5 *Please describe the funding mechanism(s) that will recover the cost of this component.*

Solid waste collections excise tax

3.7 Other Programs

For each program in effect or planned which does not readily fall into one of the previously described categories please answer the following questions. (Make additional copies of this section as necessary.)

3.7.1 *Describe the program, or provide a page number reference to the plan.*

Disposal of Toxics (Section 11)

3.7.2 *Owner/Operator:* Whatcom County

3.7.3 *Is WUTC Regulation Involved? If so, please explain the extent of involvement in section 3.8.*

No

3.7.4 *Please estimate the anticipated costs for this program, including capital and operating expenses.*

See attached budget summary and projected budget (Question 3.8).

3.7.5 *Please describe the funding mechanism(s) that will recover the cost of this component.*

Solid waste collections excise tax
State coordinated prevention grant

3.7 Other Programs

For each program in effect or planned which does not readily fall into one of the previously described categories please answer the following questions. (Make additional copies of this section as necessary.)

3.7.1 *Describe the program, or provide a page number reference to the plan.*

Litter Control (Section 9.1.1)

3.7.2 *Owner/Operator:* Whatcom County

3.7.3 *Is WUTC Regulation Involved? If so, please explain the extent of involvement in section 3.8.*

No

3.7.4 *Please estimate the anticipated costs for this program, including capital and operating expenses.*

See attached budget summary and projected budget (Question 3.8).

3.7.5 *Please describe the funding mechanism(s) that will recover the cost of this component.*

Solid waste collections excise tax
State coordinated prevention grant

3.8 References and Assumptions *(attach additional sheets as necessary)*

See attached budget summary and projection.

4. FUNDING MECHANISMS: *This section relates specifically to the funding mechanisms currently in use and the ones which will be implemented to incorporate the recommended programs in the draft 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. Please fill in each of the following tables as completely as possible.*

Table 4.1.1 Facility Inventory

Facility Name	Type of Facility	Tip Fee per Ton	Transfer Cost[A]	Transfer Station Location	Final Disposal Location	Total Tons Disposed	Total Revenue Generated (Tip Fee x Tons)
Recycling and Disposal Services[B]	Private Transfer	$100		Ferndale, WA	Columbia Ridge Landfill, Arlington, OR	92,597	$ 9,259,700
Regional Disposal Company	Private Transfer	$82.50		Ferndale, WA	Roosevelt Regional Landfill, Roosevelt, WA	11,663.25	$ 962,200
Freedom 2000, LLC (Cando)	Private Transfer	$280		Pt. Roberts, WA	Headquarters Landfill, Castle Rock, WA	979.42	$ 274,237.60
Sanitary Service Company Birch Bay – Lynden Drop Box Facility	Private Dropbox	$300		Lynden, WA	Recycling and Disposal Services	64.90	$ 19,470.00
Sanitary Service Company Cedarville Drop Box Facility	Private Dropbox	$300		Blaine, WA	Recycling and Disposal Services	81.91	$ 24,573.00
Sanitary Service Company Roeder Ave Drop Box Facility	Private Dropbox	$300		Bellingham, WA	Recycling and Disposal Services	115.37	$ 34,611.00
Nooksack Valley Disposal Drop Box Facility	Private Dropbox	$200		Lynden, WA	Recycling and Disposal Services	745	$149,000

Notes

[A] Where there is no additional transfer cost between the drop box facilities and the transfer stations because this service is included in the base cost of the Transfer Station Operation Agreement (i.e. no additional charge). All transfer costs represent the agreed to rate within the Long Haul and Disposal Agreement.

[B] RDS Tip Fee is "weighted" with Recyclables Received or Recovered but not Landfilled. "Total Landfilled, Total Revenue and Total Costs" are accurate and inclusive of all activities. RDS Recycled over 20% of all materials accepted. RDS received 116,700 tons but only landfilled 92,597 tons.

Table 4.1.2 Tip Fee Components

Tip Fee by Facility	Surcharge	City Tax	County Tax[A]	Transportation Cost	Operational Cost[B]	Administration Cost[C]	Closure Costs
Recycling and Disposal Services	NA	12.5%	NA	ND	ND	ND	NA
Regional Disposal Company	NA	12.5%	NA	ND	ND	ND	NA
Freedom 2000, LLC (Cando)	NA	NA	NA	ND	ND	ND	NA
Sanitary Service Company Birch Bay – Lynden Drop Box Facility	NA	NA	NA	0	$78.40	0	NA
Sanitary Service Company Cedarville Drop Box Facility	NA	NA	NA	0	$78.40	0	NA
Sanitary Service Company Roeder Ave Drop Box Facility	NA	NA	NA	0	$78.40	0	NA
Nooksack Valley Disposal Drop Box Facility	NA	NA	NA	0	$89	0	NA

Notes

ND – Not Disclosed by private solid waste company.

