

COMPREHENSIVE SOLID AND HAZARDOUS WASTE MANAGEMENT PLAN



Whatcom County, Washington

September 17, 2021



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ACRONYMS AND ABBREVIATIONS

C/D	construction and demolition
Cando	Cando Recycling and Disposal
CESQG	conditionally exempt small quantity generator
the County	Whatcom County
CSHWMP	Comprehensive Solid and Hazardous Waste Management Plan
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
FCO	Flow Control Ordinance
FRP	Food Recovery Program
G-permit	WUTC permit
MFS	minimal functional standards (refer to WAC 173-304 and 173-350)
MRF	material recovery facility
MRW	moderate risk waste
MRWF	moderate risk waste facilities
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
PPG	Public Participation Grant
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RDS	Recycling and Disposal Services
RE Sources	RE Sources for Sustainable Communities
Republic	Republic Services
SEPA	State Environmental Policy Act
SSC	Sanitary Service Company
SWAC	Solid Waste Advisory Committee
SWEC	Solid Waste Executive Committee
TZW	Toward Zero Waste Program
W2G	Where To Go With To-Go campaign
WAC	Washington Administrative Code
WCC	Whatcom County Code
WDFW	Washington Department of Fish and Wildlife
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 70A.205](#) 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 70A.205.040](#) to prepare a solid waste management plan. [Washington Administrative Code \(WAC\) Section 173-304-011](#) states that

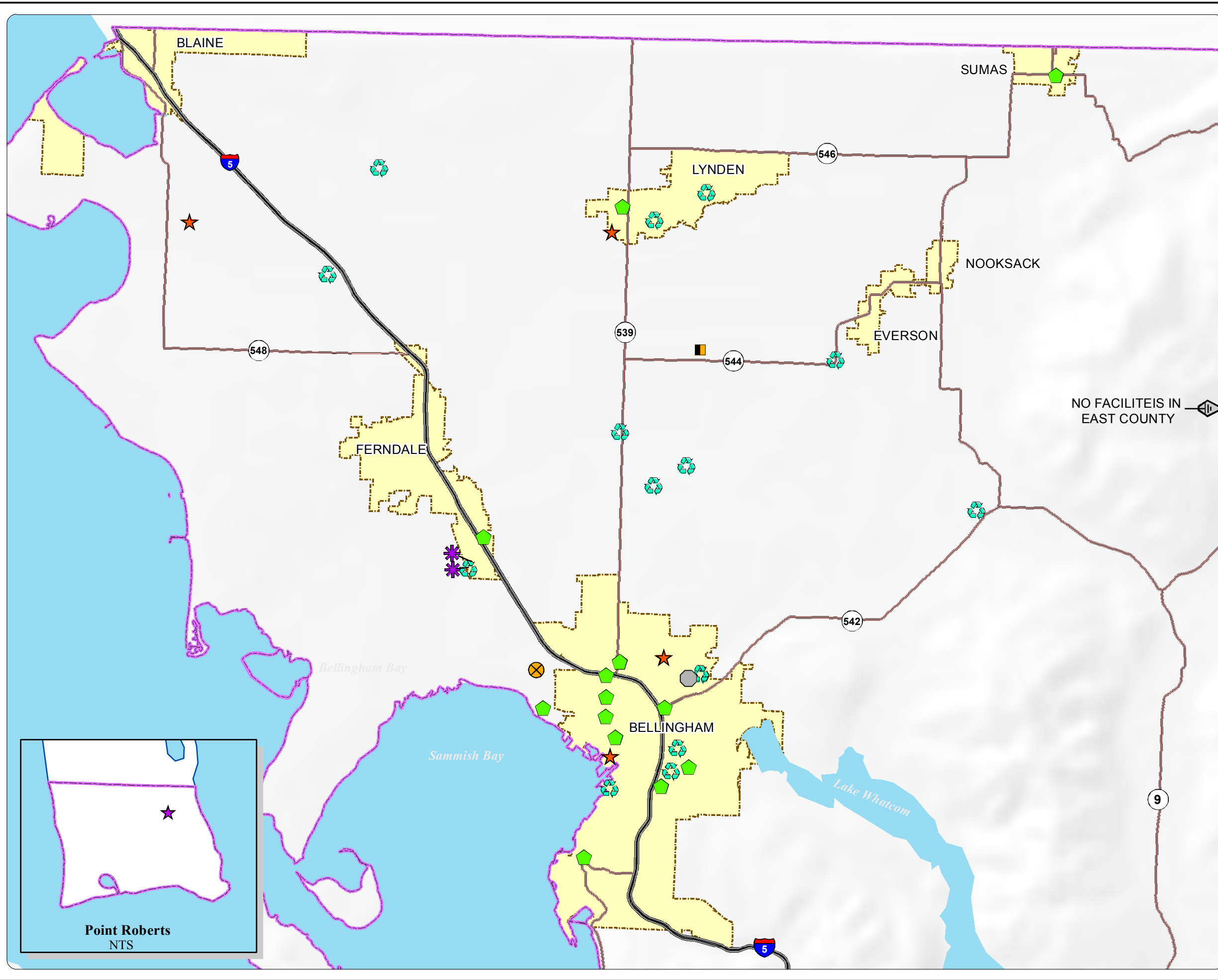
The overall purpose of local comprehensive solid waste planning is to determine the nature and extent of the various solid waste categories and to establish management concepts for their handling, utilization, and disposal consistent with the priorities established in RCW 70A.205.005 for waste reduction, waste recycling, energy recovery and incineration, and landfill.

To address state requirements, Whatcom County (the County) originally developed and adopted the first version of the Comprehensive Solid and Hazardous Waste Management Plan (CSHWMP) in 1974. As discussed with the Washington State Department of Ecology (Ecology), this plan is expected to be finalized as the 2022 revision that covers the five-year period from 2022–2027, representing the seventh iteration of the CSHWMP, which was most recently revised in 2008 and 2016. [RCW 70A.205.005](#) requires that each plan be reviewed and revised, if necessary, at least every five years. Sections one through nine of this CSHWMP are specific to solid waste management planning, and Section Ten is specific to hazardous waste management planning.

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 postclosure, 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 (called the Disposal of Toxics Program), the County neither owns nor operates collection, treatment, or disposal facilities. The easternmost portion of the County (including Newhalem and Diablo) is within the Washington Utilities and Transportation Commission (WUTC) permit (G-permit) collection area of Waste Management and is managed in the Skagit County system, and is therefore excluded from the planning in this CSHWMP.

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 Approved By: J. Gruber
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Comprehensive Solid and Hazardous Waste Management Plan Update

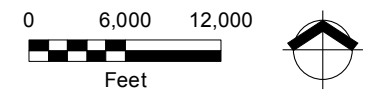
Figure 1-1 Handling Facilities Map

Whatcom County
Washington

NO FACILITEIS IN EAST COUNTY

Legend

- City Boundary
- Planning Area
- Handling Facilities**
- Drop Box Facility
- Hazardous Waste
- Organics Drop Box
- Organics Drop-off
- Reuse Drop-off Location
- Recycling Drop-off Location
- Transfer Facilities
- Vector Waste



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



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An overview of the County's solid waste system is provided below. Specific details on the system components are 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 about 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 the Slater Road Lautenbach Recycle Park. Commercial recyclable collection is provided directly to businesses by the private recycling collectors 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. 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 service providers, covering distinct service areas in the County and regulated by the WUTC: Sanitary Service Company (SSC), Nooksack Valley Disposal (NVD), and Cando Recycling and Disposal (Cando). The easternmost portion of the County is served by the Skagit County waste hauler, currently Waste Management, and managed in the Skagit County system.

All cities in the County 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. 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 privately operated transfer stations that 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:

- Recycling and Disposal Services (RDS) Transfer Station
- Republic Services (Republic) Transfer Station
- Cando/Point Roberts Transfer Station.

MSW collected by Waste Management from the communities Diablo and Newhalem (eastern Whatcom County) is transported to the Skagit County Recycling and Transfer Station and ultimately disposed of at the Roosevelt Landfill in Roosevelt, Washington.

The County system also includes four drop box facilities and recycling centers available to public self-haulers:

- NVD Drop Box Facility & Recycling Center
- SSC Roeder Avenue Drop Box Facility & Recycling Center
- SSC Birch Bay-Lynden Drop Box Facility & Recycling Center
- SSC Cedarville Drop Box Facility & Recycling Center

Waste collected in these drop boxes is hauled to the transfer stations in the County.

Waste for disposal is transferred by truck or rail to the Columbia Ridge Landfill in Arlington, Oregon (by RDS); the Roosevelt Landfill in Roosevelt, Washington (by Republic); or the Cowlitz County Headquarters Landfill (by Cando). While there are no active landfills, there are five closed County landfills maintained under permit in postclosure status in the County. Other closed landfills, such as the Y Road landfills, are regulated as Model Toxics Control Act (MTCA) sites (see Section 7.1.3).

Other system facilities include 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 Miscellaneous Waste

Miscellaneous wastes are materials that require special or separate handling because of their unique characteristics, such as bulk, water content, or dangerous constituents. Miscellaneous wastes include agricultural waste, contaminated soils, vactor waste, tires, and construction and demolition (C/D)

waste, to name a few. Miscellaneous 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 CSHWMP defines the solid waste management policy of the 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 interlocal 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 CSHWMP. These agreements are presented in Appendix B. Each participating jurisdiction, as represented by the Solid Waste Executive Committee (SWEC) through interlocal agreement, adopted this revision to the CSHWMP prior to its approval by Ecology.

The CSHWMP encompasses both the incorporated and unincorporated areas of the County. In addition, the eastern portion of the County (including Newhalem and Diablo) is serviced by the Skagit County waste hauler, Waste Management.

1.4 Required Contents

[RCW 70A.205.045](#) 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
 - Consider 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 in each respective jurisdiction that shall include:
 - Any certificate for solid waste collection granted by the 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 in 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 70A.205.005](#), provides programs that reduce waste, provides incentives and mechanisms for source separation, and establishes recycling opportunities for the source-separated waste. [RCW 70A.205.045\(6\) and \(7\)](#) list detailed program and strategy requirements.
- An assessment of the CSHWMP'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 70A.205.110](#).
- A Contamination Reduction and Outreach Plan (CROP) outlined in [RCW 70A.205.045\(10\)](#). And included as Appendix C.

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

Planning specific to hazardous waste management, as required by [RCW 70A.300](#), is presented in Section Ten.

1.5 Relationship to Other Plans

The 2022 CSHWMP is an update of the 2016 CSHWMP that was compiled from the 1999 (Whatcom County, 1999) and 2008 (Whatcom County, 2008) Comprehensive Solid Waste Management Plans and the 1991 Hazardous Waste Management Plan (Whatcom County, 1991). The previous documents provide a useful baseline for the 2022 planning process, but in many cases do not reflect the County's current practices and administrative structure.

In addition, this 2022 CSHWMP builds on the foundation of the County's comprehensive plan that provides framework for growth in the County over the 20-year planning horizon in accordance with

the Growth Management Act ([RCW 36.70A](#)). The 2016 Comprehensive Plan (Whatcom County, 2016) is the current, adopted County plan; however, County planning staff are in the process of the comprehensive plan update, which is scheduled for adoption in late 2021. To ensure consistency between plans, the CSHWMP 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 2022 CSHWMP complies with the land use policies set forth in the 2016 Comprehensive Plan.

In addition, the following plans provided a foundation for development of this 2022 CSHWMP and were reviewed for consistency:

- [Whatcom County Code \(WCC\), Title 20](#)—Zoning (updated December 2020)
- [Whatcom County Comprehensive Emergency Management Plan](#) (updated March 2017)
- Washington State Growth Management Act, [RCW 36.70A](#)
- Washington State Office of Financial Management (OFM) County Growth Management Population Projections by Age and Sex: 2010–2040
- Ecology [2015 State Solid and Hazardous Waste Plan - Moving Washington Beyond Waste and Toxics \(Beyond Waste Plan\)](#)
- 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 the CSHWMP.

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 CSHWMP, 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
- Agricultural representative

The 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 or amend the CSHWMP, review and approve budget proposals, flow control ordinance (FCO) revisions, and other solid waste system policy considerations.

1.7 Mission

The County's mission through implementation of the CSHWMP 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 the County by managing a privatized solid waste system. The CSHWMP 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 in order of priority:

- Where possible, reduce or prevent 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 CSHWMP

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

1.8.1 Development of the CSHWMP

The preparation of the 2022 CSHWMP began in October 2020. At the start of plan development, background information available in the previous CSHWMP was reviewed with a subcommittee made up of SWAC members, and informational interviews with County staff and service providers were conducted as needed to verify the description of the overall County solid waste system. This description was used as the basis for the data-gathering analysis and reporting process for the CSHWMP 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 27 goals in these primary areas to address the needs identified through the planning effort. Seventy-six 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 schedule described in Section 11 was developed to assist the County in the systematic achievement of each goal defined in the CSHWMP 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 2022 through 2027. 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 the CSHWMP, 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 every two to four weeks, between November 2020 and June 2021, 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 sections and subsequent revisions of the 2022 CSHWMP 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 website to ensure inclusivity in the process. Following the development of the draft CSHWMP, the CSHWMP was presented to the full SWAC and then released for a 60-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 CSHWMP. After revision to incorporate public and Ecology comments, and SWEC review and approval, the council formally adopted the final CSHWMP and submitted it to Ecology for approval. The final resolution for adoption and accompanying interlocal agreements are in Appendix B, as are copies of SWAC and SWEC meeting minutes recommending CSHWMP approval.

1.8.4 Public Agency Review

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

The WUTC reviewed the draft CSHWMP, as well as the WUTC Cost Assessment Questionnaire (Appendix F), 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 WUTC issued a letter dated [pending] indicating it had no comments on the revised CSHWMP (Appendix F).

The draft CSHWMP was also reviewed by all participating local jurisdictions represented in the CSHWMP. The County Health Department revised the CSHWMP to address comments received from all parties, including a 60-day public comment period. The revised draft was submitted to Ecology for its 120-day review and comment. Once the County incorporated Ecology's comments, the County carried out the local adoption process, including revisiting interlocal agreements with participating municipalities to ensure accordance with the terms, Public Works and Health Committee review, and County Council adoption. Following adoption, the final CSHWMP was submitted to Ecology for final approval. Implementation of the 2022 CSHWMP began following Ecology approval.

1.9 Organization of the CSHWMP

This CSHWMP 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 goals' corresponding section.

The format of this CSHWMP was drafted to correspond with the CSHWMP Organization Table provided in the Ecology Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revisions (Publication No. 10-07-005, Ecology 2010). However, the CSHWMP 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 that will be determined by the private waste collection and disposal providers.

This CSHWMP includes ten subsequent sections relating to:

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

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, its western boundary, to the crest of the Cascade Mountain Range. The County is bounded on the north by Canada, by Okanogan County to the east, and by 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. The solid waste management planning area encompasses the entire County, including the incorporated municipalities of Bellingham, Blaine, Everson, Ferndale, Lynden, Nooksack, and Sumas, but excepting tribal lands. Figure 2-2 shows this area in greater detail, including city limits, urban growth areas, and tribal lands.

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 is typically mountainous. Mt. Baker, the most notable landmark of the North Cascade Range, has 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 in the Cascades.

HYDROLOGY

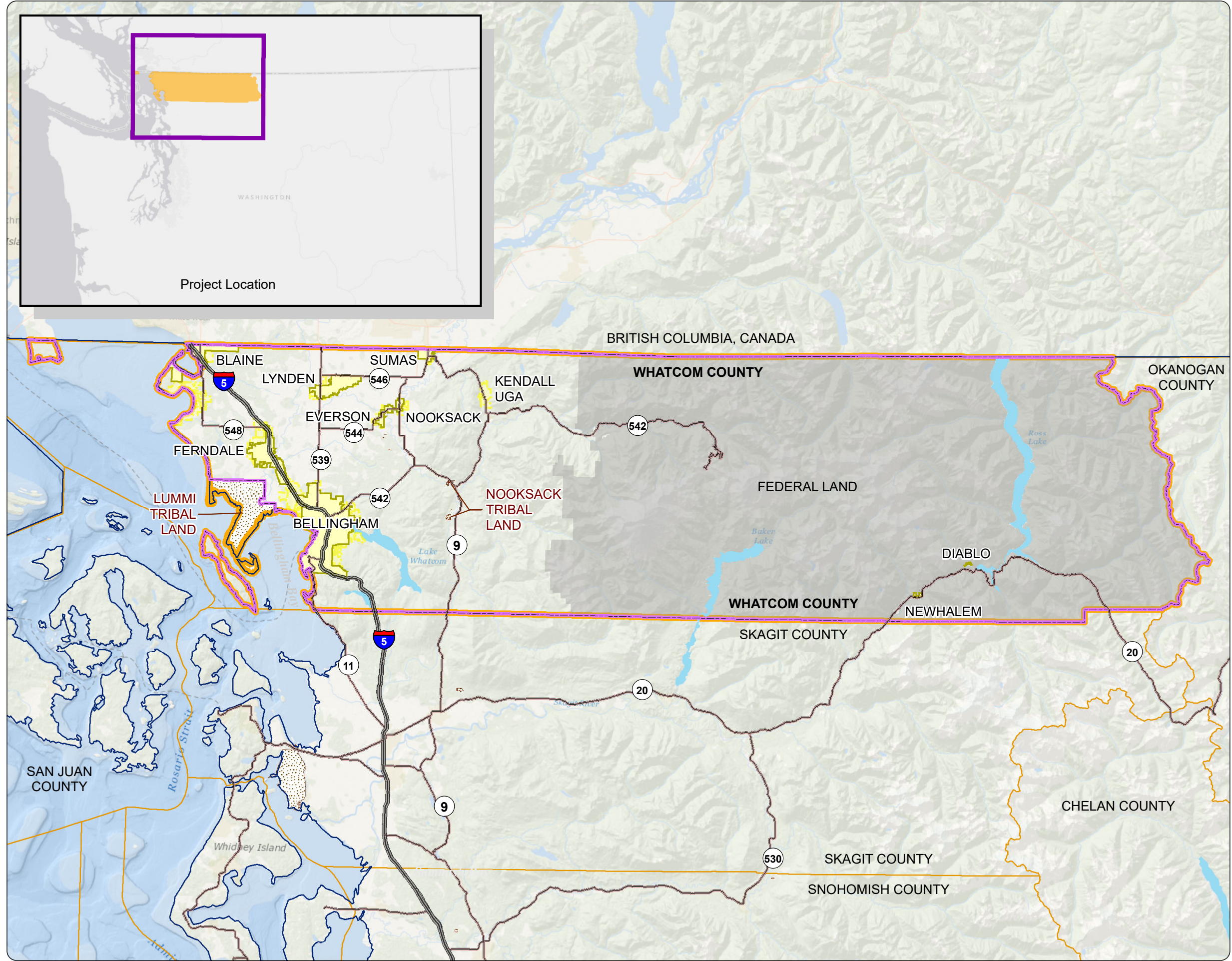
Three main river systems, the Nooksack, Sumas, and Skagit, help to drain the lowlands, foothills, and western mountains. The largest body of water in the western part of the County is Lake Whatcom (4,924 acres) and is the main source of drinking water for Bellingham. Other sizable lakes include Lake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

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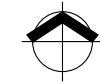
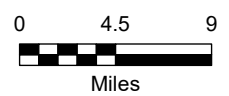
Comprehensive Solid and Hazardous Waste Management Plan Update

Figure 2-1 Base Map

Whatcom County
Washington



- Legend**
- Planning Area
 - City Boundary
 - Urban Growth Area
 - County Boundary
 - Washington Boundary
 - Federal Land
 - Tribal Lands

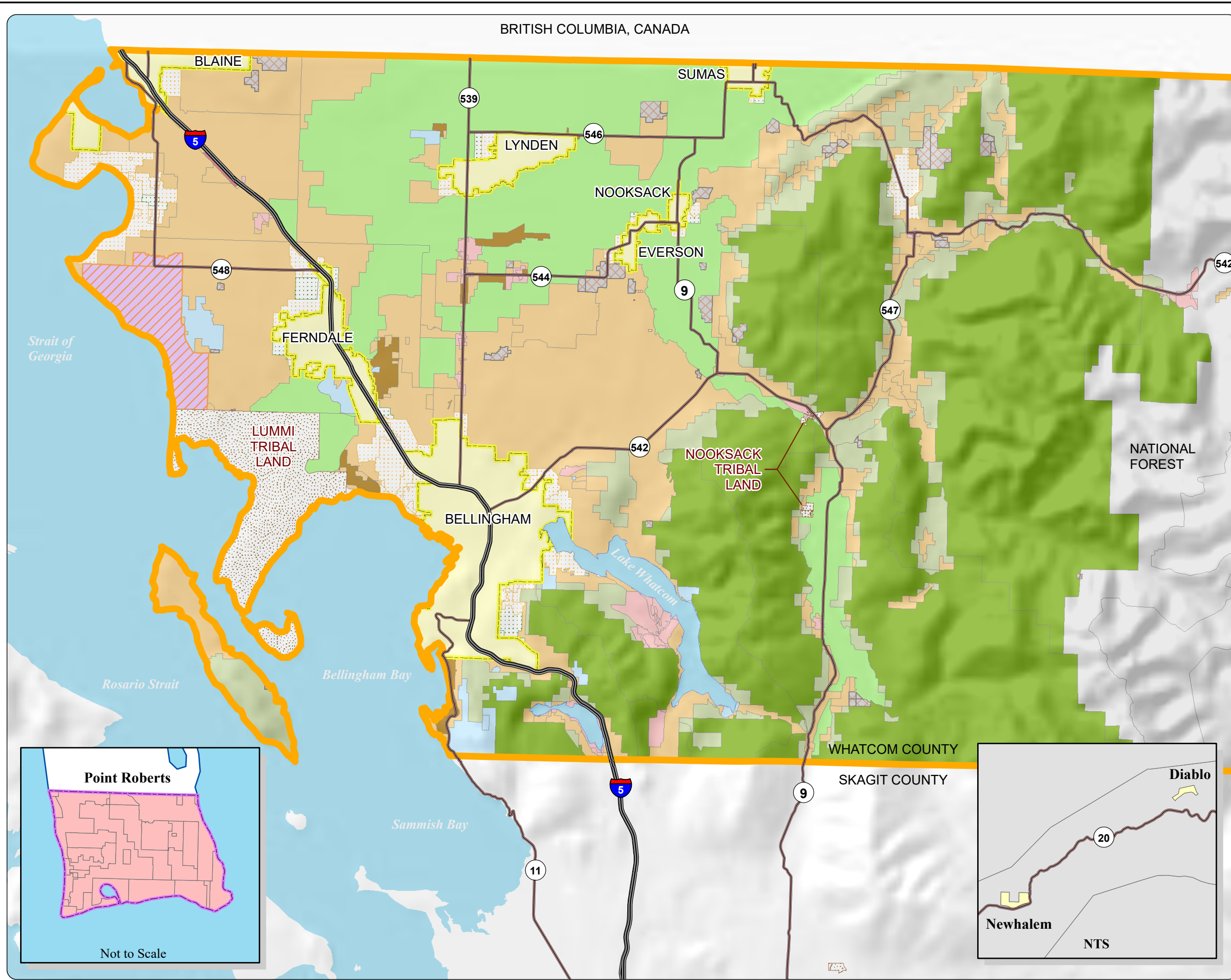


Source: Modeled terrain from Esri ArcGIS Online
City Boundary, County Boundary, Federal Lands,
Railroad, & Roads from Whatcom County.



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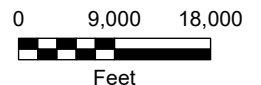
Figure 2-2 Land Uses Map

Whatcom County Washington

Legend

- County Boundary
- Comprehensive Plan Designation**
- Urban Designations**
 - Incorporated City Limits
 - Small Town
 - Urban Growth Area
 - Urban Growth Area Reserve
- Rural Designations**
 - Agriculture
 - Commercial Forestry
 - Federal Land
 - Major/Port Industrial UGA
 - Mineral Resource Lands
 - Public Recreation
 - Rural Forestry
 - Rural
 - Rural Business
 - Rural Community
 - Rural Neighborhood
 - Rural Tourism

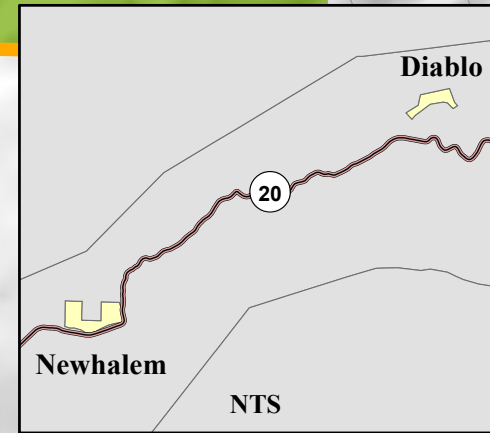
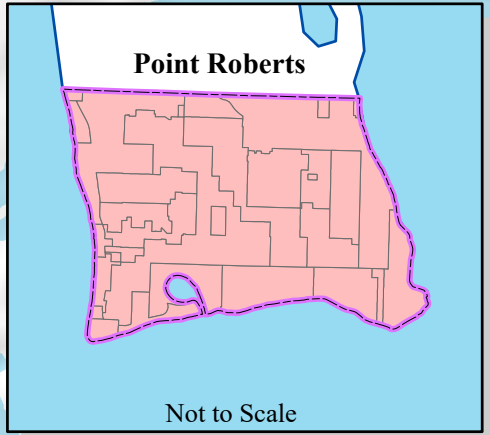
Note: Urban and rural designations are consistent with Revised Code of Washington 70.95.090(7)(b).



Source: City Boundary, National Forest Area, Planning Area Designations, Waterbodies, Zoning Designations from Whatcom County.



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



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.

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 that 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 the 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. In 2020, the OFM¹ estimated the total county population as 228,000. The population of the incorporated areas was 132,700, while the population of unincorporated areas was 95,300. The U.S. Census defines urban 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 according to the 2010 U.S. Census, the last available Census data. This same breakdown between urban and rural areas was applied to the OFM population estimates to determine the 2017 and 2020 unincorporated urban and rural populations.

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	2010 ^(a)	2017 ^{(b)(c)}	2020 ^{(b)(c)}
Urban Areas			
Bellingham	80,885	86,720	91,610
Blaine	4,684	5,075	5,520
Ferndale	11,415	13,470	14,600
Lynden	11,951	13,620	14,800
Unincorporated Urban	80,740	85,086	88,474
Urban Subtotal	189,675	203,971	215,004
Rural Areas			
Everson	2,483	2,630	2,860
Nooksack	1,338	1,490	1,645
Sumas	1,319	1,571	1,665
Unincorporated Rural	6,325	6,638	6,826
Rural Subtotal	11,465	12,329	12,996
Total Population	201,140	216,300	228,000
NOTES: OFM = Washington State Office of Financial Management ^(a) Data for 2010 was provided by the U.S. Census Bureau. ^(b) The breakdown of population estimated for each jurisdiction in 2017 and 2020 was calculated by assuming the same population share for each jurisdiction in 2010. ^(c) Total population for 2017 and 2020 is projected data prepared by OFM.			

¹ At the time of this document preparation, the 2020 United States Census was projected to be released in September 2021.

Between 2010 and 2020, the average annual growth rate of County population was 1.34 percent.

EMPLOYMENT

The U.S. Census 2017 American Community Survey (U.S. Census, 2017) reports that approximately 111,592 individuals above the age of 16 are employed in the County. The 2019 employment rate, the most recent data available is approximately 62.3 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 conducted analysis of employment in the County. The study uses 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, 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 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 the County compared to Washington State.

**Table 2-2
Employment Rates**

Date	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%
NOTES: -- = No data available OFM = Washington State Office of Financial Management 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.

**Table 2-3
Whatcom County Employment Sectors, 2017**

Industry	Number of Employees	Percent of Employed Population
Retail trade	12,813	11.5%
Manufacturing	11,958	10.7%
Educational services, health care, and social assistance	25,543	22.9%
Professional, scientific, management, and administrative and waste management services	8,797	7.9%
Construction	8,811	7.9%
Financing, insurance, and real estate	4,790	4.3%
Public administration	5,952	5.3%
Transportation, warehousing, and utilities	4,686	4.2%
Other services	6,178	5.5%
Agriculture, forestry, fishing, hunting, and mining	3,002	2.7%
Arts, entertainment, recreation, and accommodation and food services	11,471	10.3%
Wholesale trade	4,244	3.8%
Information	3,347	3%
NOTES: Percent of employed population is based on laborers per industry and total labor population 16 years and older (111,592) 2017, U.S. Census American community survey 5-year estimates.		

2.1.3 Land Use

The County covers approximately 2,152 square miles, with the majority (nearly three-quarters) of nonfederal land use distribution in the unincorporated portion of the 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 urban growth areas 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 that are essential for planning by cities, towns, and rural areas. The County’s process involves all jurisdictions and the County’s Planning Department.

The Whatcom County Comprehensive Plan most recently updated in 2016, sets policies for land use, community services, transportation, and environmental management.

2.2 History of Solid Waste System

The 2022 CSHWMP represents the seventh iteration of the plan. Each planning period represents a chapter in the history of solid waste management in the 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 (the last incinerator, operated by Recomp of Washington, Inc., ceased operation prior to 1996). In the early 1970s, the County acquired minimal solid waste management planning responsibilities because of new state law and produced its first plan in 1974. The CSHWMP 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 new system was formed, and the County set up a separate solid waste management division in 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 MSW, and three of the four accepted only C/D materials 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 CSHWMP.

The 1980s saw the system expand its solid waste management activities to include more than disposal, at least partially because of increased state and federal requirements. During this period, the system closed most of its existing dumps, compared the feasibility of waste export to finding a site for a new landfill, and began the development of the third iteration of the CSHWMP. 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 CSHWMP 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 because 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.

Since 1999, each iteration of the CSHWMP has stressed the importance of diverting waste from landfill disposal 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 that 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 CSHWMP. A more comprehensive glossary of definitions is provided immediately following the main body of this document.

Diversion: Any method of recycling, energy production, or beneficial use that prevents disposition of material in landfills or incinerators. The changes to Ecology's quantification of solid waste also replaced the term "diversion" with "recovery".

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 [WAC Chapter 173-303](#).

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.

Organic Material: Organic material refers to biodegradable, carbon-based materials that include green waste, food waste, and compostable paper and cardboard, and woodwaste. These materials make up a significant component of the County's solid waste stream.

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 waste, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

Recovery: Materials that are burned for energy recovery, anaerobically digested, or land applied for agricultural purposes. To provide an accurate comparison between 2017 and previous years, this CSHWMP will continue to use the prior definition of diversion.

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. It is important to note that in 2017, Ecology updated the classification of recyclable materials more broadly to include C/D, asphalt and concrete, land clearing debris, antifreeze, and commercial/industrial and household batteries.

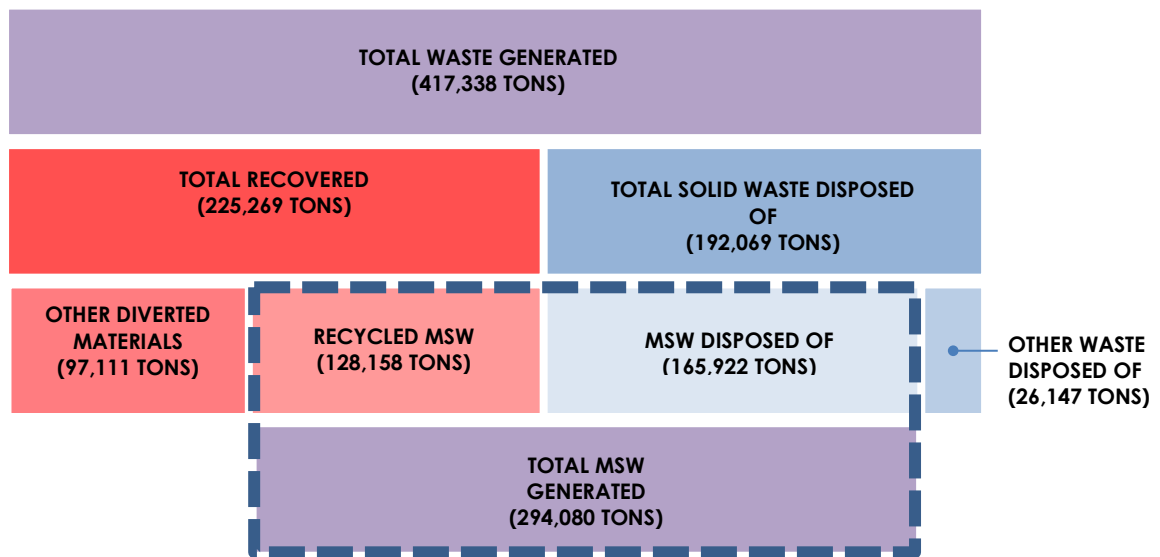
Waste Reduction: Sometimes referred to as *waste prevention* or *precycling*. Waste reduction is the practice of minimizing waste through responsible purchasing and consumerism. It is essentially, removing waste from the waste stream by not creating it in the first place. Waste reduction is typically 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 Generation

The discussion presented below is based mainly on data that were collected by Ecology and provided to the County². A total of 417,338 tons of solid waste was generated in the County in 2017 (this is inclusive of recycled, recovered, MSW, and industrial and inert wastes).

An overall summary of waste generation is represented graphically in Figure 2-3 below.

**Figure 2-3
Waste Generation Breakdown**



² <https://ecology.wa.gov/Research-Data/Data-resources/Solid-waste-recycling-data>

2.3.3 Waste Disposal

Of the 417,338 tons of MSW generated in the County, including recycled and diverted material, 165,922 tons of MSW were transported to and disposed of at an MSW landfill as described below. The remaining nonrecoverable portion of the waste generated in the County was disposed of at the Spokane Regional Waste to Energy Facility in Spokane, Washington, BP Cherry Point Landfill in Blaine, Washington, and Graham Road Recycling and Disposal in Medical Lake, Washington. Additionally, Lautenbach Recycling disposes of C/D and recycling residuals (nonrecyclable material) from the Skagit County Transfer Station.

Of the 165,922 tons of MSW disposed of at MSW landfills, roughly 69 percent is disposed of at Columbia Ridge Landfill in Arlington, Oregon (by RDS) and 29 percent is disposed of at the Roosevelt Landfill in Roosevelt, Washington (by Republic). The remaining two percent of waste was disposed of at the Greater Wenatchee Regional Landfill in East Wenatchee, Washington, the Headquarters Landfill in Cowlitz County. A portion of the total MSW generated in the County is disposed of at the Spokane Regional Waste to Energy Facility in Spokane, Washington, and Graham Road Recycling and Disposal in Medical Lake, Washington. Additionally, Lautenbach Recycling disposes of C/D and recycling residuals (nonrecyclable material) from the Skagit County Transfer Station.

Table 2-4 illustrates the trends in waste disposal and recycling in the County since 2007.

**Table 2-4
Waste Summary—Change Over Time, 2007–2017**

Year	Tons MSW Landfilled	Annual Percent Change	Tons Recycled	Annual Percent Change in Tons Recycled
2007	156,043	--	132,007	--
2008	149,751	-4.0%	121,917	-7.6%
2009	138,623	-7.4%	92,358	-24.2%
2010	133,943	-3.4%	103,385	11.9%
2011	130,171	-2.8%	129,553	25.3%
2012	132,539	1.8%	120,215	-7.2%
2013	135,134	2.0%	114,055	-5.1%
2014	135,442	0.2%	117,628	3.1%
2015	142,862	5.5%	125,898	7.0%
2016	149,294	4.5%	129,252	2.7%
2017	165,922	11.1%	128,158	-0.8%

NOTE:
 -- = No annual percent change in first year of data.
 Ecology = Washington State Department of Ecology.
 MSW = municipal solid waste.
 Tons landfilled data for 2007–2017 are taken from annual Ecology records. Recycled tons are taken from annual Ecology Recycling Survey.

2.3.4 Population Projections

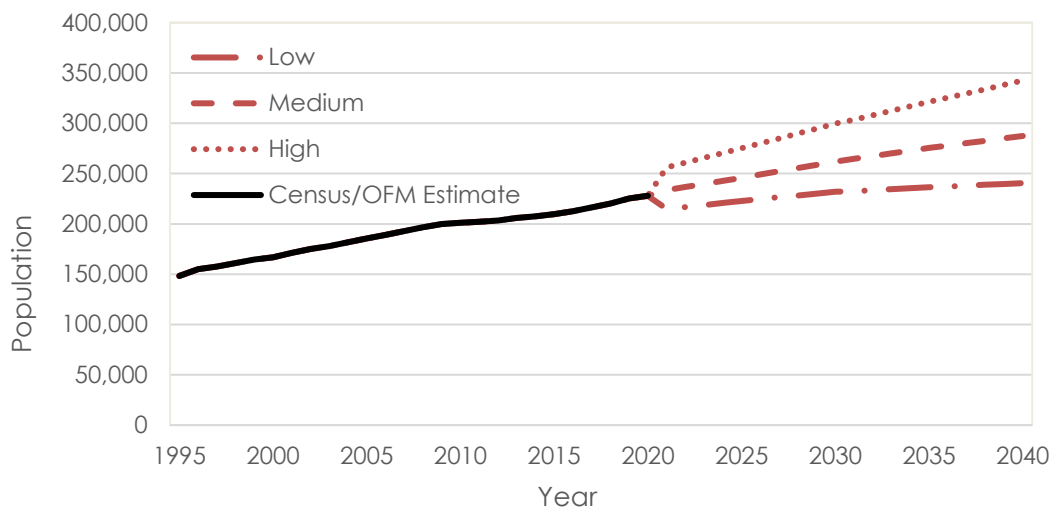
OFM’s population estimates for 2017 are used as a basis for the discussion below (OFM, 2017). OFM provides population forecasts for each county in Washington State. OFM has prepared high-, medium-, and low-series population projections for Washington counties through 2040. [RCW 43.62.035](#) provides that counties may, for purposes of growth management planning, use values between the high and low projections. As shown in Table 2-5, the medium series population projection predicts a County population of 287,369 in 2040. These populations would be attained with an average annual growth rate of approximately 1.2 percent over the planning period. The OFM low- and high-series projections have average annual growth rates of approximately 0.5 percent to 1.4 percent, respectively. Figure 2-4 below shows the low-, medium-, and high-series OFM population growth trajectory through 2040.

**Table 2-5
OFM Population Projections**

Year	Low Series	Medium Series	High Series
2020—estimated current	228,000		
2025	222,711	245,610	275,316
2030	231,842	261,996	299,625
2035	236,388	275,405	321,273
2040	240,495	287,369	342,477
Average annual percent growth	0.5%	1.2%	1.4%

NOTES:
OFM = Office of Financial Management.
All projections based on 2020 population estimate of 228,000 from OFM.

**Figure 2-4
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 that will increase the need for continued emphasis on waste reduction and recycling.

2.3.5 Solid Waste Per Capita

With an estimated population of 216,300 in 2017 (OFM, 2017), the County’s municipal disposal rate was 1,534 pounds per person per year, or 4.20 pounds per person per day. Table 2-6 summarizes the County’s total waste and diversion rates per capita over the last ten years.

**Table 2-6
MSW Summary—Total and Per Capita, 2007–2017**

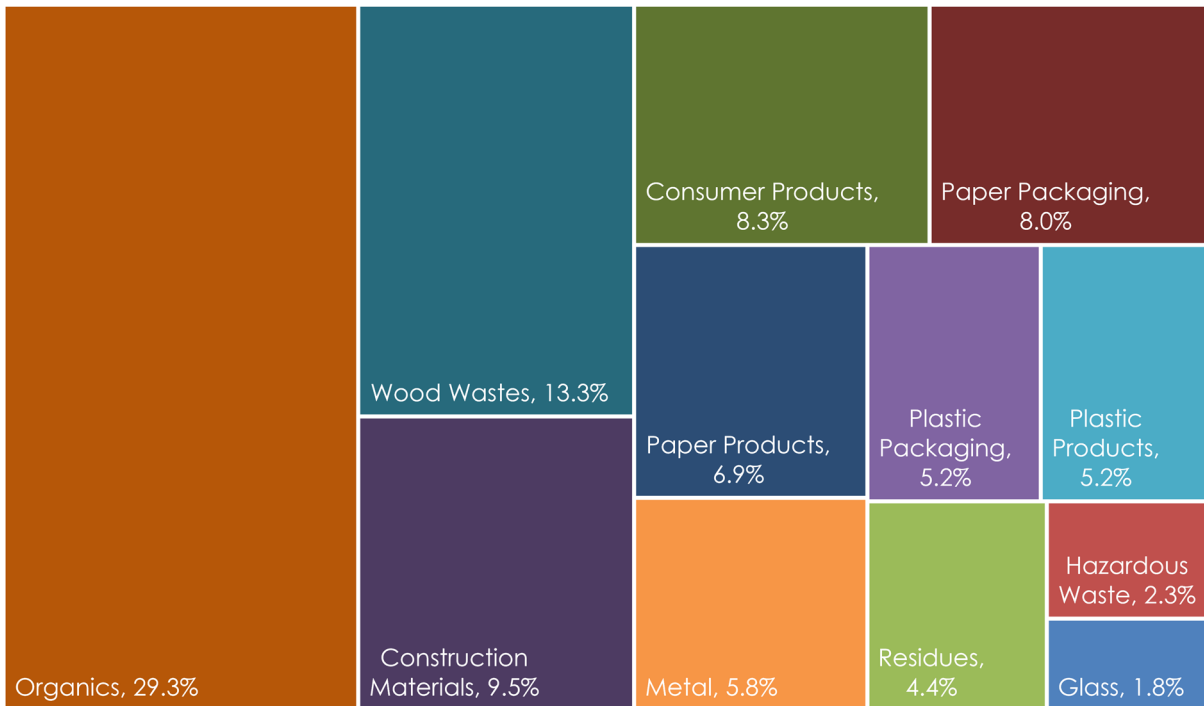
Year	Countywide	Total Recycling ^(a) (Tons Per Year)	Total Diversion ^(b) (Tons Per Year)	Total MSW Disposal (Tons Per Year)	Per Capita Waste Generation	Total Recycling (Pounds Per Year)	Total Diversion (Pounds Per Year)	Total MSW Disposal (Pounds Per Year)
2007		132,007	88,602	156,043		1,369	919	1,618
2008		121,917	28,232	149,751		1,240	287	1,523
2009		92,358	75,300	138,623		924	754	1,387
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
2014		117,628	41,205	135,442		1,133	397	1,305
2015		125,898	58,809	142,862		1,200	561	1,362
2016		129,252	71,932	149,294		1,216	677	1,405
2017	128,158	97,111	165,922	1,185	898	1,534		

NOTES:
 Ecology = Washington State Department of Ecology
 MSW = municipal solid waste.
 Tons landfilled data for 2007–2017 are taken from annual Ecology records. Recycled tons are taken from annual Ecology recycling survey.
^(a)Recycling represents materials that are transformed or remanufactured into usable or marketable materials for use other than landfill disposal or incineration as described in Section 2.3.1. Recycling does not include collection, compaction, repackaging, and sorting for the purpose of transport.
^(b)Diversion represents the materials that are removed from the waste stream for the purpose of energy production or other beneficial use, as described in Section 2.3.1. Total Diversion excludes materials that are recycled.