NA – Not Applicable

[A] The County solid waste excise tax is paid through solid waste collection fees and is not represented in the table above.

[B] Drop Box Facilities have listed transfer station disposal fees in the operations costs column

[C] Providers do not track operational and administrative costs per ton separately unless listed. These items are reported together in the Operational Costs Column.

Table 4.1.3 Funding Mechanism

Name of Program Funding Mechanism will defray costs	Bond Name	Total Bond Debt	Bond Rate	Bond Due Date	Grant Name	Grant Amount	Tip Fee	Taxes	Other	Surcharge
Waste Reduction/Recycling								$ 80,000		
Solid Waste Administration								$435,000		
Landfill Post-Closure								$ 77,600		
Disposal of Toxics Facility					Ecology CPG	$281,000		$145,000		
Litter Control					Ecology CPG	$ 18,500		$ 4,500		

Table 4.1.4 Tip Fee Forecast

Tip Fee per Ton by Facility	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Recycling and Disposal Services	$100	$100	$100	$100	$100	$100
Regional Disposal Company	$82.50	$82.50	$82.50	$82.50	$82.50	$82.50
Freedom 2000, LLC (Cando)	$280	$280	$280	$280	$280	$280
Sanitary Service Company Birch Bay – Lynden Drop Box Facility	$300	$300	$300	$300	$300	$300
Sanitary Service Company Cedarville Drop Box Facility	$300	$300	$300	$300	$300	$300
Sanitary Service Company Roeder Ave Drop Box Facility	$300	$300	$300	$300	$300	$300
Nooksack Valley Disposal Drop Box Facility	$200	$200	$200	$200	$200	$200

Notes

- Tip fees for private waste management facilities have been level for the past 10 years and rate increases are not currently anticipated by the facility operators.
- Private operators of the facilities respond to market conditions and may change tip fees at any time.

4.2 **Funding Mechanisms** *summary by percentage: In the following tables, please summarize the way programs will be funded in the key years. For each component, provide the expected percentage of the total cost met by each funding mechanism. (e.g. Waste Reduction may rely on tip fees, grants, and collection rates for funding). You would provide the estimated responsibility in the table as follows: Tip fees=10%; Grants=50%; Collection Rates=40%. The mechanisms must total 100%. If components can be classified as "other," please note the programs and their appropriate mechanisms. Provide attachments as necessary.*

Table 4.2.1 Funding Mechanism by Percentage

Year One

Component	Tip Fee %	Grant %	Bond %	Collection Tax Rates %	Other %	Total
Waste Reduction/ Recycling		0%		100%		100%
Administration		0%		100%		100%
Landfill Post-Closure		0%		100%		100%
Disposal of Toxics		65%		35%		100%
Litter Control		80%		20%		100%

Notes

- Collection Tax Rates is the Excise Tax collected by Whatcom from permitted haulers.
- Waste Reduction/Recycling includes county administered contracts for solid waste education and community outreach.
- Administration includes County solid waste staff, solid waste planning, and general county solid waste program administration.

Table 4.2.2 Funding Mechanism by Percentage

Year Three

Component	Tip Fee %	Grant %	Bond %	Collection Tax Rates %	Other %	Total
Waste Reduction/ Recycling		0%		100%		100%
Administration		0%		100%		100%
Landfill Post-Closure		0%		100%		100%
Disposal of Toxics		65%		35%		100%
Litter Control		80%		20%		100%

Table 4.2.3 Funding Mechanism by Percentage

Year Six

Component	Tip Fee %	Grant %	Bond %	Collection Tax Rates %	Other %	Total
Waste Reduction/ Recycling		0%		100%		100%
Administration		0%		100%		100%
Landfill Post-Closure		0%		100%		100%
Disposal of Toxics		65%		35%		100%
Litter Control		80%		20%		100%

4.3 References and Assumptions

Please provide any support for the information you have provided. An annual budget or similar document would be helpful.

See attached budget summary and projection.

4.4 Surplus Funds

Please provide information about any surplus or saved funds that may support your operations.