2.3.6 Disposed Municipal Solid Waste Stream Composition

In 2015–2016, Ecology conducted a four-season MSW characterization study that identified major waste stream compositions for specific counties in Washington State (Ecology, 2018). The study included wastes generated from four major sectors: commercial waste sector, residential waste sector, self-hauled C/D materials sector, and self-hauled other waste sector. Figure 2-5 below shows the disposed waste stream composition for the County from all waste sectors averaged over the four seasons.

**Figure 2-5
Whatcom County Waste Stream Composition
2015 Seasonal Study (All Seasons)***



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

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

2.3.7 Other Disposed Solid Waste

Table 2-7 shows the other major waste streams generated in the County in addition to MSW. Non-MSW waste streams tend to be highly variable on an annual basis because of largescale industrial maintenance activities, contaminated site remediation projects, structure demolition projects, and other non-routine activities.

**Table 2-7
Total Tonnage of Waste Disposal, 2007–2017**

Year	Municipal Waste	Industrial Waste	Contaminated Soil ^(a)	C/D Waste ^(b)	Asbestos-Containing Materials	Special Waste
2007	156,043	29,503	11,299	13,700	6,214	--
2008	149,751	3,447	10,901	19,612	1,004	--
2009	138,623	1,511	12,197	7,187	67	--
2010	133,943	4,109	16,408	2,938	236	--
2011	130,171	7,893	20,291	440	227	--
2012	132,539	13,380	8,062	5,034	115	105
2013	135,134	3,407	8,217	9,729	93	9,827
2014	135,442	2,785	14,014	11,540	81	11,083
2015	142,862	2,893	23,191	1,794	1,314	116,756
2016	149,294	2,879	33,342	4,325	346	89,194
2017	165,922	2,685	18,954	6,378	334	17,084
Percent of Total Waste Stream	79%	1%	9%	3%	<1%	8%

NOTES:
 Total tonnage of waste disposal data for 2007–2017 are taken from Washington Department of Ecology's Disposal by County annual records.
 -- = No data available.
 C/D = construction and demolition.
 Ecology = Washington State Department of Ecology
^(a)Contaminated soil includes petroleum-contaminated soils, dredged materials, and other contaminated soil.
^(b)C/D waste includes brick and masonry, concrete, C/D waste, soil, rock, gravel, uncontaminated soil, and woodwaste.

2.3.8 Diversion and Recycling Rates

Diverted waste is the prevention of landfill disposal of generated waste through source reduction, reuse, recycling, energy recovery, or composting. Recycled materials are the portion of diverted wastes that are transformed or remanufactured into usable or marketable materials.

The waste diversion rate for the County is calculated by dividing the tons recovered (recycled materials plus other diverted materials) by the total solid waste generated.³ The waste diversion rate is different from the recycling rate in that all the waste generated in the County is considered, including industrial waste. The typical diversion rate for the County is above 50 percent. Over the most recent five-year period (2013 to 2017) the diversion rate was generally above 50 percent, though two years dipped to as low as 41 percent.⁴

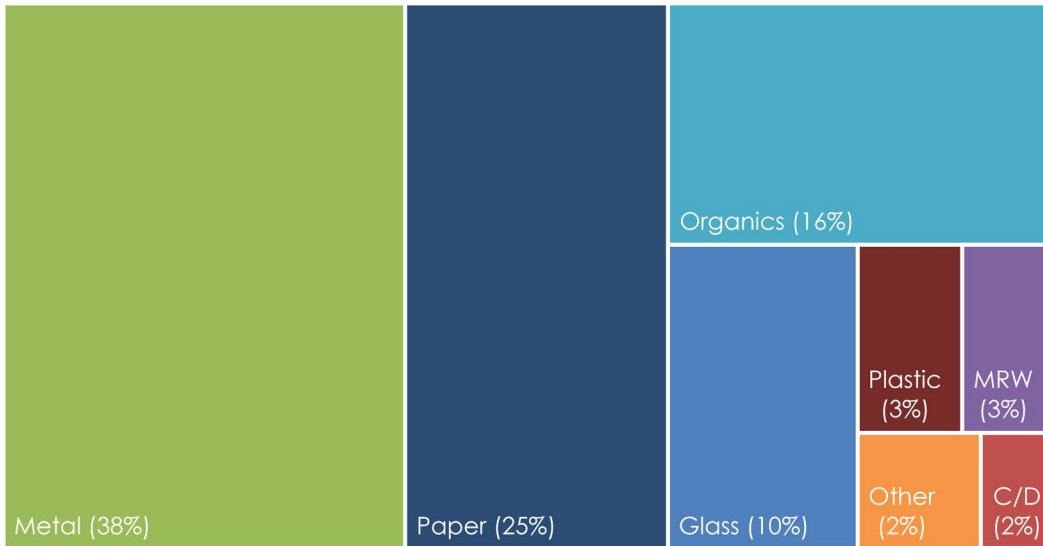
The recycling rate for the County is calculated by dividing the tons recycled by the total MSW generated. It is important to note that the recycling rate is included in the diversion rate. The recycling rate is a measure of how much of the MSW generated in the County is successfully separated by residents and businesses and then sent for recycling. Typically, the County recycling rate is between 45 and 50 percent. Over the most recent five-year period (2013 to 2017) the recycling rate varied between 44 and 47 percent.

According to the annual Ecology records, major diversion streams for the County include C/D-related waste (including asphalt and concrete, C/D waste, land clearing debris, and wood burned for energy) that makes up 95 percent of diverted materials, organics, and MRW. Major recycled streams for the County include metals, paper, and organics (see Figure 2-6). It is worth noting that metals, which account for a significant portion of the recycled stream, are collected curbside (typically small cans) and are also brought directly to metal recycling facilities (cars, industrial and construction remnants, and other salvaged materials).

³ In 2017, Ecology recategorized materials into recycling and recovery, eliminating the diversion category. The new term, recovery, focuses on materials that are burned for energy recovery, aerobically or anaerobically digested, or land applied for agricultural purposes. The recategorization moved many material types from diversion into the recycling category and caused the calculation of total MSW generated (calculated by adding MSW disposed of and material recycled) to increase significantly. Due to the recency of the change and to provide a reasonable comparison to previous years, MFA recategorized Ecology's 2017 summary of material types recycled and recovered to match the previous classifications of recycling and diversion. Future updates of the CSHWMP should evaluate the benefit of reclassifying the historic data summaries to match Ecology's new categories.

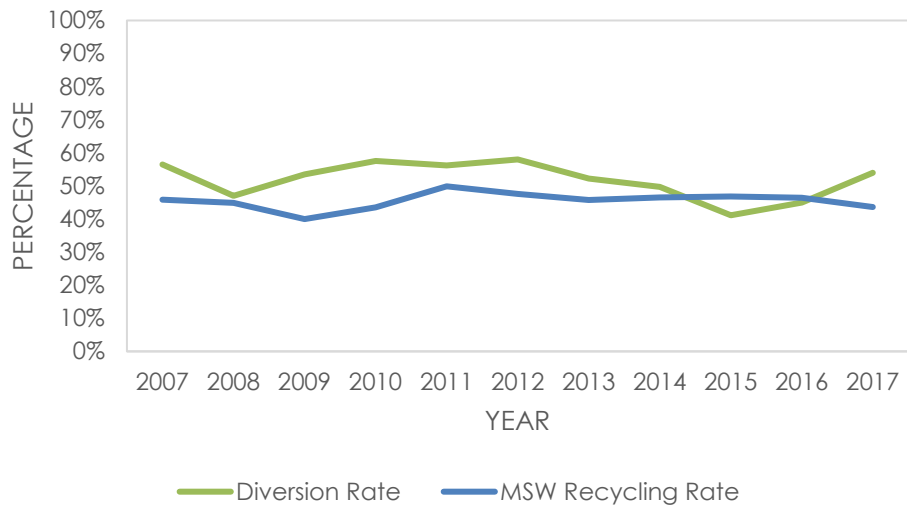
⁴ In 2015 and 2016, an anomalous amount of special waste was reported by the Columbia Ridge Landfill, which may be attributed to a large one-time project or misattributed waste records.

**Figure 2-6
Recycled Stream Composition, 2017**



A summary of the overall diversion and recycling rates from 2007 to 2017 is presented in Figure 2-7 below.

**Figure 2-7
Diversion and Recycling Rates, 2007–2017**



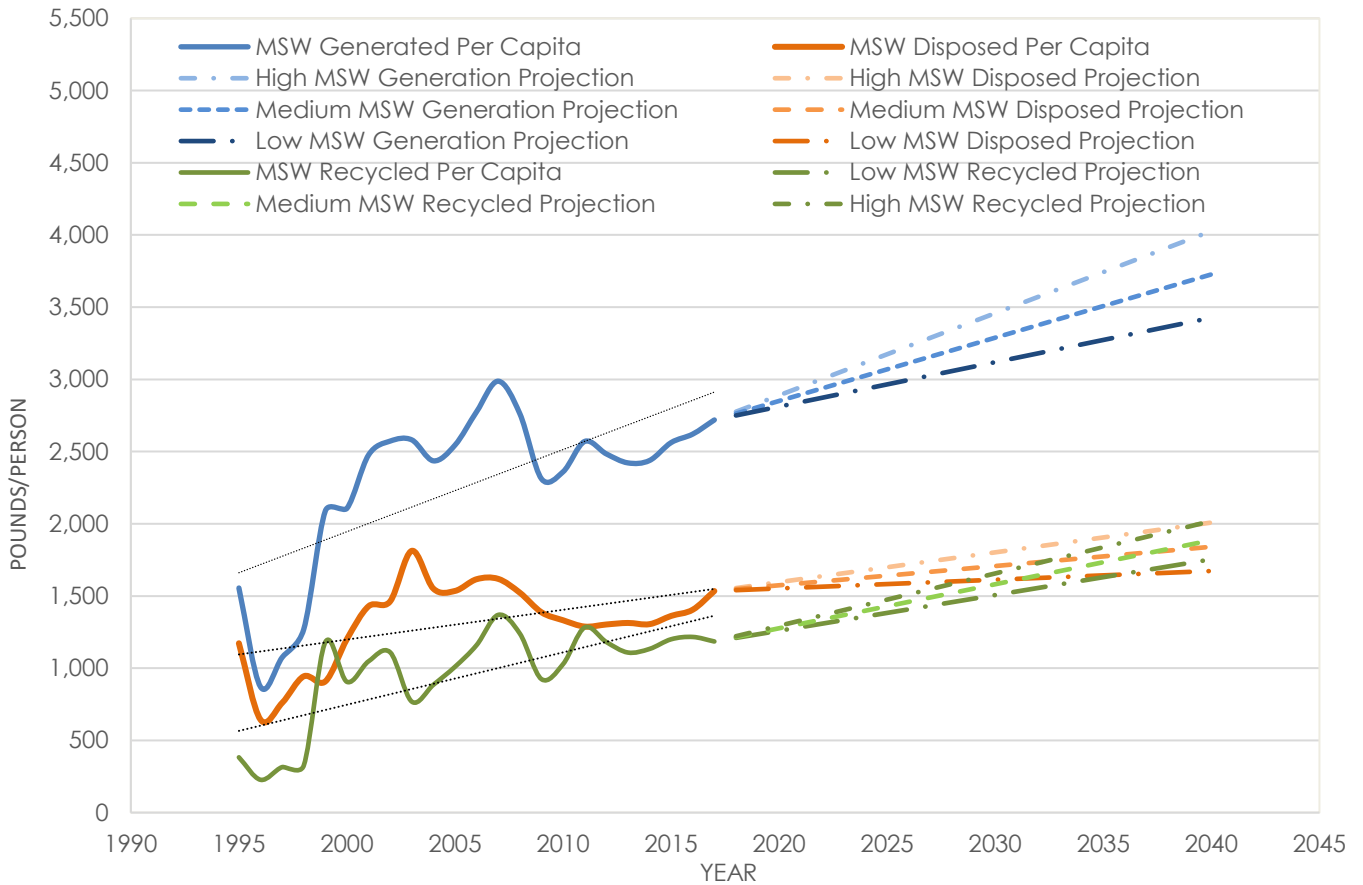
2.3.9 Per Capita Waste Projections

The per capita MSW generation chart is shown in Figure 2-8. Between 1995 and 1999 there were large fluctuations in per capita waste generation from a low of 870 pounds per person in 1996, to a high of 2,089 pounds per person in 1999. Following 1999, per capita waste generation increased steadily to a high of 2,987 in 2007. Per capita MSW generation decreased noticeably in 2009 and 2010, likely 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 that resulted in improved efficiency (reducing management costs) and/or community motivation to prevent the generation of solid waste. Per capita MSW generation was mostly steady from 2011 to 2013 at which point it began to increase to 2,719 pounds per person in 2017. A close look at the waste generation line between 2000 and 2007 shows a period of accelerated growth, followed by a steep decline in 2008 and 2009, corresponding to a significant financial recession. The change in per capita generation habits was observed at a state and national level. A portion of the drop in the per capita waste generation was likely also a result of increasing public awareness of the negative economic and environmental impact that resulted in improved efficiency (reducing management costs) and/or community motivation to prevent the generation of solid waste. A consistently upward new trend is visible between 2009 and 2017. It is not as steep as the previous trend.

A projection of the per capita MSW generation in the County has been developed for both trends that are shown in Figure 2-9: 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 increases at a rate of 31 pounds per person per year, while the high rate increases at 57 pounds per person per year. The per capita low projection of recycling increases at 25 pounds per person per year, while the high rate increases at 36 pounds per person per year.

The waste projections are based on the data provided by Ecology through 2017. The County anticipates significant changes to solid waste generation and disposal beginning in early 2020 and beyond, due to changes in consumer habits that were brought about by the COVID-19 global pandemic. Data for this period was not available as of the writing of this plan and so the County will evaluate potential new trends during the next update.

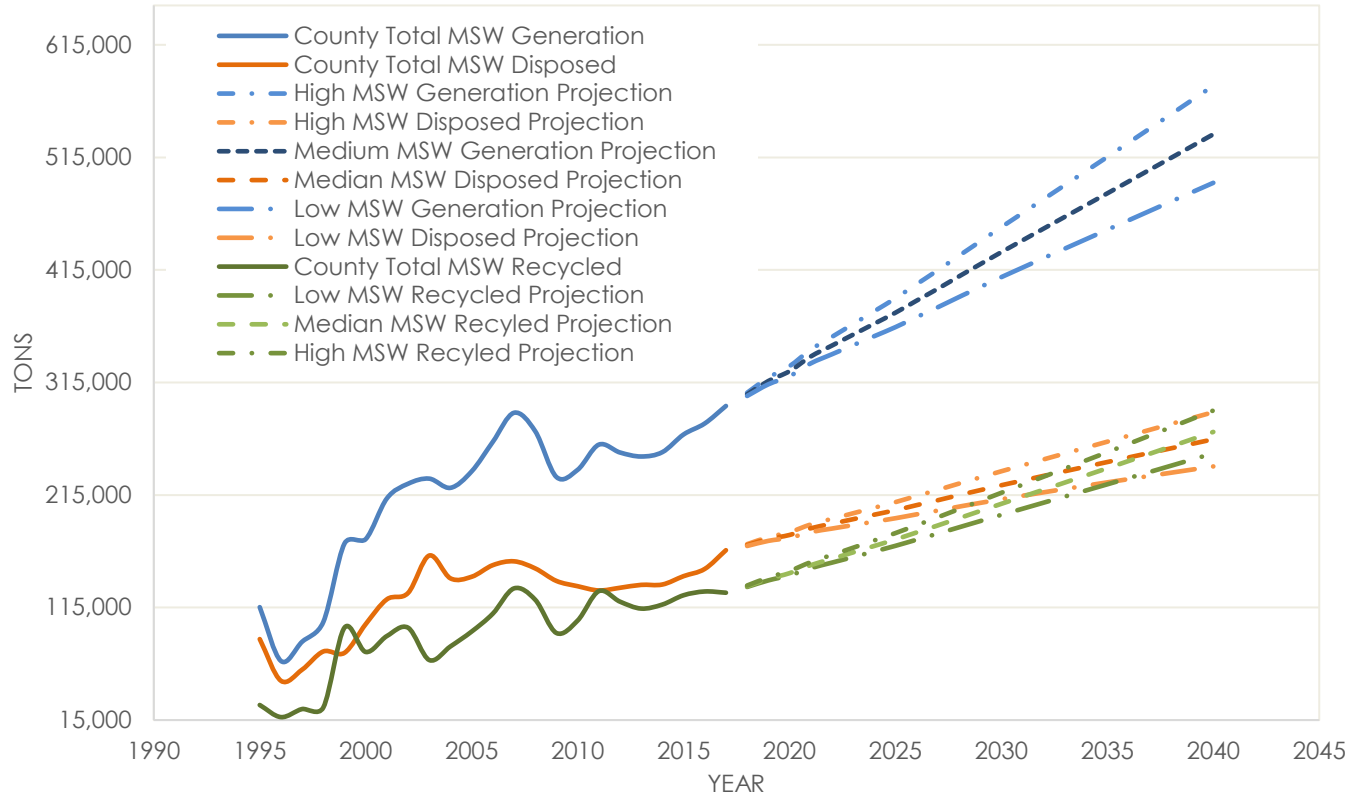
**Figure 2-8
Whatcom County Waste Projection, Per Capita**



2.3.10 Total County Waste Projections

Estimates for future waste generation, recycling, and disposal are calculated by multiplying the population projections with the per capita waste generation projections. The medium series population projection is shown in Figure 2-9, reflecting the high and low per capita as shown in Figure 2-8. The middle per capita number combined with the medium series population growth for the County identifies a 20-year waste potential of 535,000 tons generated, 265,000 tons disposed of, and 271,000 tons recycled. Solid waste service providers were apprised of these waste projections throughout development of this revision of the CSHWMP and have ensured the County that they will continue to plan for and construct sufficient system capacity in advance of need. The County will continue to work with the private solid waste service providers to ensure that facility capacity is constructed in advance of need.

**Figure 2-9
Whatcom County Waste Projection, Total**



2.3.11 MRW Management

MRW is regulated as solid waste and is defined as hazardous waste (waste chemicals) generated from households and qualified conditionally exempt small quantity generator (CESQG) businesses. The County owns one of the two permitted moderate risk waste facilities (MRWFs) located in the County. The second facility is the Seattle City Light Skagit Hydroelectric Project (Newhalem) MRWF.

The Newhalem MRWF accepts MRW from CESQGs working on the Skagit Hydroelectric Project only. The County collected 453,766 pounds of MRW in 2020 (64,003 pounds from CESQGs and 389,763 pounds from county residents). The most recent version of the State of Washington's annual status report on solid waste was published by Ecology in December 2015 (Ecology, 2015) and provides a summary of the statewide solid waste activities, including MRW activities. The report states that the County was one of the five counties that publicly collected the most CESQG waste per capita. An active outreach program through EnviroStars is a significant contributor to the success of the County program that is described in more detail in Section 3.1.1.

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 70A.205](#)). As a result, waste reduction is a critical element of all local solid waste management plans. Waste reduction is defined in [RCW 70A.205.015](#) as “reducing the amount or toxicity of waste generated or reusing materials.” Recycling is defined in [RCW 70A.205.015](#) 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 and are identified in RCW 70A.205 as a top priority for solid waste management. There has been a continued trend in focusing and supporting waste and pollution prevention. An obstacle that remains is that 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 the County, programming and work conducted by Sustainable Connections, RE Sources for Sustainable Communities (RE Sources) classroom education and programming, Washington State University (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 reduction and recycling technical assistance to businesses. For example, SSC currently provides waste audits to businesses to increase efficiency in their customers’ system and to help save money and gain efficiencies.

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

3.1 Existing Conditions

3.1.1 Public Sector Activities

STATEWIDE

As of the writing of this CSHWMP, a statewide ban on single-use plastic bags is set to begin on October 1, 2021. This ban prohibits the distribution of single-use plastic carry-out bags by restaurants, retail, small vendors, and grocery stores. Ecology recommends the use of reusable bags, but customers will also have the option of using compliant plastic or paper bags offered by a merchant for a charge of eight cents per bag. Ecology and partners developed an outreach tool kit that includes a variety of materials that are customizable for individual restaurants and retailers. With the passing of new plastics laws in 2021 and the Food Waste Reduction Act in 2019, Ecology anticipates expanding its education and outreach efforts to implement these and other initiatives. Ecology's approach to educating the public about sustainable materials management best practices is evolving to meet these challenges.

As guided by the statutes in the state's legislature, Ecology offers recycling information to Washington's residents, oversees recycling programs for unusual or hazardous materials, and supports programs to reduce or reuse food waste and other organic materials. Through ongoing communications with local partners, Ecology guides the implementation of new waste laws and promotes harmonization of outreach campaign messaging across the state.

Ecology is committed to ensuring that diverse audiences have meaningful access to services, information, and input on policy directions. This means routinely evaluating who the intended audience is then planning for inclusive engagement that addresses the languages, cultures, literacy, abilities, and other characteristics of the audience

To support the general public, Ecology's Reducing and Recycling Waste website (<https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste>) provides a wealth of information on various recycling programs, solid waste data, and recycling services. The 1-800-RECYCLE program (<https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste/1-800-RECYCLE>) is both a hotline and an online tool that connects individuals and businesses to recycling services across Washington.

The Waste Not Washington School Awards (<https://ecology.wa.gov/About-us/Who-we-are/Our-Programs/Solid-Waste-Management/Sustainable-School-Awards>) promote sustainability and reward school efforts to reduce waste, recycle, and teach environmental curriculum.

Ecology oversees three active producer responsibility programs: E-Cycle Washington (<https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste/Electronics-E-Cycle>) for computers and TVs; LightRecycle Washington (<https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste/Mercury-lights>) for mercury-containing lights, and PaintCare (<https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste/Paint-stewardship>) for

architectural paint. These programs all have requirements for outreach so that the public knows where they can safely recycle these items.

To support local partners conducting outreach efforts, Ecology distributes outreach materials including:

- The We Keep Washington Litter Free campaign (<https://ecology.wa.gov/Waste-Toxics/Solid-waste-litter/Litter/litter-prevention/Keep-Washington-Litter-Free>) recently launched with radio ads, commercials, and an outreach tool kit: Secure Your Load for Safer Roads (<https://ecology.wa.gov/Waste-Toxics/Solid-waste-litter/Litter/litter-prevention/Keep-Washington-Litter-Free/Secure-Load-campaign>).
- Ecology’s Recycle Right page (<https://ecology.wa.gov/recycleright>) has a link to a tool kit with outreach materials for the public.
- The Plastic Bag Ban effort provides an outreach tool kit (<https://app.box.com/s/mhrkiuiku4sum2q904saymf6dix294b7>) for local governments and businesses to comply with Washington’s single-use plastic bag ban, that will go into effect in October 2021.
- The Recycling Contamination Reduction Resource Library (https://www.ezview.wa.gov/site/alias_1962/37664/recycling_contamination_reduction_resources.aspx) is a rich information resource for local governments and interested members of the public to reduce contaminants in the recycling stream.

The State Solid and Hazardous Waste Plan (<https://ecology.wa.gov/Regulations-Permits/Plans-policies/Washington-state-waste-plan>) is another information-rich document available for the public. It includes a section about education and outreach, and it includes goals and actions for state and local governments and others to work on. The plan calls for outreach and education about:

- Toxic chemicals in products, including how to avoid and properly dispose of them
- Reducing food waste, reducing contamination in collected organic materials, and the benefits of using compost and other recycled organic products
- Reduced consumption, waste reduction, environmentally preferred purchasing, proper recycling, and litter prevention.

The plan calls for communication strategies, outreach materials, and public engagement activities to be inclusive, accessible, and in compliance with Title VI of the Civil Rights Act.

Ecology also administers grants to support waste reduction and recycling, which may include public outreach efforts:

- Public Participation Grants (PPG) (<https://ecology.wa.gov/About-us/Payments-contracts-grants/Grants-loans/Find-a-grant-or-loan/Public-participation-grants>) provide

funding to individuals and not-for-profit public interest organizations to increase public understanding and involvement in cleaning up contaminated sites and improving recycling and waste management.

- Local Solid Waste Financial Assistance program (<https://ecology.wa.gov/About-us/Payments-contracts-grants/Grants-loans/Find-a-grant-or-loan/Coordinated-prevention-grants>) provides funding to local governments for solid and hazardous waste planning and implementation, as well as enforcement of solid waste rules and regulations.
- Waste Reduction and Recycling Education Grants (<https://ecology.wa.gov/WRRED>) provide funding for qualified local governments and nonprofit organizations for local or statewide education programs designed to help the public with litter control, waste reduction, recycling, and composting.

WHATCOM COUNTY

In a privatized solid waste system, a primary County role in solid waste management is public outreach and education, as well as overall program assessment. 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 WSU Whatcom County Extension Master Recycler and 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 about responsible waste management, including ways to minimize waste and disposal. Green classroom certifications and waste audits are also provided 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 the process source control by 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 manage dangerous waste, prepare for spills, and reduce stormwater pollution. The grant also funds EnviroStars.

[EnviroStars](#) 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 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 in 2012, through Ordinance 2011-07-034, which became Bellingham Municipal Code [6.47.020](#). The ordinance prohibited the use of single-use, plastic, carry-out bags less than 2.25 mils⁵ 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 used, with or without a charge, at the store's discretion. Large paper bags require a five-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.

In March 2020, the plastic bag ban was suspended due to safety concerns related to the COVID-19 pandemic. In March 2021, the City Council resumed discussion on an expanded single-use plastic ban, including straws, cutlery, plates, bowls, cups and beverage containers and lids, and condiment containers. The pending ordinance was approved in May 2021 and is set to take effect in 2022.

⁵ A mil is equivalent to one thousandth of an inch.

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 Materials 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 measures that are 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.

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

Ragfinery opened in April 2014 as the second "jobs from waste" business of ReUse Works, which is a branch of the same nonprofit that operated the former Appliance Depot. Ragfinery accepts unwanted garments and textiles, diverting them from the waste stream and upcycling them in a training business that provides transitional jobs for low-income clients.

The RE Store is the retail arm of RE Sources. Staff and volunteers work to divert more than four million pounds of C/D waste annually by deconstructing small homes and outbuildings, salvaging usable building materials and furnishings from residential and commercial 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 100 work trainees and volunteers, totaling more than 5,000 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.

A notable change is the closure of Appliance Depot, which previously offered free curbside pickup of large household appliances in the City of Bellingham and other portions of the County. The appliances were reconditioned and sold to the public. Due to COVID-19, Appliance Depot is no longer in operation.

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

SSC has provided over 2,500 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 (TZW) organized by Sustainable Connections in concert with the City of Bellingham and the 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 total in the tens of millions of dollars.

Since 1994, the SSC recycling manager has reviewed all new commercial and multifamily construction in the City of Bellingham (Ferndale and Blaine applications have been reviewed 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 about 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 20 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 tool kits, 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 80 businesses per year over a two-year period, helping participants implement individual TZW plans. Of these businesses, 50 to 55 typically are existing participants who need supplemental hands-on assistance to successfully implement TZW, and 25 to 30 are new participants interested in establishing TZW in their businesses. By September 30, 2014, a total of 445 participating businesses showed improvement in at least two of the following areas:

- Reducing solid waste generated by 50 percent compared to pre-TZW 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. On behalf of the Whatcom County Solid Waste Division, the Sustainable Schools team offers two types of programming: traditional in-class presentations about solid waste, paper-making, and household hazardous waste; and the 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.

During the 2018-2019 school year, RE Sources conducted programming in 88 classrooms, contacted 2,107 students, and certified 53 [Green Classrooms](#). Outreach took place in 60 different schools in seven school districts throughout the County. RE Sources is seeking additional funding to expand and extend waste prevention education programming to the middle school level in 2021 and explore the potential for programs at the high school level. In addition, RE Sources will continue to develop relationships with district-level staff, starting with Mt. Baker School District. In addition to local efforts led by RE Sources, a handful of schools also participate in the [EarthGen](#) program, formerly Washington Green Schools, that provides support and resources for resource conservation education.

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 Composting and Recycling 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 the 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 2021 includes a four-week course with an emphasis on composting and soil building. Enrollment is anticipated at 20 families.

3.1.4 Former Education Efforts (County, Private, and Nonprofit)

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 following the financial collapse in 2008. 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.

TZW 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 1,000 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 tool kit 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 2020, 550 businesses were participating in the TZW program. Eighty-two percent of respondents have reduced, reused, or recycled their largest waste stream, 30 percent of participants reduced the size of their garbage dumpster, 40 percent of participants reduced the frequency of waste hauler pickup, and 65 percent of TZW participants have instituted at least one additional sustainable business practice.

This effort, originally launched in 2009, received funding from the County in 2009 and 2011, but has not received additional County funding since. Most current program funding comes from private foundations and grants.

In 2017, an Ecology PPG was awarded to Sustainable Connections to develop an organics diversion and education program, now known as the Food Recovery Program (FRP). The FRP diverts nutritious surplus food from smaller sectors, such as restaurants and cafeterias, and redistributes this food to agencies focused on feeding community members in need. Sustainable Connections identified the need to work with these smaller sectors because the larger food banks are unable to handle the inconsistency and immediacy around prepared, perishable foods. The FRP recovers food from more than 70 businesses, works with more than 50 volunteers, and redistributes food to 12 hunger relief agencies throughout the County including the Lummi Nation.

Businesses that donate food to the FRP report a better understanding on how to store foods and extend the food's lifetime, use surplus prepared food and reduce food waste overall. The amount of food waste reduction at these businesses can be attributed to their increased handling of surplus food;

the more that food is analyzed by the donating business, the better understanding they have of their food waste, ultimately allowing them to reduce the volume of surplus food. Success of the FRP has resulted in additional PPG funding in 2019 and again in 2021. County funding was also awarded in 2019 and in 2021 to aid the growth of the program.

In addition to the food recovery element of the FRP, there is an educational component encouraging community members to reduce food waste at home. Food waste reduction education exists on the Sustainable Connections website and is shared at workshops, school presentations, newsletters, social media, outreach materials, and more.

In 2020, Sustainable Connections was awarded one year's worth of funding by an Ecology Waste Reduction and Recycling Education grant and launched the Where To Go With To-Go campaign (W2G). The goal of this campaign was to combat the upswing of single-use plastic waste generated by the influx of to-go food. W2G helps restaurants move away from single-use plastic, ensures that any switches to compostable products are switches to options that can be composted locally, and increases public education in how to dispose of to-go products. The W2G campaign is comprised of 40 participating businesses, and that number continues to grow. Sustainable Connections provides these businesses with educational materials for both employees and customers regarding source reduction and proper waste sorting, conducts personalized to-go ware waste assessments, and generates and distributes a resource guide to support restaurants in making informed purchasing decisions of to-go ware. This campaign helped set the foundational approach and outreach strategy applicable to the single-use plastics ban that will go into effect for restaurants and hotels in Bellingham starting in July of 2022.

A formal recycling hotline was operated by the County, and before 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 website or were able to leave a message. Messages left on the hotline were returned by solid waste staff. Calls made to the hotline are now redirected to the County Health Department receptionist and calls are referred to relevant staff. Additional resources are available online through the state <https://www.facebook.com/1800recycle.wa.gov> and <http://1800recycle.wa.gov>, and via live phone assistance during the week (9:00 a.m. to 3:00 p.m.) at 1-800-RECYCLE (1-800-732-9253)

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

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

Permanent information centers were installed in 1992 to provide solid waste information on brochure racks 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 (and is now required by law under [RCW 70A.200.100](#)). 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. Ecology provides an event recycling brochure that outlines the requirements and resources for the public to comply with this law (<https://apps.ecology.wa.gov/publications/documents/0807016.pdf>).

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 and the programs available to do so. In addition, certain electronics can be recycled for free through a product stewardship program call [E-Cycle Washington](#) launched in 2009.

3.2 Needs and Opportunities

The state has identified citizen participation as a critical element in decreasing the per capita waste generation rate. When considering all waste generated in the County (residential, commercial, industrial), the per capita generation rate is 3,859 pounds of waste per person per year, compared to the state rate of 4,709 pounds per person per year. After accounting for waste reduction and recycling, MSW disposed of by county residents is 1,534 pounds per person per year compared to the state rate of 1,431 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 increase between one and two percent per year over the next 20 years. The outcome of successfully implementing the goals and actions of this CSHWMP would limit per capita generation to not more than a one percent annual increase (or 27 pounds per person per year) from the 2017 per capita rate. Packaging and mailing containers are suspected to be significant contributors to waste generation increases as residents switch to more home deliveries of goods during the COVID global pandemic. 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. It should be noted that with contamination losses of less than one percent, the County's effective recycling diversion per capita is significantly higher than the state average, where contamination and processing losses from single-stream recycling approach 25 percent by weight.

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- and non-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 managing 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 websites, 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 preparing 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 website 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. A detailed discussion of the County's private transfer and disposal system is provided in Section Seven of this CSHWMP.

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
<p>1. Increase community knowledge and expertise of waste reduction methods by providing educational opportunities to targeted populations using existing public and private resources.</p>	<ul style="list-style-type: none"> 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. Provide additional educational resources for adults. D. Support and fund commercial education through targeted outreach, commercial waste audits, and technical assistance, specifically related to C/D and food waste. E. Increase distribution of waste reduction educational materials related to C/D waste for the construction industry to address significant increases during the COVID-19 pandemic. F. Target development of educational materials for multifamily customers. G. Increase support and advertising for the WSU composting education program through the Master Composting and Recycling program. H. 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. I. Publish educational materials of the solid waste system in response to community requests.
<p>2. Use appropriate and relevant tools for mass communication and outreach to further promote implementation of waste reduction methods, using an integrated public/private approach.</p>	<ul style="list-style-type: none"> 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 website, 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).

GOALS	ACTIONS
<p>3. Develop relevant educational materials for residential, commercial, and institutional consumers.</p>	<p>A. Educate about waste generation habits/trends.</p> <p>B. Educate about waste reduction and home waste management (material reuse opportunities, purchasing products with less packaging, purchasing more durable goods, home composting, and food waste prevention).</p> <p>C. Educate about the environmental impact of waste and waste management.</p> <p>D. Promote the theme of zero waste.</p> <p>E. Identify relevant metrics and data-gathering needs in coordination with the County CROP to support targeted and effective future education and outreach programs.</p>
<p>4. Review solid waste data on an annual basis.</p>	<p>A. Review annual solid waste data provided by Ecology and track effectiveness of County programming.</p> <p>B. Request more detailed data as needed and form material handlers to better understand the effectiveness of County programming.</p>
<p>5. Reduce food waste by 50 percent.</p>	<p>A. Incorporate the state food waste reduction Plan released in late 2021.</p>
<p>NOTES: C/D = construction and demolition. County = Whatcom County. CROP = contamination reduction and outreach plan. Ecology = Washington State Department of Ecology. WSU = Washington State University.</p>	

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 and Regulations).

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 8.10.050](#) and 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 B), 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 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 according to [WCC 8.10.050\(A\)](#). Residents claiming the exemption also can subscribe to recycling-only collection.

Collection companies provide recycling containers to each residence at the customer’s request. The following recyclable materials are collected presorted at the curb: newspaper, mixed paper, cardboard, aluminum, tin, glass, plastic bottles, scrap metal, vehicle batteries, and motor oil. Recyclable materials are source separated using a stackable, three-bin recycling system. To make the best use of available space, customers may use any bin for accepted recyclable material, as long as they are correctly separated. Table 4-1 provides a summary of the approved materials accepted in each bin. For a more detailed summary of materials accepted by bin for each service provider, links to their websites are provided in Section Six. Recyclable material reconfiguration is intended to reduce curbside overflow. Drivers inspect the bins during pickup and determine if they are properly sorted and which compartment of the truck it should be placed into. Cardboard is accepted outside of the bins, flattened on its side.

**Table 4-1
Accepted Curbside Materials by Bin**

Bin ^(a)	Acceptable Materials to Bundle
Newspaper (Red Bin)	<ul style="list-style-type: none"> • Newspaper • Inserts • Ads
Scrap Paper (White Bin)	<ul style="list-style-type: none"> • 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 and office paper (all colors), carbonless paper, file folders, poster paper. • Paperboard cartons (e.g., cereal boxes, macaroni and cheese boxes, shoe boxes, gift boxes, egg cartons). Discard liners/packing material and flatten. • Staples, paper clips, file folder clips are okay.
Containers (Blue Bin)	<ul style="list-style-type: none"> • Glass bottles • Jars • Aluminum cans • Tin/steel/bimetal cans • Plastic containers (i.e., bottles, jugs, caps and rings, tubs, pails, buckets, and lids)^(b)
Outside of Bins	<ul style="list-style-type: none"> • Cardboard (flattened, on its side) • Brown paper bags
<p>NOTES: SSC = Sanitary Service Company NVD = Nooksack Valley Disposal ^(a) SSC customers may use any bin for accepted recyclable material, as long as they are correctly separated. ^(b) NVD accepts bottles only</p>	

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 its physical isolation requires two trips across the Canadian border 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. Effective January 1, 2019, single-family residences with on-site sewage systems that are in Point

Roberts, are no longer exempt from mandatory curbside collection services. As a minimum level of service, curbside collection consists of 26 annual pickups as defined in [WCC 9.10.040\(D\)](#). The cost of the minimum level of service, per the approved WUTC tariff, is billed as an annual fee on the property tax bill. Service levels above the minimum level of service are billed directly by the service provider.

The unincorporated Newhalem and Diablo area is serviced by Waste Management and processed with materials collected in Skagit County. However, this area meets the minimum program requirements for collection of source-separated materials as described in RCW [70A.205.045\(7\)\(b\)\(i\)](#) through recycling depots to which residents may self-haul their recyclables.

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. Most commercial MSW customers also subscribe to source-separated collection from the G-certificated haulers for various materials, depending on their economic sector. These services are almost universally less costly than disposal, thus existing rate structures incentivize diversion to recycling and composting, and in some cases, reuse. Commercial recyclables are generally collected in the same material streams as residential (Table 4-1). Depending upon business size, they may request curbside bins, carts, various dumpsters, drop boxes, and/or compactor service. Businesses may also subscribe to source-separated collection of plastic film, scrap metal, drywall, specific industrial plastics, wood, and other source-separated materials (e.g., concrete and pallets).

Business participation has been steadily growing since the early 1990s to today, where nearly every local business participates in recycling or waste reduction to one extent or another. Part of this success is due to the rate structure, which makes recycling the more cost-effective alternative to solid waste disposal.

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

WHATCOM COUNTY IN-HOUSE RECYCLING PROGRAMS

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 for some materials at all locations with trash containers in public areas. Recycling is emphasized in office areas by providing a small, desk-side trash container and a larger recycling container. These measures have contributed to the County's successful Leadership in Energy and Environment Design, or LEED certification of the county courthouse.

ELECTRONICS RECYCLING

[RCW 70A.500.030](#) 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 70A.500.020\(6\)](#)) 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 the County that are registered with E-Cycle Washington. The website for this program is www.ecyclewashington.org.

LIGHT BULB 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 (the 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 website at <https://www.lightrecycle.org/collection-site-locator/>.

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.

MEDICATION RECYCLING

Safe Medication Return is a statewide program that provides Washington residents with a free and convenient option to dispose of unwanted medication. The program is operated by [MED-Project](#) with oversight from the Department of Health and was established under [RCW 69.48](#), also known as the Drug Take-Back program. Unused medication is accepted by mail or returned to a drop-off site, both free of charge. A list of nearest drop-off sites is available on MED-Project’s website.

PAINT RECYCLING

In 2019, Washington became the ninth state with a paint stewardship program, as defined by [RCW 70A.515](#). This statewide recycling program was designed by paint manufacturers, with oversight by Ecology’s Solid Waste Management program and operated by the manufacturers’ stewardship organization, [PaintCare](#). The program will accept latex paint from any household or business, but only accepts oil-based or other paint that may be potentially dangerous waste from households or small quantity generators.

4.1.2 Facilities

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

- Birch Bay-Lynden Drop Box Facility & Recycling Center (SSC)—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 & Recycling Center—Accepts metal, antifreeze, oil, cardboard, glass, plastic, cans.
- NVD Drop Box Facility & Recycling Center—Accepts metal, antifreeze, oil, cardboard, glass, paper, plastic, cans, tires, yard waste, and electronics.
- Northwest Recycling and Northwest Recycling Warehouse—Accepts metals, appliances, cardboard, automobile bodies, electric motors, radiators, and car batteries. Provides drop boxes upon request for residential, commercial, and industrial accounts.
- 1PC Electronics Recycling—A member of Washington’s E-cycle program, it accepts electronic and medical equipment and offers hard drive shredding and data destruction services.
- SSC Roeder Avenue Drop Box Facility & Recycling Center—Accepts recycling of household materials, including metals, plastics, plastic film and miscellaneous plastics, and paper for a drop-off fee. Also accepts yard waste.
- Republic 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 for a drop-off fee.
- .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 and operated through early 2020. RDS is in the process of completing a new 12,000 square foot station that will create extra tipping floor space and allow the facility to presort loads and better separate mixed wastes. Potentially recoverable materials (recycling or diversion) were 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 brought materials past a manual pick line where various construction materials could be sorted including aluminum, vehicle batteries, appliances, cardboard, glass, electronics, paper, tires, plastic, scrap metal, cans, porcelain, sheetrock, and wood. The facility typically guarantees a diversion rate of 20 percent for the overall waste stream being processed by the transfer station because 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.
- Consumer demand for recycling of certain materials, despite market conditions that require additional cost to do so.
- No satisfactory 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.
- Environmental and human health impacts associated with recycling certain materials.
- Legislative mandate.