Surplus funds within the County Solid Waste program are managed appropriately to their funding source. Grant funds that are not spent are returned to the grantor. County General Fund dollars are not used to fund solid waste operations. Excess solid waste excise taxes ($6/ton) that are unspent are transferred to a solid waste reserve account that has been established to fund future landfill post-closure costs or to support programs that are recommended within the solid waste management plan.

ATTACHMENT

Whatcom County Solid Waste Program Budget Summary & Projection

Solid Waste Program Summary

1. **Maintain 25% of existing vehicle in budget: allocate 75% to enforcement and 25% to operations**
2. **Budget 0.5 FTE EHS Supervisor and 0.25 EHS II to operations**
3. **No need to increase travel and training budget**
4. **Existing fund balance to be held in reserve for potential landfill post-closure contingency, or as identified in 5 year plan update**

Total Budget = $1,049,804

Solid Waste Tax	**$740,000**
Grants	**$299,604**
Other	**$ 10,200**

1. Solid Waste Operations - $435,000
    - Solid Waste Coordinator
    - Update of Comprehensive Solid and Hazardous Waste Management Plan – mid-2014 through 2015
    - Leases for operation of SW drop box facilities –
        - Sanitary Services: Cedarville, Birch Bay
        - Cando Recycling: Point Roberts
        - Periodic maintenance required
    - Office Space Rental/Overhead
    - Training
    - Office Supplies/Printing/Postage/Telephone
    - Insurance Premiums
    - Vehicle
    - Payment to Health Department
2. Landfill Post-Closure - $77,600
    - Cedarville and Y Road Landfills
        - Leachate Collection System/NPDES Permit-Cedarville
        - Groundwater/Surface Water/Leachate/LFG monitoring/reporting
    - Currently contracted to Bennett Engineering – contract ends on 12/31/14
    - Birch Bay/Point Roberts
    - Interdepartmental Agreement with Sheriff's Office for site maintenance
3. Disposal of Toxics Facility - $410,000
    - Contracted to PSE Services through 2018
    - Mostly paid for by Ecology CPG
4. Litter Control - $23,000
    - Interdepartmental Agreement with Sheriff's Office for jail litter crew – paid for by Ecology grant
    - Contract with Sanitary Services for seasonal trash cans in Birch Bay – no grant funding
5. Waste Reduction/Recycling - $80,000
    - Education – Contract with RE Sources for school recycling education – contract ends on 12/31/14
    - WSU Extension Compost Program – part of comprehensive interlocal agreement between WSU/County
    - Clean Green contribution to City of Bellingham – ends in 2014

Whatcom County Solid Waste Program Budget Summary & Projection

	2015 (Year 1)	2017 (Year 3)	2020 (Year 6)
SW Operations	$435,000	$435,000	$435,000
LF Post-Closure	$78,000	$78,000	$78,000
DOT Facility	$410,000	$410,000	$410,000
Litter Control	$23,000	$23,000	$23,000
Waste Red/Recyc	$105,000	$105,000	$105,000
Total	$1,051,000	$1,051,000	$1,051,000

Due to pending budget cuts at the state level, budget projections for the Whatcom County solid waste programs are very uncertain. The current state issued CPG accounts for approximately 30% of the County budget. The state legislature is currently considering an across the board cut of state funds of between 25% and 50%, which translates to up to $160,000 over the 2015-2016 biennium or approximately $80,000 per year. These budget cuts are likely to carry into the 2017 calendar year. The loss of state funding will be managed through the elimination of low-priority actions or use of excess solid waste funds that have accumulated from the solid waste collection excise tax. The budget projections identified above are maintained at a fixed level for the years requested by UTC in this questionnaire.

As a result of Whatcom County's privatized solid waste system, budgetary demands for County infrastructure are essentially fixed in the administration and operation of the DOT Facility, Litter Control, and maintenance of Closed Landfills. The second priority for County staff is to preserve the existing Waste Reduction and Recycling programs that are currently provided though WSU Extension (via Interlocal Agreement) or through ReSources (via public contract). New solid waste activities addressing the actions recommended within this SWMP are optional, to be funded after meeting basic infrastructure and existing program demands. If the County solid waste program is provided with an expanded basis (through restoration of state funds or increased revenues from solid waste collection (excise tax)), the County will first focus on fully funding the DOT Facility, followed by an expansion of the education and outreach contracts that would address the goals and actions identified in Table 10-1 of the SWMP.