For instance, for several years, only plastic bottles with necks were accepted for recycling because of available markets for processing. As of the writing of this CSHWMP in 2021, all bottles and containers, regardless of number or color are accepted for collection. These items were added to the list as markets became available and processing these items became 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 executive 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 rates (46 to 55 percent) and diversion rates (41 to 54 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. This understanding is reflected in the high residential recycling participation rate, which has held steady at over 90 percent in recent years.

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 CSHWMP 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 that 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 because 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 the CSHWMP. Ecology supports the collection of curbside-sorted materials through [RCW 70A.205.045\(7\)\(b\)](#).

Some providers reported issues of improper recycling of materials, including mixed materials being placed in the same 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. In cases where a customer may have a higher volume of recyclable materials than the bin's capacity, haulers typically accept materials, if they are appropriately separated, in alternative containers. To prevent public nuisance during winter weather, waste collection companies provide routine windy weather tips such as putting paper in a paper sack before laying the sack on its side in the bin, setting bins on the ground versus stacking, weighing down cardboard, etc.

4.2.2 Multifamily Residential Recycling

Approximately 26 percent of the County's population resides in multifamily residential units, representing a large share of the customer base (U.S. Census, 2014–2019). There is a general perception that recycling rates for multifamily residential are low relative to single-family residential rates. This is commonly attributed to the lack of understanding of the system by multifamily residential subscribers, high tenant turnover, lack of incentives for tenant participation, and a lack of outreach and education to multifamily residents. Some service providers also indicated that the higher levels of contamination found in multifamily recycling bins and lower participation rates compared to the rest of the County are a weakness of the existing system.

The Washington State Recycling Association recognized multifamily recycling as an issue for communities across the state in its 2014 report, "Sorting It Out: That State of Multifamily Recycling

in Washington State” (WSRA, 2014). The report notes the lack of targeted focus on multifamily recycling as a primary cause of relatively low multifamily recycling rates, and that an approach with three prongs can help boost rates. The three components are: (1) collection statistics; (2) policies and regulations; and (3) education and outreach. While additional outreach will be helpful, it should be noted that the local multifamily program is now and has been very successful since 1992. Over 90 percent of all multifamily complexes participate, with an average recycling rate of 30 percent, and a contamination rate of below 5 percent.

4.2.3 Commercial Recycling

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. Most commercial MSW customers also subscribe to source-separated collection from the G-certificated haulers for various materials, depending upon their economic sector. These services are almost universally less costly than disposal, thus existing rate structures incentivize diversion to recycling and composting, and in some cases, reuse. Business participation has been steadily growing since the early 1990s to today, where nearly every local business participates in recycling or waste reduction to one extent or another. Part of this success is due to the rate structure that makes recycling the more cost-effective alternative to solid waste disposal. The County recognizes the need to maintain the high recycling participation rate among businesses.

4.3 Goals and Actions

Recycling and diversion in the County are already highly successful when compared to the state goal of achieving waste stream reduction of 50 percent. In 2017, approximately 44 percent of the County’s waste stream was recycled, and 54 percent was 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 multifamily 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
Residential Recycling	
1. Enhance residential recycling.	<p>A. Assess materials currently collected through the three-bin system, focusing on their relevance to overall solid waste system goals and commonly disposed recyclable materials.</p> <p>B. Evaluate current alternate materials collected curbside and consider the potential to add or remove materials.</p> <p>C. Educate the public on the purpose and benefits of a three-bin system, as well as the success of the local program.</p>
Multifamily Recycling	
1. Gather information about multifamily disposal and recycling habits.	A. Conduct a waste audit to understand the recycling habits of multifamily 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 multifamily residential outreach.	<p>A. Provide educational information to be distributed to multifamily residents, such as information on how to accommodate recycling bins.</p> <p>B. Create or expand programs to provide waste audits to building managers and provide support for follow-up education.</p> <p>C. Provide clear labeling of acceptable materials with pictures for each container to address potential language barriers.</p> <p>D. Ensure that the frequency of curbside service to multifamily buildings provides adequate capacity in each recycling bin at any time, minimizing potential for unnecessary disposal or contamination.</p>
E. Commercial Recycling	
1. Continue to support commercial recycling.	A. Monitor commercial recycling rates to ensure all businesses in the County are served.

5 ORGANIC MATERIAL MANAGEMENT

Significant diversion of waste is commonly accomplished through composting of organic materials. Organic materials (green waste, food waste, and compostable paper) are a significant component of the County’s solid waste stream. In 2017, recycling and diversion efforts accounted for the diversion of over 42,000 tons of organic materials (including 9,000 tons of food) from landfill disposal that equated to about 25 percent of the total waste stream.

In 2015–2016, Ecology conducted a four-season [MSW characterization study](#) in select counties across the state, one of which was the County (Ecology, 2016). The study found that organic material made up approximately 29 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 2015 waste stream was approximately 77,000 tons of organic materials, with about 21,000 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. Curbside collection is not available in some of the rural areas of eastern Whatcom County.

- SSC—Provides residential curbside and commercial collection of yard waste, food waste, and compostable papers through the SSC Food Plus program. Materials are collected in the same container. The service is provided throughout the SSC service area, except for 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 & Recycling Center.

Cando does not provide curbside collection of organics. However, green waste is accepted at the Cando Drop Box Facility & Recycling Center in Point Roberts.

EDUCATIONAL PROGRAMMING

The WSU Master Composting and Recycling program and the County Solid Waste Division provide a substantial amount of composting information on their websites. These programs, including the WSU Backyard Composting program, 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 asking for support in setting up commercial composting services.

The commercial business component focuses on food producers such as restaurants, caterers, long-term care facilities, schools, manufactures, and hospitals to help reduce their food waste. FRP works to provide the technical assistance needed to safely donate surplus food that would ordinarily be dumped in a compost or landfill can. This food is then routed to one of 12 local hunger relief agencies working with the program, using a robust network of volunteers. Participating business are widely promoted on social media for their efforts. The program has been successful helping participants reduce their waste costs as well as overall food waste. Once a participant takes the time to handle their food waste a second or third time, they become more aware of their waste generation and tend to donate less over time. For example, a program standout Casa Que Pasa donated on average 905 pounds of surplus food a month in the first four months of 2020. In the same first four-month period of 2021, they donated on average 755 pounds of surplus food.

The FRP program has been steadily growing in recognition and success with the help of a second PPG and additional funds from Whatcom County Solid Waste Division, as well as private donations. In 2019, more than 59,000 pounds of edible food was diverted back to community members in need. There were more than 36 regularly participating business, with additional one-time donations from public events. In 2020, the program saw many of its regular donors stop participating due to the COVID-19 pandemic shutdowns that forced restaurants to operate at lower levels, events to stop, and long-term care facilities to no longer allow outside visitors. However, the program was able to successfully pivot to help in other sectors and recovered 255,000 pounds of surplus edible foods in 2020. The program saw more than 76 businesses participate, with 18 of those businesses participate on a regular basis.

Lastly, FRP has a general public education campaign that aims to teach residents how to reduce and prevent food waste in their daily lives. This is accomplished by distributing educational materials at public events and conducting workshops for public groups. A bimonthly series titled, Waste and Whatnot, is open to the public and hosts themed workshops titled “The Future of Wasted Food” and “Use It Up and Reduce Food Waste at Home.” Sustainable Connections has also built robust and interactive website (<https://sustainableconnections.org/squatchfoodwaste/>) to help people get creative with leftovers, plan meals, and donate nonperishables to local food banks.

5.1.2 Facilities

PUBLIC DROP-OFF LOCATIONS

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

- SSC Roeder Avenue Drop Box Facility & Recycling Center—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 & Recycling Center—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 are transported to the privately operated Green Earth Technology facility in Lynden. Materials are composted using a Gore-based aerated pile system that can compost a green waste stream with a lighter amount of food waste mixed in through an eight-week production cycle. The facility currently manages 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

preconsumer 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 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 three digesters in the County are:

- Edaleen Cow Power, LLC
- FPE Renewables, LLC (Vander Haak Dairy)
- Van Dyk Dairy

A total of 8 million gallons of preconsumer food waste and 16 million gallons of livestock manure were treated by anaerobic digestion in 2020, and 1.8 million kilowatt-hours of generator power was produced.

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 on-site 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 (EPA) and by Washington jurisdictions. Educational materials are readily available to solid waste program managers through the Food: Too Good to Waste campaign that 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

At the time of the writing of this CSHWMP, the City of Bellingham is in the planning phase of constructing the Post Point Biosolids facility anaerobic digesters to manage wastewater residual biosolids from the Post Point Wastewater Treatment Plant for land application on gardens and agricultural lands.

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).

Organic waste derived from cannabis production is an emerging class of waste that the state and County are closely monitoring. At the time of the writing of this CSHWMP, the Green Earth Technology facility does not accept cannabis waste and will not do so until there is new guidance from the state or federal level.

There are no issues regarding current composting facilities. The Green Earth Technology facility can rapidly double its operational capacity 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 below provides the County goals and actions for organics management.

**Table 5-1
Goals and Actions for Organics Management**

GOALS	ACTIONS
1. Consider accessibility of organic materials collection and management.	<ul style="list-style-type: none"> A. Evaluate flexibility of collection (frequency, container size, cost, etc.) and impact to the existing system. B. Investigate expanding organics collection to areas of the County that are not served by existing programs. C. Continue to support composting at home and identify opportunities to expand existing programs.
2. Increase recovery of organic materials from, multifamily, commercial, and industrial generators.	<ul style="list-style-type: none"> 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. E. Evaluate and increase options for multifamily and commercial composting.
3. Identify opportunities to expand cannabis waste management in the County.	<ul style="list-style-type: none"> A. Identify opportunities to manage cannabis waste generated in the County. B. Monitor state and federal guidance regarding disposal of cannabis waste.
<p>NOTE: County = Whatcom County.</p>	

6 SOLID WASTE COLLECTION

6.1 Existing Conditions

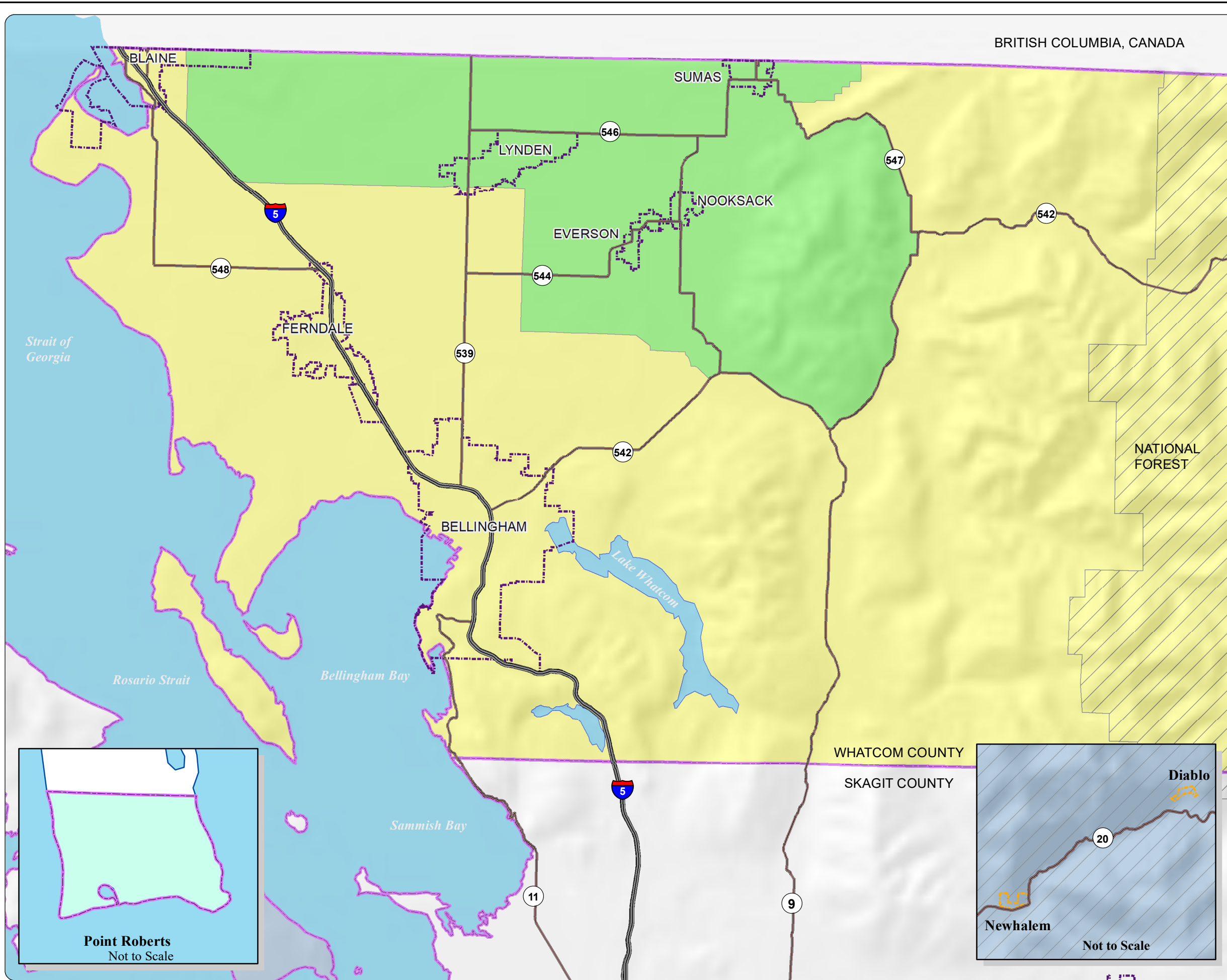
[WCC 8.10.040](#) and [WCC 8.10.060](#) require that certificated solid waste companies collect solid waste from residential and nonresidential entities. Only companies holding G-certificates or operating under municipal contract for that area may collect solid waste for a fee. Weekly, every other week, and monthly curbside garbage and every other week 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 except for Point Roberts, Lummi Island, and certain areas east of Cedarville Road, all SSC subscribers have the option to pay for curbside collection of organic materials. Organic materials (yard waste, food-soiled paper, and food waste) are picked up on an every other week basis. NVD also offers organics collection in its cities (weekly in Lynden, and every other week in Nooksack, Everson, and Sumas). NVD does not offer organics collection in unincorporated areas. The easternmost portion of the County (including Newhalem and Diablo) is within the WUTC G-permit collection area of Waste Management and is managed in the Skagit County system. This area is excluded from the planning area as discussed in Section 1.2.

All cities in the County 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 four 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 and Ferndale, the Lummi Nation and parts of the Nooksack Tribes, 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.
- **Waste Management (Permit G-00237)**—Serves the Newhalem and Diablo unincorporated areas in eastern Whatcom County.

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



Comprehensive Solid and Hazardous Waste Management Plan Update

Figure 6-1 Hauler Territory Map

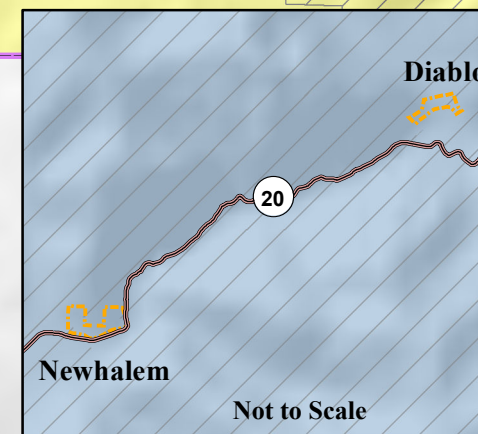
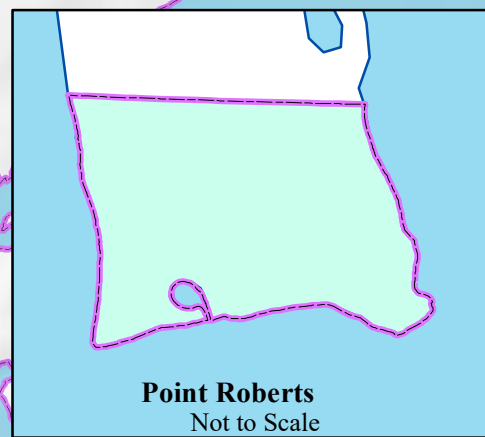
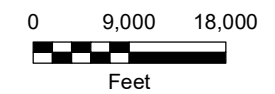
Whatcom County
Washington

Legend

- City Boundary
- Small Town Boundary
- County Boundary
- National Forest

Certified Waste Hauler Territory (Certificate Number)

- Freedom 2000 LLC, dba Cando (G063819)
- Nooksack Valley Disposal, Inc. (G000166)
- Sanitary Service Co., Inc. (G000014)
- Waste Management of WA, Inc. (G000237)

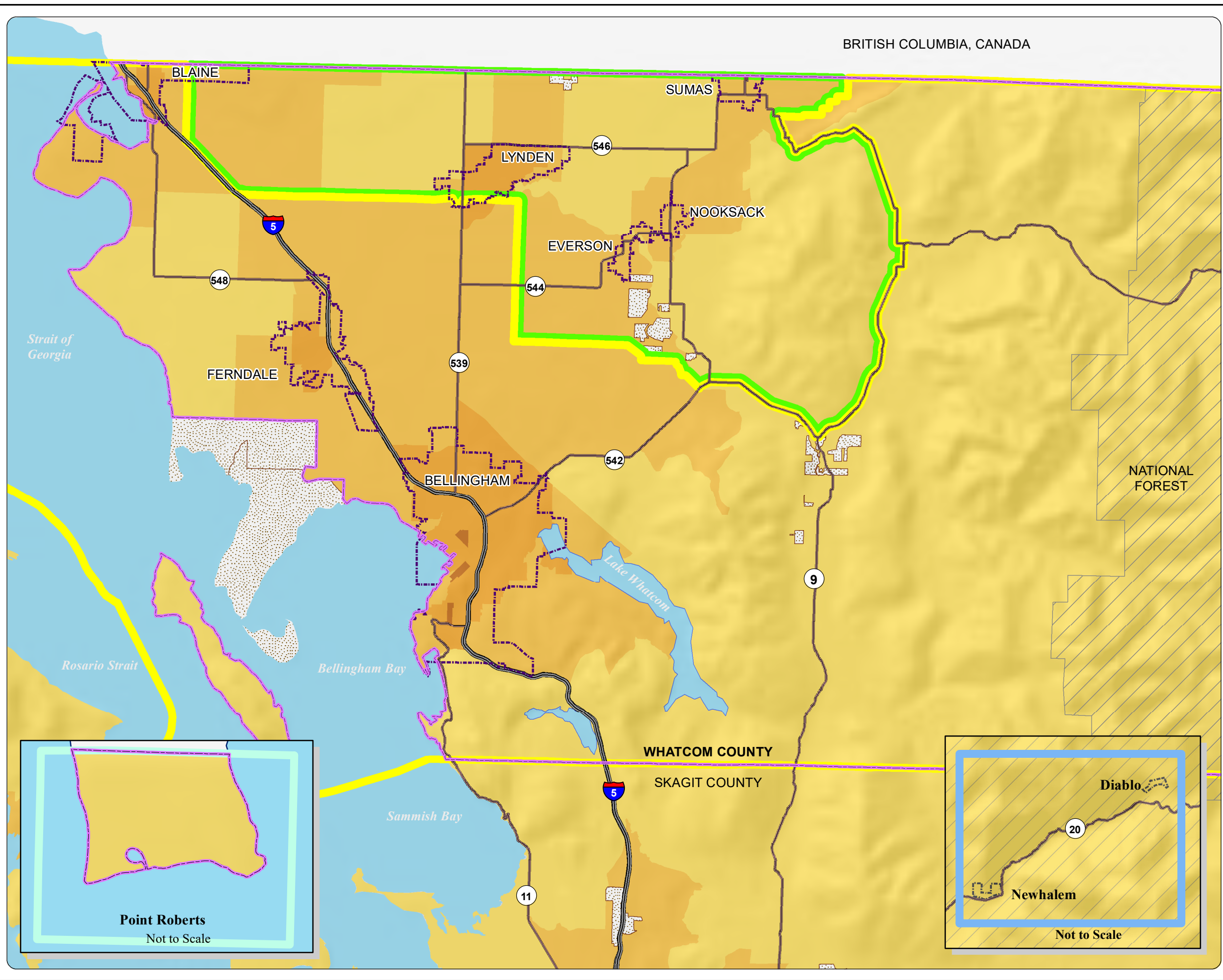


Source: City Boundary, Waterbodies, National Forest Area from Whatcom County. County Boundary from WSDOT. Waste Hauler Territory from Utilities and Transportation Commission

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Project: 0744.02 Produced By: jbstrot Approved By: J. Gubler Print Date: 5/16/2021 Path: X:\0744.02 Whatcom Co SWMP\Projects\Fig. 6-2_PopDensityMap2.mxd



Comprehensive Solid and Hazardous Waste Management Plan Update

Figure 6-2 Population Density Map

Whatcom County
Washington

Legend

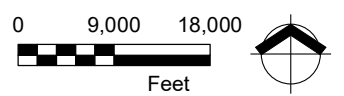
- City Boundary
- Small Town Boundary
- Tribal Lands
- Planning Area
- National Forest

Certified Waste Hauler Territory

- Freedom 2000 LLC, dba Cando
- Nooksack Valley Disposal, Inc.
- Sanitary Service Co., Inc.
- Waste Management of WA, Inc.

2020 Population Density (per square mile)

- 100 or fewer people
- 101 to 1,000 people
- 1,001 to 10,000 people
- 10,001 to 25,000



Source:
City Boundary, Waterbodies, National Forest Area, Planning Area from Whatcom County. Population Density from Esri ArcGIS Online. Tribal Land from U.S. Census Bureau. Waste Hauler Territory from Washinton Utilities and Transportation Commission



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

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 several facilities available for public drop-off. These facilities are discussed in Section Seven.

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.

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.

**Table 6-1
Goals and Actions for Collection**

GOALS	ACTIONS
1. Ensure that collectors are providing the required minimum service to all subscribers as outlined in the Whatcom County Code and interlocal agreements between the County and municipalities.	A. Investigate complaints regarding collection services and correct deficiencies.

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 processing 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 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 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. A summary of the facilities discussed in the following sections is provided in Appendix A.

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**—One of the two primary transfer stations in the County, it accepts self-haul waste and waste collected by SSC and NVD. The RDS Transfer Station includes one inbound scale, two outbound scales, two truck bays, and an MRF that was operated through early 2020. 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 2017, RDS processed 116,885 tons of solid waste materials.
- **Republic Transfer Station**—The other primary transfer station in the County, it 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 2017, Republic processed 52,039 tons of solid waste materials.
- **Cando/Point Roberts Transfer Station**—Located on County-owned land but is privately operated via a lease with the County. 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 2017, the facility processed 1,177 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, the County, the Washington Department of Transportation, 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, with exception to the Bellingham Vactor Waste Facility, 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
Disposal Rates for Transfer Stations, 2021**

Waste Type	Measured By	Flat Rate	Weight Rate		Volume Rate	Minimum
			Per Pound	Per Ton		
RDS						
Garbage	Weight	--	\$0.070	\$140	--	--
Contractors (Accounts Only)	Weight	--	\$0.056	\$112	--	--
Wood	Weight	--	\$0.050	\$100	--	--
Yard Waste	Weight	--	\$0.040	\$80	--	--
Dirt and Sod	Weight	--	\$0.025	\$50	--	--
Metal	Weight	--	\$0.020	\$40	--	--
Concrete	Weight	--	\$0.020	\$40	--	--
All Passenger Tires	Flat Fee	\$10/each	--	--	--	--
Semi Tires	Flat Fee	\$20/each	--	--	--	--
Tractor Tires	Flat Fee	\$50/each	--	--	--	--
Loader Tires	Flat Fee	\$100/each	--	--	--	--
Propane Tanks	Flat Fee	\$10/each	--	--	--	--
Hot Water Tanks, Dishwasher, Stoves, Washers, Dryers	Flat Fee	\$10/each	--	--	--	--
Refrigerators, Freezers, Air Conditioner Units	Flat Fee	\$40/each	--	--	--	--
Porcelain Toilets and Sinks	Flat Fee	--	--	--	--	--
Mobile Homes (Manager Approval)	Volume	--	--	--	\$1.25 per square foot	\$1,000
Republic						
Garbage	Weight	\$7.35*	\$0.057	\$113.40	--	\$12.60
C/D Waste	Weight	\$7.35*	\$0.057	\$113.40	--	\$12.60
Yard Waste	Weight	\$7.35*	\$0.057	\$113.40	--	\$12.60
Asbestos	Weight	\$7.35*	\$0.175	\$350.70	--	\$106.05
Paper	Free	--	--	--	--	--
Cando						
Garbage	Weight	--	\$0.135	\$270	--	\$5.50
Recycling	Weight	--	\$0.05	\$100	--	\$3.00
Appliances	Flat Fee	\$20/each	--	--	--	--
Fridge/Freezer	Flat Fee	\$50/each	--	--	--	--
Tire, No Rim	Flat Fee	\$4/each	--	--	--	--

Waste Type	Measured By	Flat Rate	Weight Rate		Volume Rate	Minimum
			Per Pound	Per Ton		
Propane Tank	Volume	--	--	--	\$5/gallon	--
Battery	Flat Fee	\$1/each	--	--	--	--
Computer Monitor	Flat Fee	\$10/each	--	--	--	--
TV	Flat plus weight	\$1/each plus weight	\$0.135	--	--	--
Microwave	Flat plus weight	\$5/each plus weight	\$0.135	--	--	--
Electronics	Flat Fee	\$5.00	--	--	--	--
NOTES: -- = No data available. C/D = construction and demolition. Cando = Cando Recycling and Disposal RDS = Recycling and Disposal Services. Republic = Republic Services. 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 vector waste transfer station that is not open to the public but does receive vector 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 & Recycling Center**—County-owned and operated by SSC via a lease with the County. 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 & Recycling Center**—County-owned and is operated by SSC via a lease with the County. 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 & Recycling Center**—Located in downtown Bellingham. Waste and recyclable materials are transported to the RDS Transfer Station or the Republic Transfer Station.

- **NVD Drop Box Facility & Recycling Center**—Waste collected 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
Disposal Rates for Drop Box Facilities, 2021**

Waste Type	Measured By	Weight Rate		Volume Rate	Minimum
		Per Pound	Per Ton		
NVD					
Garbage	Weight	\$0.13	\$260	--	\$10.00
Recycling	Volume ^(a)	\$0.05	\$100	--	\$5.00
Paper, Cardboard, Tin	Weight	\$0.05	\$100	--	\$5.00
Plastics	Volume ^(a)	--	--	\$5.00 per 32 gallon	\$5.00
Glass	Weight	\$0.07	\$140	--	\$5.00
Scrap Metal, Aluminum	Free	Free		--	--
Wood	Weight	\$0.13	\$260	--	\$10.00
Yard Waste	Weight	\$0.05	\$100	--	\$10.00
SSC Cedarville					
Garbage	Weight	\$0.15	\$300	--	\$5.00
Recycling	Weight	\$0.03	\$60	--	--
SSC Birch Bay					
Garbage	Weight	\$0.15	\$300	--	\$5.00
Recycling	Weight	\$0.03	\$60	--	--
SSC Roeder					
Garbage	Volume ^(a)	--	\$300 ^(b)	\$30.90 per cubic yard	\$5.85
Recycling	Volume ^(a)	--	--	\$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. -- = No data available. NVD = Nooksack Valley Disposal SSC= Sanitary Service Company ^(a) Volume defined as "normal residential amounts." ^(b) Garbage disposal rate per ton is estimated from the volume rate based on a loose density of 190 to 220 pounds or cubic yards.					

7.1.3 Landfills

MSW generated in the County is primarily disposed of at one of the following landfills:

- **Columbia Ridge Landfill, Arlington, Oregon**—Operated by Waste Management, this landfill is a modern Resource Conservation and Recovery Act (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 destination of waste originating from the RDS Transfer Station.
- **Roosevelt Regional Landfill, Roosevelt, Washington**—Operated by Republic Services, it accepts MSW and specific types of special waste. Roosevelt Regional Landfill is the destination of waste originating from the Regional Disposal Company Transfer Station and MSW collected by Waste Management from Newhalem and Diablo in eastern Whatcom County.
- **Headquarters Landfill, Castle Rock, Washington**—Cowlitz County operates this landfill. It is the destination of waste collected by Cando.

Other facilities that currently or have historically accepted waste generated in the County, as reported by Ecology, include:

- **BP Cherry Point Refinery Inert Landfill, Blaine, Washington**—Located at the Cherry Point Refinery in Bellingham and operated by BP.
- **CEMEX Inert Waste Landfill, Everett, Washington**—Accepts materials that are neither chemically nor biologically reactive and will not decompose, such as petroleum-contaminated soils generated from cleanup sites. The contaminated soils are treated with a thermal desorption process at the CEMEX Regional Petroleum-Contaminated Soil Treatment facility before they are landfilled.
- **Graham Road Recycling & Disposal, Medical Lake, Washington**—Operated by Waste Management, this is a limited-purpose facility that accepts primarily C/D waste, industrial waste, and special waste; it does not accept MSW or hazardous waste.
- **Greater Wenatchee Regional Landfill, East Wenatchee, Washington**—Operated by Waste Management, it accepts primarily MSW, C/D waste, and industrial waste. It does not accept hazardous waste.

The County owns and maintains five closed landfills:

- **Cedarville Landfill**—The nine-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 postclosure 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. The leachate collected is treated and discharged under a National Pollutant Discharge Elimination System permit issued by Ecology.

- **Birch Bay Landfill**—The five-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 one 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 that 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 173-304](#) 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, including ongoing efforts to encourage communication between the service providers and County residents. 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 time frames. The County will continue to work with the service providers to ensure each provider is adequately planning for and constructing additional capacity in advance of need.

7.3 Goals and Actions

**Table 7-3
Goals and Actions for Transfer and Disposal**

GOALS	ACTIONS
1. Continue to maintain and support transfer and disposal system facilities.	A. Provide ongoing postclosure monitoring and maintenance of closed landfills.
	B. Work with existing private transfer stations to ensure compliance with solid waste handling facility permits.
	C. Work with service providers to ensure adequate system capacity is constructed in advance of need.
	D. Work with service providers to ensure adequate communication with County residents regarding collection needs.
2. Continue to manage illegal dumping in the County.	A. Survey residents and businesses regarding disposal needs to ensure sufficient access to disposal facilities is provided.

8 MISCELLANEOUS WASTE

Miscellaneous wastes are materials that require special or separate handling because of their unique characteristics, such as bulk, water content, or dangerous constituents. Miscellaneous wastes discussed in this section 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
- Vector waste
- Waste tires
- C/D waste

This section discusses the current management practices for miscellaneous 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](#), 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 County Health Department for animal burials and composting.

The recent legalization of recreational cannabis production and sales has resulted in regulations specific to the handling and disposal of crop residues. As the industry matures and regulations evolve, the County will rely on the most current regulations and guidance from Ecology regarding disposal best practices for addressing this waste.

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 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 Republic 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.

Biosolids may be applied on agricultural land, forests, rangelands, or other disturbed land, in a process known as land application that supplies nutrients and replenishes soil organic matter. 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

waterways where contaminants are present at concentrations not suitable for open water disposal, but not designated as dangerous waste. The primary statute governing petroleum-contaminated soil clean up in Washington State is the MTCA. [RCW 70A.305](#). [WAC 173-340](#) 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, [WAC 173-303](#). 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 (see CEMEX Inert Waste Landfill description in section 7.1.3) 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 ten cubic yards). Small project contaminated dredged materials will be accepted into the County system, if they have been adequately characterized and have been dewatered adequately to meet criteria specified under the EPA paint filter test (see Federal Register, Vol. 50, No. 83, Tuesday, April 30, 1985).

8.1.5 Disaster Debris

The County could be impacted by several 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, woody debris, and some construction materials.
- Earthquakes generate damaged building materials, personal property, woody debris, 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, vehicles, 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.

The Whatcom County Sheriff's Office Division of Emergency Management is responsible for developing and maintaining a community infrastructure for emergency and disaster mitigation, planning, response, and recovery. The most recent version of the Whatcom County Disaster Debris Management Plan was published on September 1, 2017 (Whatcom County, 2017). The County Health Department plays an active role in supporting emergency planning efforts, as well as serving on the incident command team during response to any natural disasters. The County also understands that the Federal Emergency Management Agency will likely take the lead in the case of natural disasters and supersede local plans. Disaster debris will be managed through the appropriate existing facilities, including transfer facilities, permitted inert waste landfills, building materials recovery centers, and composting facilities, as feasible. The County may also designate certain locations and facilities for accumulating large volumes of disaster debris. 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 Program). 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, several 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 ([RCW 70A.205](#)). Furthermore, biomedical waste is regulated by [WCC 24.06.040](#). 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—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—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—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—Discarded waste human blood and blood components and materials containing free-flowing blood and blood products.

Pathological 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—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 Environmental Solutions and Waste Management Healthcare Solutions are the two biomedical waste 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 County Health Department, disposal of treated infectious solid waste in the solid waste stream is allowed.

Pharmaceutical waste is any leftover, unused, or expired medication that is no longer needed or can no longer be used. It can be classified as either hazardous or non-hazardous depending on its chemical properties and its risk to humans and the environment.

In 2019, the County Health Department began providing oversight for the Secure Medicine Return program, named [Whatcom Med Return](#) that is operated by MED-Project, an independent organization at no cost to community members. This program allows residents to return unused or expired household medications at participating pharmacies, police stations, a drug return kiosk, or via a postage-paid envelope available at local libraries. A list of locations is provided on the Whatcom Med Return website. Since the program began, the County has securely collected over 8,000 pounds of pharmaceutical waste and safely transported to a hazardous waste incinerator for destruction. This waste is kept out of the waste stream, protecting surface and groundwater. Properly collection and destroying unwanted medications keeps them out of the wrong hands and reduces the potential for poisoning and unintended overdose.

Prior to the start of the Whatcom Med Return program, the City of Bellingham collected unused household medications starting in April 2010. Since that date, over 17,000 pounds of pharmaceutical waste have been securely collected and safely transported to a hazardous waste incinerator for destruction. The City of Ferndale operated their own pharmaceutical take-back program between 2013 and 2018 that collected 3,555 pounds of unwanted medication. The City of Ferndale worked with the County Health Department to wind down the program once the Whatcom Med Return established a drop box at the Hagggen 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 Vector Waste

The City of Bellingham owns, operates, and maintains a vector waste transfer station in the Irongate Industrial Area for the purpose of processing street sweepings and vector 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, the County, the City of Blaine, the Washington Department of Transportation, and several private operators. The smaller cities of the County either dispose of their street sweepings and vector 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 vector waste transfer station as low- to moderate-risk solid waste. Due to the classification of the material, vector waste recycling or reuse options are limited. Since the facility is permitted as a transfer station, the City of Bellingham currently legally contracts with a private hauler to transport the material to the Waste Management Greater Wenatchee Solid Waste Landfill for reuse

as alternative daily landfill cover. The City of Bellingham continues to pursue avenues to reuse and recycle vector waste and street sweepings. The City of Bellingham is also exploring options to encourage the development of additional privately operated vector waste and street sweeping transfer stations.

The City of Ferndale received grant funding and intends to pursue construction of a vector waste facility.

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, clean up, and education. The County used these funds for tire pile prevention activities, such as the cleanup of 23,600 tires at three tire amnesty collection events from 2015 to 2017. More information can be found on the program's website: <https://ecology.wa.gov/Waste-Toxics/Business-waste/Manage-your-waste/Waste-tires>

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
- Slater Road Recycle Park
- 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 miscellaneous waste is a critical role of the County. Although miscellaneous wastes represent only a relatively small proportion of the total solid waste generated, the County 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 miscellaneous 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 waste and vector waste, miscellaneous waste may be repurposed.

8.2.1 Construction and Demolition Debris and Recycling

C/D waste comprises a significant portion of the waste stream. The 2015 waste sort study conducted by Ecology found that approximately 13 percent by weight of all solid waste consisted of woodwaste, including treated and painted wood, dimensional lumber, engineered wood, and pallets and crates. An additional ten percent of all solid waste consisted of construction materials, including drywall, asphalt paving and roofing, ceramics and bricks, carpet and carpet padding, concrete, and 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 an MRF that was operated through early 2020, to recover C/D-related materials that were dropped off in a designated area or manually sorted from the transfer station tipping floor. While in operation, the MRF contributed a significant amount of diversion that was not accounted for in the Ecology study.

The County's 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 waste. 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 evaluate the potential for disposal, recycling, and reuse of miscellaneous waste sources. Programs for miscellaneous 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 Miscellaneous Waste**

GOALS	ACTIONS
1. Increase C/D materials recycling.	A. Conduct outreach to building associations and other construction-related entities to educate contractors about the benefits of a self-regulating industry.
	B. Measure, monitor, and support existing C/D diversion efforts.
	C. Evaluate potential for instituting recycling requirements for construction sites through the building permit program.
	D. Implement provisions for governmental construction projects to require recycling of waste and a preference to use recycled building products.
	E. Explore County use of reclaimed asphalt shingles.
2. Control sham recycling, if it is taking place.	A. Develop a monitoring program to evaluate sham recycling. Understand if there is an issue of illegally hauling solid waste under the guise of recycling.
	B. Evaluate changes to the flow control exemption for C/D materials.
3. Work in state regulatory structure to effectively manage street sweepings and contaminated soil.	A. Evaluate growing need to manage street sweepings and the 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.
5. Be prepared for management of miscellaneous waste generated through response to natural or human-caused disasters.	A. Coordinate with the Whatcom County Sheriff's Office Division of Emergency Management for integration of waste handling/disposal into emergency planning documents.
NOTES: C/D = construction and debris. County = Whatcom County.	

9 ADMINISTRATION AND ENFORCEMENT

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

This section 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 Solid Waste Division of the County Health Department; management 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 allocated through the County's annual budget process (see Section 11.3) with most revenues provided by the collection of an excise tax on garbage hauled by certificated haulers, as well as by multiple Ecology Local Solid Waste Financial Assistance 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 County 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 CSHWMP and the 1991 Hazardous Waste Plan. The Public Works Department has remained engaged in the planning process of the current CSHWMP, 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 CSHWMP 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 in the County, as well as the County executive. The SWEC is responsible for reviewing the CSHWMP and providing recommendations to County Council.

CITIES

Pursuant to interlocal agreements with the County, all cities have instituted mandatory garbage and recycling collection. 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 residential collection and commercial collection remains governed by WUTC regulations; disposal is managed through an independent contract. No other cities in the 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.

Apart from 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 the 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.

NATIVE AMERICAN TRIBES

Residents of the Lummi and Nooksack tribal lands use many of the same services as non-tribal residents of the County living on fee lands, and as such are considered participants in this CSHWMP; however, the County does not have enforcement jurisdiction in these areas. Both the Lummi Nation and Nooksack Tribe contract with private WUTC certificated haulers for garbage collection.

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 (including [RCW 70A.205](#)) 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 70.138RCW 70A.315](#). Ecology may periodically revise facility standards for demolition landfills, compost facilities, and MRW facilities as part of the MFS revisions. Ecology also provides grant funding to local governments that assists in solid waste program operations.

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. NWCAA is also responsible for regulation of any construction that may result in handling and/or disposal of asbestos-containing materials.

There are no active incinerators in the County.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

The WUTC regulates solid waste collection companies under the authority of [RCW 81.77](#). 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. If a collection company decides to cease business, their certificate could be sold to a competing entity, under review of the WUTC, that competing entity 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 in the framework of the County's Service Level Ordinance.

The WUTC also reviews the CSHWMP during the approval process and evaluates probable financial impacts to County ratepayers.

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 and codified as [WCC 8.15.030](#), 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 materials 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 Republic) 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 several 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 8.13.030](#), effective January 1, 2020, the excise tax is levied on all solid waste collection at each residence, business, and institution at the rate of 3.3 percent of collection charges paid to certified and franchised solid waste haulers and \$8.50 per ton for solid waste received at disposal facilities. 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 County Health Department provides staff to administer the contracts for solid waste education and outreach programs, procure state and local grants supporting solid waste operations, and support the SWAC and SWEC. 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 County Health Department maintains responsibility for permit compliance and solid waste enforcement activities in the County and the solid waste system. County 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 170 complaints per year.

The County 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 County 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 and the illegal dumping 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 work hours to gather sufficient evidence, conduct repeated inspections or 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 revenues resulting from leases with private sector solid waste providers (refer to sections 7.1.1 and 7.1.2). 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 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 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 Kendall-Maple Valley area requires urban levels of service even though it is a more rural area, and the Point Roberts area is geographically separated by Canada.

THE KENDALL-MAPLE VALLEY AREA

The Kendall-Maple Valley area is 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. County Health Department staff have implemented 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 County 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 a compliance issue being investigated in Point Roberts that may be exacerbated by international travel restrictions enforced on the only road leading from this isolated community that is 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 many 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 several 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 continue to examine the causes of illegal disposal and have taken steps to curb the issue through the County Health Department enforcement program.

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 Collection**

GOALS	ACTIONS
1. Evaluate regulatory changes to increase efficiency and management.	A. Evaluate the existing exemption program (discussed in Section 4.1.1) 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 LAMIRDs).
	D. Conduct revision, as warranted, to Whatcom County Code 8.15.030.E to reflect current disposal sites.
	E. Pursue an interlocal agreement with Skagit County that defines and establishes solid waste planning and service provision responsibilities in the Newhalem and Diablo area.
	F. Review adequacy of existing excise tax levy and exemptions to address recent state funding reductions.
2. Develop and implement community-specific programs in highly developed unincorporated areas (e.g., LAMIRD) 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 to encourage legal disposal practices.
	C. Evaluate the potential need for additional enforcement staff.
3. Provide sufficient funding to maintain current and expanded levels of service.	A. Explore potential new funding options to support expanded County facilities and disposal options.
NOTES: County = Whatcom County. LAMIRD = Limited Area of More Intense Rural Development.	

10 LOCAL HAZARDOUS WASTE MANAGEMENT PLAN

10.1 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 10.2, Implementation.

10.1.1 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 70A.300](#), 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 70A.300](#). Since then, updates to the CSHWMP (most recently completed in 2022) have included reference to the 1991 Hazardous Waste Management Plan, with no substantial revisions to that plan completed

10.1.2 Analysis of Current Conditions

10.1.2.1 Hazardous Waste Inventory

MRW is regulated as solid waste and is defined as hazardous waste (waste chemicals) generated from households and qualified CESQG businesses. There are two permitted MRWFs located in the County.

The County owns the Whatcom County MRWF, 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's hours are 9:00 a.m. to 4:00 p.m., Monday through Friday and the first Saturday of each month. The facility is operated under contract by Clean Earth.

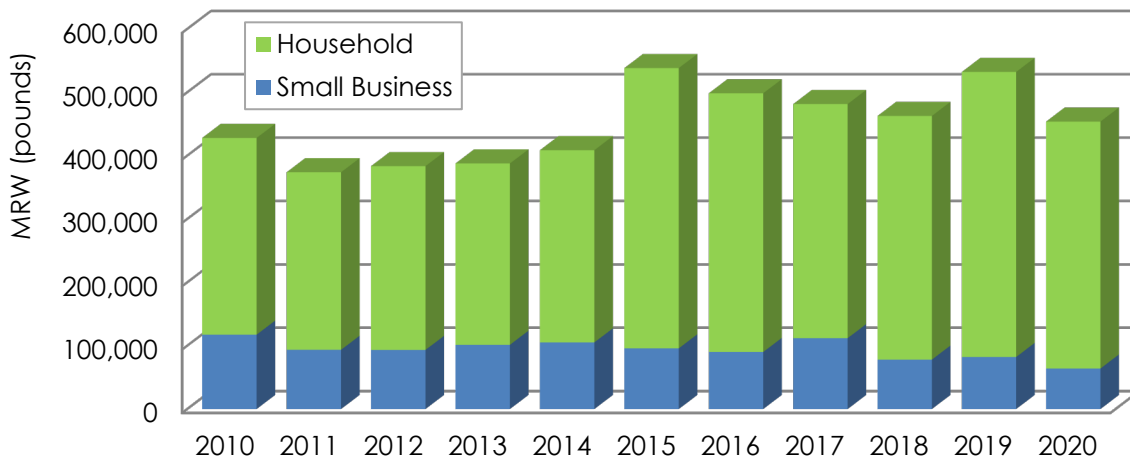
Automobile-related MRW (motor oil, antifreeze, and oil filters) are also accepted at the following satellite facilities:

- Cedarville Road drop box station
 - Hours: Saturday 9:00 a.m. to 5:00 p.m.
- Birch Bay drop box station
 - Hours: Sunday 9:00 a.m. to 5:00 p.m.
- NVD Lynden transfer station
 - Hours: Monday through Friday 8:00 a.m. to 4:00 p.m., and Saturday 9:00 a.m. to 12:00 p.m.

The second facility is the Seattle City Light Skagit Hydroelectric Project (Newhalem) MRWF. This facility accepts MRW from CESQGs working on the Skagit Hydroelectric Project and is open by appointment only.

In 2020, the Newhalem MRWF collected 12,364 pounds of MRW from eight businesses. The Newhalem MRWF contracts with Clean Harbors to transport and dispose of all MRW collected. The County collected 453,766 pounds of MRW in 2020 (64,003 pounds from CESQGs and 389,763 pounds from County residents). Figure 10-1 presents the annual MRW received over the past ten years.

**Figure 10-1
Annual MRW Received**



The County served 6,907 customers at the MRW facility and through mobile collection events in 2020 (972 visits by CESQGs and 5,935 visits by County residents). This represents a decrease of nearly 2,800 household customers between 2019 and 2020, which is believed to have been largely related to the COVID-19 pandemic. Figure 10-2 presents the annual MRW received from households on a per capita basis.

**Figure 10-2
Annual Per Capita Household MRW Received**

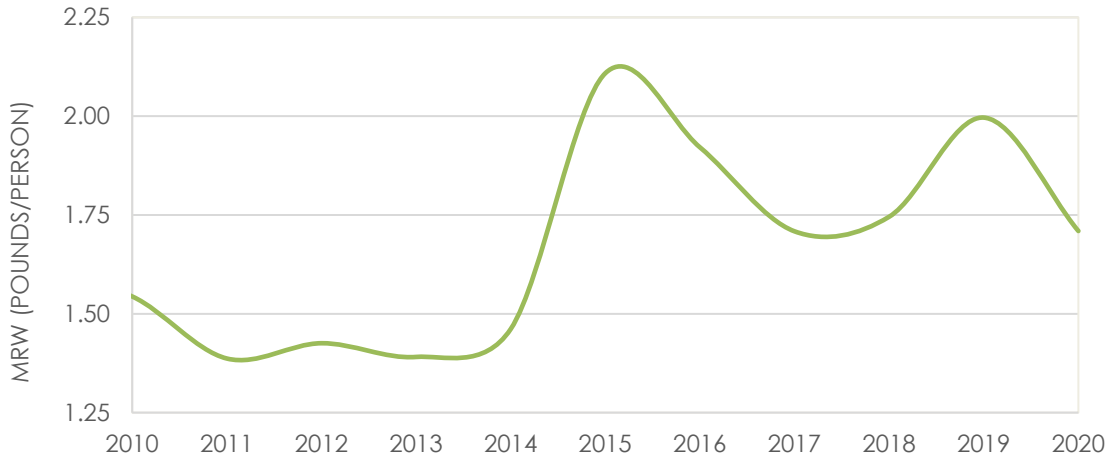
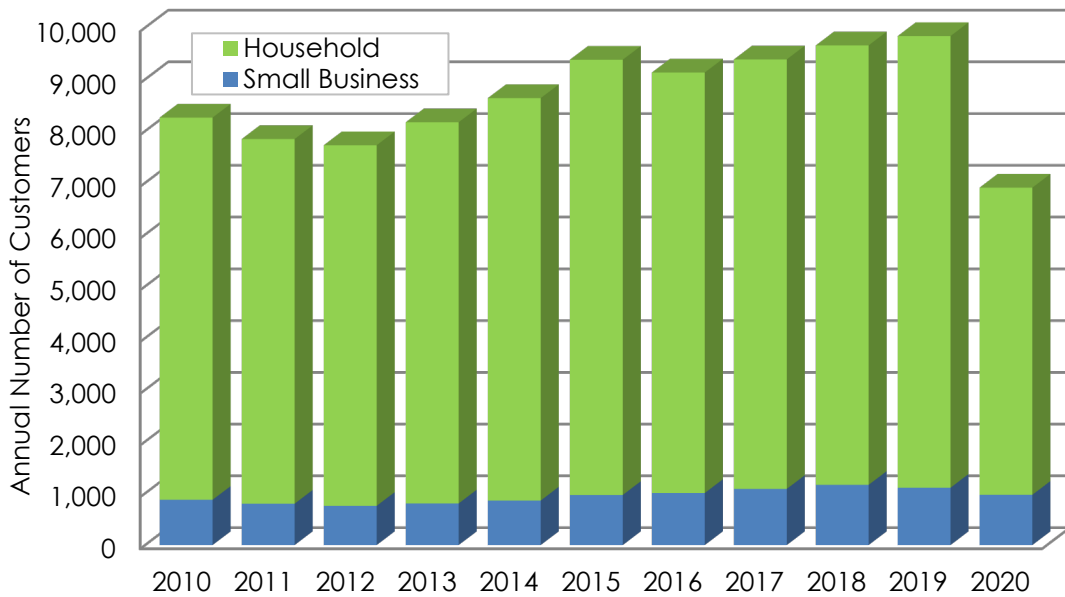


Figure 10-3 presents the annual number of users of the County’s MRW facilities and programs over the past ten years.

**Figure 10-3
Annual Customers—Moderate Risk Waste Facilities**



Dangerous waste generators. 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 2021:

- Large-quantity generators: 23
- Medium-quantity generators: 27
- Small quantity generators: 51
 - Includes only those small quantity generators that have chosen to obtain a EPA identification number, which is not required for CESQGs; the actual number of CESQGs is higher
- Non-generating sites and transporters: 24
 - These have active EPA or state identification numbers but did not generate waste in the most recent year.

Remedial action sites. 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 June 2021):

1. Brownfield sites: one site. Brownfield sites are abandoned or underutilized properties where potential liability due to environmental contamination and cleanup costs complicates redevelopment.
2. Environmental covenants register: seven 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: 121 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: 245 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: 263 records. This dataset 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: 128 active sites with 546 tanks. Washington State regulates active storage tanks on different properties including gas stations, industries, commercial properties, and government entities.

Hazardous waste services (transporters and facilities). Listed on Ecology’s hazardous waste and toxics reduction services directory at <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Dangerous-waste-guidance/Dispose-recycle-or-treat/Dangerous-waste-facilities>

10.1.2.2 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 website 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 upon request, and Clean Earth and MRWF staff are available to speak at various public meetings (e.g., small business associations, neighborhood associations, real estate professional associations).

10.1.2.3 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 addition to information provided on the County's website relative to appropriate disposal options (see Section 10.1.2.2), County residents can receive technical assistance through the Department of Transportation, as well as a telephone hotline (360-380-4640) maintained by Clean Earth. 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 pollution prevention assistance specialists are available to conduct business tours and consultations. In addition, the EnviroStars program (see Section 3.1.1) is another resource for businesses.

10.1.2.4 Service Improvement Opportunities and Constraints

The County plans to focus its available funding on program and service maintenance. Partnerships with both the private sector and nonprofit organizations will continue to be explored to identify potential means of cost-effective service enhancement.

10.1.3 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 EPA 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](#) (including MRW), and Criteria for MSW in Landfills in [WAC Chapter 173-351](#). Relevant federal laws and regulations include the following:

- RCRA
- Toxic Substances Control Act
- 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 (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 70A.300](#))
- Solid Waste Management Act ([RCW 70A.205](#))
- MTCA
- Pollution Prevention Planning Act
- Used-Oil Recycling Act

Under [RCW 70A.300](#), 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:

- [WCC 24.06](#), Solid Waste Rules and Regulations—Standards and Permits

10.1.4 Financing the Program

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

- Excise tax on solid waste hauled by certificated haulers and self-haulers

- Ecology grants (primarily LSWFA Grant funds)

10.1.5 Governance Structure

As presented in Section 10.1.3, 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 County 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 (Appendix B).

10.1.6 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.

10.1.7 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 10.2.2.

10.1.7.1 Household Collection

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

- Automotive products
- Cleaners
- Fluorescent lamps

- Latex paint
- Lawn and garden chemicals and other toxic materials
- Mercury thermometers and other devices
- Oil-based paint and associated products
- Solvents
- Corrosive liquids and solids
- Aerosols
- Pool chemicals
- Used oil and fuels

Annual collection events: 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 distant from the MRW facility. Because of international transport challenges, one MRW collection event is held in the Point Roberts area at least once every two years.

CESQG waste pharmaceuticals collection: Disposal services are available for qualifying CESQGs at the MRW facility. CESQGs wishing to dispose of dangerous waste pharmaceuticals must comply with the Dangerous Waste Regulations ([WAC 173-303-555\(2\)\(a\)](#)). CESQG's must call the telephone hotline (360-380-4640) and follow specific guidelines before transporting the substance(s) to the facility.

MRW reuse 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 ten to 15 percent.

10.1.7.2 Household and Public Education

Section 10.1.2.2 provides a description of current household and public education services provided by the County specific to hazardous waste management.

10.1.7.3 Small Business Technical Assistance

In addition to information provided on the County's website relative to appropriate disposal options (see Section 10.1.2.2), County residents can receive technical assistance through a telephone hotline (360-380-4640) maintained by Clean Earth. Assistance is typically provided in the form of technical advice over the phone and referrals to information available on the Internet. In cases where additional, on-site technical assistance is warranted for small businesses, County staff pollution prevention assistance specialists are available to conduct business tours and consultations. In addition, the EnviroStars program (see Section 3.1.1) is another resource for businesses.

10.1.7.4 Small Business Collection Assistance

CESQGs may dispose of hazardous wastes at the MRW facility and must pay for hazardous waste disposal in accordance with the fee structure defined in the Disposal of Toxics Program operations plan. Wastes accepted from CESQGs at the facility are consistent with those identified in Section 10.1.7.1 for household collection.

The County also provides pharmaceutical collection services to CESQGs through a specific program. Participating small businesses must be pre-certified to participate in the disposal program.

10.1.7.5 Enforcement

The County Health Department leads enforcement of local hazardous waste regulations for CESQGs and households and investigates approximately 170 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

10.1.7.6 Used-Oil Education and Collection

Used motor oil is currently collected curbside by MSW collectors for appropriate management. As an alternative, used oil may also be delivered to the MRW facility, as well as to satellite sites such as SSC Cedarville Road and Birch Bay drop box stations and NVD Lynden Transfer Station. The County relies primarily on service description content on its website for public education specific to used-oil collection services. It also relies on technical assistance offered through the telephone hotline (360-380-4640). In addition, the County has collaborated with the Port of Bellingham to provide handling and disposal of used watercraft motor oil. Efforts by the port have resulted in earning EnviroStar status by educating the public on proper watercraft motor oil disposal through signage at port-operated facilities.

10.1.8 Process for Updating the Hazardous Waste Section

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

10.2 Implementation

This section describes programs to help the County achieve the goals related to its hazardous waste management program for the 2022–2027 planning period.

10.2.1 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 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

10.2.2 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.

10.2.2.1 Household Collection

Household collection element objective: Provide or facilitate convenient collection services for household hazardous waste and key special wastes that meet the needs of residents.

**Table 10-1
Household Collection Goals**

Household Collection Goal 1: Disposal Facility Operation	
Action	Operate an MRWF and associated satellite collection facilities for residents.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County (through contract with Clean Earth).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
Household Collection Goal 2: Collection Event	
Action	Host at least one annual mobile collection event for residents in underserved areas of the County.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County (through contract with Clean Earth).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
NOTES: County = Whatcom County. MRW = moderate risk waste. LSWFA = local solid waste financial assistance.	

10.2.2.2 Household and Public Education

Household and public education element objective: Educate and motivate residents to understand the environmental risks posed by hazardous products, reduce purchase and use of hazardous product, and properly use, store, and dispose of hazardous products.

**Table 10-2
Household and Public Education Goals**

Household and Public Education Goal 1: MRW Reduction Education and Outreach	
Action	Provide HHW education programs designed to increase awareness and reduce use, misuse, improper storage and disposal, and risks to human health and the environment.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County.
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
Household and Public Education 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 clean up.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County (through contract with Clean Earth).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
NOTES: HHW = household hazardous waste. LSWFA = local solid waste financial assistance.	

10.2.2.3 Small Business Technical Assistance

Small business technical assistance element objective: Educate and motivate small businesses to understand the environmental risks posed by hazardous products, reduce purchase and use of hazardous product, and properly use, store, and dispose of hazardous products.

**Table 10-3
Small Business Technical Assistance Goals**

Small Business Technical Assistance 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.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County.
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
Small Business Technical Assistance 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 clean up.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County (through contract with Clean Earth).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
NOTES: LSWFA = local solid waste financial assistance. MRW = moderate risk waste.	

10.2.2.4 Small Business Collection Assistance

Small business collection assistance element objective: Provide or facilitate collection services for business hazardous waste and key special wastes that meet the needs of small quantity generators.

**Table 10-4
Small Business Collection Assistance Goals**

Small Business Collection Assistance Goal 1: MRW Collection	
Action	Accept business hazardous waste from small quantity generators for a fee at the existing MRWF.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County.
Funding Source(s)	Disposal fee paid directly by business customers supplements excise tax on solid waste hauled by certified haulers and LSWFA funds.
NOTES: LSWFA = local solid waste financial assistance. MRW = moderate risk waste. MRWF = moderate risk waste facility.	

10.2.2.5 Enforcement

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

**Table 10-5
Enforcement Goals**

Enforcement Goal 1: Complaint Response and Enforcement	
Action	Respond to hazardous-and solid waste-related complaints, and conduct enforcement activities, as warranted.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County.
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
Enforcement Goal 2: Regulatory Coordination	
Action	Coordinate with Ecology, other agencies, and other County departments involved in hazardous materials regulations that relate to prevention and proper use, storage, and disposal of hazardous materials.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County.
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
NOTE: LSWFA = local solid waste financial assistance.	

10.2.2.6 Used-Oil Education and Collection

Used-oil education and collection element objective: Provide and facilitate collection services for used oil and related automotive wastes that meet the needs of residents and small quantity generators.

**Table 10-6
Used-Oil Education and Collection Goals**

Used-Oil Education and Collection Goal 1: Used-Oil Collection Sites	
Action	Operate the MRWF and associated satellite facilities.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County (through contract with Clean Earth Technologies).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
Used-Oil Education and Collection Goal 2: Oil Filter and Antifreeze Collection	
Action	Operate the MRWF and associated satellite facilities.
Time frame	Ongoing, 2022–2027.
Implementing Agency	Whatcom County (through contract with Clean Earth Technologies).
Funding Source(s)	Excise tax on solid waste hauled by certified haulers and LSWFA funds.
NOTES: LSWFA = local solid waste financial assistance. MRWF = moderate risk waste facility.	

10.2.3 Programs and Milestones

All program goals presented in Section 10.2.2 are intended to be ongoing efforts throughout the planning horizon with no specific milestone-associated dates.

10.2.4 Annual Budgets

Section 10.1.4 presents the current sources of funding specific to operation and maintenance of the hazardous waste management program. The Disposal of Toxics Program is responsible for management of all hazardous waste-related system components and services. It was allocated an operating budget of \$375,000 in 2021. This budget was supported in 2021 by Local Solid Waste Financial Assistance grant funds in the amount of \$281,000. The current grant fund allocation has been reduced to \$280,000 annually for the next two-year term.

11 IMPLEMENTATION SCHEDULE

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

11.1 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 CSHWMP. 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

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

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 used for the disposal of county-generated waste. The CSHWMP is required to describe existing solid waste disposal handling facilities in the County that, 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 will continue to be conducted throughout the County so that people are informed of the need to reduce, source separate, and recycle solid waste. Developing educational programs is required as part of the CSHWMP ([RCW 70A.205](#)).

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 about the CSHWMP 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 CSHWMP, distributing informational brochures, and soliciting ideas from citizens.

SOLID WASTE PERMITS

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

Applicants must also apply for permit approval from the County Department of Planning and Development Services. The Department of Planning and 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 that must comply with [RCW 70A.205](#), 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 70A.205.045](#).

IMPLEMENTATION

It is the responsibility of the County and cities to implement programs following the adoption and approval of the 2022 CSHWMP. The County and the cities are required to adopt regulations and ordinances governing solid waste handling to implement the 2022 CSHWMP ([RCW 70A.205](#)).

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 about proposed rules, policies, and ordinances before their adoption. The SWAC is advisory only, making recommendations to the County Council that 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.

11.2 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 in each section contained in this CSHWMP.

**Table 11-1
Implementation Schedule**

GOALS	ACTIONS	2022	2023	2024	2025	2026	Future
Section 3. 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. Provide additional educational resources for adults.	✓	✓	✓	✓	✓	✓
	D. Support and fund commercial education through targeted outreach, commercial waste audits, and technical assistance, specifically related to C/D and food waste.	✓	✓	✓	✓	✓	✓
	E. Increase distribution of waste reduction educational materials related to C/D waste for the construction industry to address significant increases during the COVID-19 pandemic.	✓					
	F. Target development of educational materials for multifamily customers.			✓	✓	✓	✓
	G. Increase support and advertising for the WSU composting education program through the Master Composting and Recycling program.		✓	✓	✓	✓	✓
	H. 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.				✓	✓	✓
	I. Publish educational materials of the solid waste system in response to community requests.	✓	✓	✓	✓	✓	✓
2. Use 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 website, 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 about waste generation habits/trends.	✓	✓	✓	✓	✓	✓
	B. Educate about 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 about the environmental impact of waste and waste management.	✓	✓	✓	✓	✓	✓
	D. Promote the theme of zero waste.				✓	✓	✓
	E. Identify relevant metrics and data gathering needs in coordination with the County CROP to support targeted and effective future education and outreach programs	✓	✓	✓	✓	✓	✓
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.	✓	✓	✓	✓	✓	✓
5. Reduce food waste by 50 percent.	A. Incorporate State Food Waste Reduction Plan released in late 2021.	✓					

**Table 11-1
Implementation Schedule**

GOALS	ACTIONS	2022	2023	2024	2025	2026	Future
Section 4. Recycling							
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 about the purpose and benefits of a three-bin system, as well as the success of the local program.		✓	✓	✓	✓	✓
Multifamily Recycling							
1. Gather information about multifamily disposal and recycling habits.	A. Conduct a waste audit to understand the recycling habits of multifamily 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 multifamily residential outreach.	A. Provide educational information to be distributed to multifamily residents, such as information on how to accommodate recycling bins.			✓	✓	✓	✓
	B. Create or expand programs to provide waste audits to building managers and provide support for follow-up 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 multifamily buildings provides adequate capacity in each recycling bin at any time, minimizing potential for unnecessary disposal or contamination.	✓	✓	✓	✓	✓	✓
Commercial Recycling							
1. Continue to maintain and support commercial recycling.	A. Monitor commercial recycling rates to ensure all businesses in the County are served.	✓	✓	✓	✓	✓	✓
Section 5. 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.		✓		✓		
	B. Investigate expanding organics collection to areas of the County that are not served by existing programs.	✓					✓
	C. Continue to support composting at home and identify opportunities to expand exiting programs.	✓	✓	✓	✓	✓	✓
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.						✓
	E. Evaluate and increase options for multifamily and commercial composting.	✓	✓	✓	✓	✓	✓
3. Identify opportunities to expand cannabis waste management in the County.	A. Identify opportunities to manage cannabis waste generated in the County.	✓	✓	✓	✓	✓	✓
	B. Monitor state and federal guidance regarding disposal of cannabis waste						✓

**Table 11-1
Implementation Schedule**

GOALS	ACTIONS	2022	2023	2024	2025	2026	Future
Section 6. Solid Waste Collection							
1. Ensure that collectors are providing the required minimum service to all subscribers as outlined in Whatcom County Code and interlocal agreements between the County and municipalities.	A. Investigate complaints regarding collection services and correct deficiencies.	✓	✓	✓	✓	✓	✓
Section 7. Transfer and Disposal							
1. Continue to maintain and support transfer and disposal system facilities.	A. Provide ongoing postclosure monitoring and maintenance of closed landfills.	✓	✓	✓	✓	✓	✓
	B. Work with existing private transfer stations to ensure compliance with solid waste handling facility permits.	✓	✓	✓	✓	✓	✓
	C. Work with service providers to ensure adequate system capacity is constructed in advance of need.	✓	✓	✓	✓	✓	✓
	D. Work with service providers to ensure adequate communication with County residents regarding collections needs.	✓	✓	✓	✓	✓	✓
2. Continue to manage illegal dumping in the County.	A. Survey residents and businesses regarding disposal needs to ensure sufficient access to disposal facilities is provided.	✓	✓	✓	✓	✓	✓
Section 8. Miscellaneous Waste							
1. Increase C/D materials recycling.	A. Conduct outreach to building associations and other construction-related entities to educate contractors about the benefits of a self-regulating industry.	✓	✓				
	B. Measure, monitor, and support existing C/D diversion efforts.	✓	✓	✓	✓	✓	✓
	C. Evaluate potential for instituting recycling requirements for construction sites through the building permit program.		✓	✓	✓		
	D. Implement provisions for governmental construction projects to require recycling of waste and a preference to use recycled building products.			✓			
	E. Explore County use of reclaimed asphalt shingles.	✓					
2. Control sham recycling, if it is taking place.	A. Develop monitoring program to evaluate sham recycling. Understand if there is an issue of illegally hauling solid waste under the guise of recycling.			✓			
	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 the 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.	✓			✓		✓
5. Be prepared for management of special waste generated through response to natural or human-caused disasters.	A. Coordinate with the Whatcom County Sheriff's Office Division of Emergency Management for integration of waste handling/disposal into emergency planning documents.	✓		✓		✓	

**Table 11-1
Implementation Schedule**

GOALS	ACTIONS	2022	2023	2024	2025	2026	Future
Section 9. 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 LAMIRD.			✓			
	D. Conduct revision, as warranted, to Whatcom County Code 8.15.030.E to reflect current disposal sites.	✓					
	E. Pursue an interlocal agreement with Skagit County that defines and establishes solid waste planning and service provision responsibilities in the Newhalem/Diablo area.	✓					
	F. Review adequacy of existing excise task levy and exemption to address recent State funding reductions.	✓					
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.			✓			
3. Provide sufficient funding to maintain current and expanded levels of service.	A. Explore potential new funding options to support expanded County facilities and disposal options.	✓	✓	✓	✓	✓	✓

**Table 11-1
Implementation Schedule**

GOALS	ACTIONS	2022	2023	2024	2025	2026	Future
Section 10. Local Hazardous Waste Management Plan							
1. Maintain current level of household and small business MRW disposal facility operation and collection events.	A. Operate an MRWF and associated satellite collection facilities for residents and small businesses to accept MRW, including used oil and antifreeze.	✓	✓	✓	✓	✓	✓
	B. Host at least one annual mobile collection event for residents in underserved areas of the County.	✓	✓	✓	✓	✓	✓
	C. Accept business MRW from small quantity generators for a fee at existing MRWF.	✓	✓	✓	✓	✓	✓
2. Maintain MRW reduction education and outreach.	A. Provide HHW education programs designed to increase awareness and reduce use, misuse, improper storage and disposal, and risks to human health and the environment.	✓	✓	✓	✓	✓	✓
	B. Operate an Environmental Health Hotline (360-380-4640) for residents and small businesses to provide information about environmental health, including hazardous materials prevention, use, storage, disposal, and clean up.	✓	✓	✓	✓	✓	✓
	C. Deliver technical assistance services to small businesses that result in measurable changes in waste management, compliance, and best management practice implementation.	✓	✓	✓	✓	✓	✓
3. Respond to complaints and enforce solid waste regulations.	A. Respond to hazardous and solid waste-related complaints and conduct enforcement activities, as warranted.	✓	✓	✓	✓	✓	✓
	B. Coordinate with Ecology, other agencies, and other County departments involved in hazardous materials regulations that relate to prevention and proper use, storage, and disposal of hazardous materials.	✓	✓	✓	✓	✓	✓
<p>NOTES:</p> <p>C/D = construction and demolition. the County = Whatcom County. CROP = contamination reduction and outreach plan Ecology = Washington Department of Ecology LAMIRDS = Limited Area of More Intense Rural Development MRW = moderate risk waste MRWF = moderate risk waste facility WSU = Washington State University</p>							

11.3 Budget

The County maintains an annual solid waste budget of approximately \$2,280,000. 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 and by local transfer stations through self-haulers. The balance of funding is secured through Ecology grants, which has recently been increased by \$315,000 per year through increases in the State 2021-2023 biennial capital budget.

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, Republic 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 publicly 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 MRWF (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 Disposal of Toxics Program represents a much larger portion of the budget, at approximately 20 percent.

Funding for community education and outreach programs are critical to achieving waste reduction goals. Additional programming will be considered for commercial technical assistance programs pertaining to organics management, C/D debris recycling, and single and multifamily 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.

GLOSSARY⁶

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.

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.

⁶ Source: Appendix A (Glossary of Terms and List of Acronyms), Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revisions, Washington State Department of Ecology Publication No. 10-07-005.

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 RCW 81.77 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.

Green Waste: Biodegradable waste typically consisting of garden or park waste, such as grass or flower cuttings and hedge trimmings, and contain relatively high nitrogen concentrations.

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

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

Household Hazardous Waste: Those substances identified by Ecology as hazardous household substances in the guidelines developed under RCW 70.105.220 (Local Hazardous Waste Management Program Guidelines). Household hazardous waste 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 WAC Chapter 173-303.

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 RCW 70.105D.

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 that are 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.

Vector Waste: A common term used to describe street waste. "Vector" 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 Vector trucks and treated as street wastes. However, not all wastes picked up by Vector 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 “waste prevention” or “recycling.” 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.

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APPENDIX A

WHATCOM COUNTY SOLID WASTE HANDLING FACILITIES

Whatcom County Solid Waste Handling Facilities

Facility	Materials Type				Materials Accepted*	Permitted
	Reuse	Recycling	Organics	Waste		
Reuse Drop-off Locations						
Goodwill Bellingham	✓				clothing, household items, electronics	
Habitat for Humanity	✓				building materials, furniture, appliances	
Ragfinery	✓				clothing, household items, electronics	
The RE Store	✓				building materials	
Value Village Bellingham	✓				clothing, household items, electronics	
Recycling Drop-off Locations						
Beacon Battery & Tires (2 locations)		✓			batteries, tires of all size	
Granite Construction Company (2 locations)		✓			asphalt, concrete	
Henifin Construction		✓			concrete, rebar, asphalt	✓
Northwest Recycling Warehouse		✓			cardboard	
Scrap-It Recycling		✓			scrap metal, obsolete equipment	
Slater Road Lautenbach Recycle Park		✓			plastics, glass, metal, paper, cardboard	
Whatcom Builders		✓			asphalt	
Reclaim Northwest		✓			agricultural plastics	
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, plastics, plastic film, paper, yard waste	✓
Tri-County Deadstock				✓	deadstock	
Organics Drop-off Locations						
Green Earth Technology			✓		yard waste and food scraps	✓
Smit's Compost			✓		dairy manure and sawdust	
4 Legs LLC			✓		dairy manure	
Transfer Stations (with public drop-off)						
Cando Recycling Transfer Station		✓		✓	yard waste	✓
Republic Transfer Station		✓		✓	scrap metal, batteries	✓
RDS Transfer Station		✓	✓	✓	scrap metal, batteries, electronics, yard waste, food scraps	✓
Hazardous Waste Facility						
Disposal of Toxics		✓		✓	hazardous household waste, including motor oil, antifreeze, cooking oils, and other chemicals	✓
Seattle City Light Newhalem Moderate Risk Waste Facility		✓		✓	small quantity generator waste, no HHW	

Whatcom County Solid Waste Handling Facilities

Facility	Materials Type				Materials Accepted*	Permitted
	Reuse	Recycling	Organics	Waste		
Vactor Waste Facility						
City of Bellingham Vactor Waste Facility—not open to the public				✓	vactor waste only, not open to public	✓
Anaerobic Digesters						
FPE Renewables/ Vander Haak Dairy Anaerobic Digester			✓		preconsumer food waste	
Edaleen Cow Power LLC			✓		preconsumer food waste	
Van Dyk-S Holsteins LLC			✓		preconsumer food waste	
Biosolids						
Tjoelker Enterprises				✓	septage	
Shannon Tjoelker Enterprises				✓	septage	
Lil' John Sanitary Service SMF				✓	septage	
City of Ferndale Sewage Treatment Plant				✓	septage	
Landfills						
Airport Landfill				✓	closed landfill	
BP Inert Landfill				✓	inert waste landfill	
BP Limited Purpose Landfill				✓	limited purpose landfill	
CCR Landfill				✓	closed landfill	
Cedarville Landfill				✓	closed landfill	
GP Hilltop Landfill				✓	closed landfill	
Intalco Landfill				✓	closed landfill	
Olivine Landfill				✓	closed landfill	
* Contact the facility for a full list of materials accepted						
NOTES: HHW = household hazardous waste NVD = Nooksack Valley Disposal RDS = Recycling and Disposal Services SMF = septage management facility SSC = Sanitary Service Company						

APPENDIX B

RESOLUTION OF 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.

WHATCOM COUNTY RECEIVED
CONTRACT NO. 9110001
SEP 27 1991

WHATCOM COUNTY
BELLINGHAM, WA
01/31/92 10:03 AM
REQUEST OF: WHATCOM C
Shirley Forslof, AUDITOR
BY: MRT, DEPUTY
AMAGER

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 15th 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.

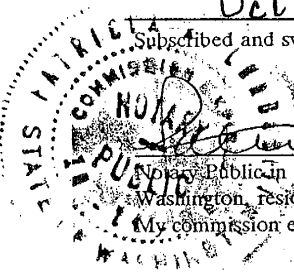
8. Assets and Liabilities: On termination of this Agreement, any assets owned separately by a party shall remain the property of that party. In entering into this Agreement, neither

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 15th day of

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



Ronald J. Watts
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
Randall J. Watts, Chief Civil
Deputy Prosecuting Attorney

ATTEST:

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

CITY OF Sumas
By [Signature]
Mayor

Bellingham

Σ Solid Wastes
V 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.

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

WHATCOM COUNTY

[Signature]
SHIRLEY VAN ZANTEN
County Executive

APPROVED AS TO FORM:

[Signature]
Randall J. Watts, Chief Civil
Deputy Prosecuting Attorney

CITY OF BELLINGHAM

ATTEST:

By [Signature]
Tim Douglas, Mayor

Departmental Approval
[Signature]

APPROVED AS TO FORM
BELLINGHAM CITY ATTORNEY

BY [Signature]

WHATCOM COUNTY
BELLINGHAM, WA
01/31/92 09:44 AM
REQUEST OF: WHATCOM C
Shirley Forslof, AUDITOR
BY: MRT, DEPUTY
\$1.00 AMGR

Council's
WHATCOM COUNTY
CONTRACT NO.
9109004

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.

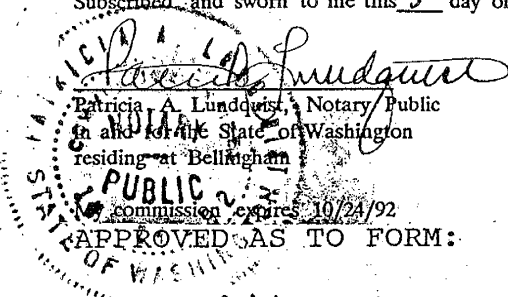
9. Implementing Agreements: The parties agree that routine operating agreements may be required from time to time to accomplish the purpose of this Agreement and the Plan. Any such operating agreement or understanding executed to implement this Agreement or the Plan which is signed by the County Executive 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, 1991.

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:

CITY OF Blaine
By Ann E. Wagner
Mayor

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

Councils
WHATCOM COUNTY
CONTRACT NO.
9109020

WHATCOM COUNTY
BELLINGHAM, WA
01/31/92 09:38 AM
REQUEST OF: WHATCOM C
Shirley Forslof, AUDITOR
BY: MRT, DEPUTY
\$.00 AMAGR

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 Sept, 1991.

Patrick A. Lundquist
Patrick A. Lundquist, Notary Public
in and for the State of Washington
residing at Bellingham
My commission expires 10/24/92
APPROVED AS TO FORM:

WHATCOM COUNTY

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

Randall J. Watts
Randall J. Watts, Chief Civil
Deputy Prosecuting Attorney

ATTEST:

CITY OF Everson

Mary E. Branham Asst. Clerk

BY *Matt Lezerwey*
Mayor

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

WHATCOM COUNTY
BELLINGHAM, WA
01/30/92 10:23 AM
REQUEST OF: WHATCOM C
Shirley Forslof, AUDITOR
BY: MRT, DEPUTY
\$18.00 AMGR

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.

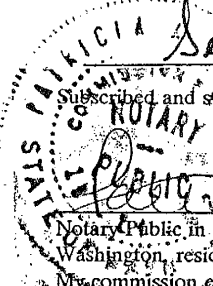
Definitions

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, 1991.

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

WHATCOM COUNTY

[Signature]
SHIRLEY VAN ZANTEN
County Executive

APPROVED AS TO FORM:

[Signature]
Randall J. Watts, Chief Civil
Deputy Prosecuting Attorney

ATTEST:

[Signature]

CITY OF FERN DALE

By [Signature]
Mayor
CITY MANAGER

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

WHATCOM COUNTY
CONTRACT NO. 9110002

RECEIVED
SEP. 27. 1991

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

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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.

WHATCOM COUNTY

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

Shirley Van Zanten
SHIRLEY VAN ZANTEN
County Executive

APPROVED AS TO FORM:

Randall J. Watts
Randall J. Watts, Chief Civil
Deputy Prosecuting Attorney

ATTEST:

CITY OF *Lynn*

[Signature]

By *[Signature]*
Mayor

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

Council

12

WHATCOM COUNTY
BELLINGHAM, WA
01/31/92 10:05 AM
REQUEST OF: WHATCOM C
Shirley Forslof, AUDITOR
BY: MRT, DEPUTY
\$1.00 AMAGER

WHATCOM COUNTY
CONTRACT NO. 3 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

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 17th day of Oct, 1991.



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

APPROVED AS TO FORM:

[Signature]
Randall J. Watts, Chief Civil Deputy Prosecuting Attorney

ATTEST:

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

WHATCOM COUNTY

[Signature] ^{10/} 7/91
SHIRLEY VAN ZANTEN
County Executive

CITY OF NOOKSACK

By [Signature]
Mayor

APPENDIX C

CROP

RECYCLING CONTAMINATION REDUCTION AND OUTREACH PLAN

WHATCOM COUNTY, WASHINGTON



MAUL
FOSTER
ALONGI

Prepared for
WHATCOM COUNTY
WHATCOM COUNTY HEALTH DEPARTMENT
June 28, 2021
Project No. 0744.02.02

Prepared by
Maul Foster & Alongi, Inc.
3140 NE Broadway Street, Portland, OR 97232

RECYCLING CONTAMINATION REDUCTION AND OUTREACH PLAN

WHATCOM COUNTY, WASHINGTON

*The material and data in this plan were prepared
under the supervision and direction of the undersigned.*

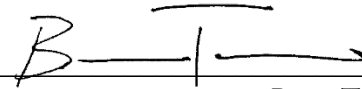
MAUL FOSTER & ALONGI, INC.



*Erik Bakkom, PE
Principal Engineer*



*Seth Otto, AICP, LEED AP
Senior Planner*



*Brian Tino, PE
Project Engineer*

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ACRONYMS AND ABBREVIATIONS

BMP	best management practice
the County	Whatcom County
CROP	Contamination Reduction and Outreach Plan
CSHWMP	Comprehensive Solid and Hazardous Waste Management Plan
Ecology	Washington State Department of Ecology
MRF	material recovery facility
TRP	The Recycling Partnership
WCC	Whatcom County Code

1 INTRODUCTION

This Recycling Contamination Reduction and Outreach Plan (CROP) is an appendix to the Whatcom County Comprehensive Solid and Hazardous Waste Management Plan (CSHWMP) and addresses Revised Code of Washington 70A.205.045(10), which requires counties with a population of more than 25,000 to include a CROP in their CSHWMP by July 1, 2021. This CROP is a customized version of the state template, which includes a discussion of problem contaminants and impacts on collection, action steps to address the issue, and an implementation schedule for the required CROP. The following is a list of action steps Whatcom County (the County) will take to reduce contamination in existing recycling programs for single-family and multifamily residences, commercial locations, and drop-box collection sites:

1. Inventory current recycling collection services and programs.
2. Prioritize which recycling program to focus on first.
3. Review the existing acceptable materials list, as shown in the Whatcom County Code (WCC), and update as needed.
4. Define and gather baseline recycling contamination data.
5. Identify key contaminants and their costs and impacts.
6. Develop and implement contamination-reduction education and outreach strategies.
7. Evaluate the effectiveness of anti-contamination strategies and set next steps.
8. Explore contamination-reduction strategies beyond education and outreach.

The goal of this CROP is to reduce the amount of contamination in the materials collected in the County's single-family, multifamily, drop-box, and commercial recycling programs. By reducing the contamination of collected recyclables, the county will more fully realize the economic, environmental, social, and public health benefits of these programs.

2 RECYCLING CONTAMINATION LITERATURE REVIEW

2.1 Recycling Contamination

Before 2018, Washington relied heavily on the export of collected recyclables to Asian countries, primarily China. After dealing with decades of issues resulting from the contamination of recyclable materials from the United States, China instituted the National Sword policy. The policy bans contamination at levels above 0.5 percent, ending Washington's export of collected recyclables, which were typically sent with levels of contamination between 3 and 5 percent. As a result, Washington

must now dispose of heavily contaminated recyclable materials, while also searching for new recycling markets and evaluating recycling practices and collection methods.

Recycling contamination consists of materials collected for recycling that are not accepted in a given community's recycling program. These include materials that are too wet or dirty for processing into new products and that therefore must be disposed of in a landfill. This CROP focuses on contamination in the recycling stream from single-family and multifamily residences, drop-box collection sites, and commercial recycling programs. Specifically, this CROP deals with traditional recyclables, such as paper, metal cans, glass bottles and jars, and plastic bottles. This CROP does not directly address organics, construction and demolition debris, commodity bale contamination, residuals controlled by material recovery facilities (MRFs), or material removed by remanufacturers from their secondary material feedstock.

The County's effective curbside source-separated recycling program has contributed to the reduction of contamination rates to less than 1 percent, significantly lower than the state average. Given the strong support for the existing three-bin system and the resulting higher-value recycling commodities, the County is not currently evaluating alternative collection opportunities.

2.2 Contamination Studies Conducted throughout Washington

The County referenced contamination studies performed by the following entities to supplement the gaps in local contamination data. The following studies inform the County's approach to assessing recycling contamination.

2.2.1 The Recycling Partnership (2019)

In 2019, The Recycling Partnership (TRP) conducted a State of Curbside Recycling Survey of 197 collection programs across the country. Based on the results of this study, TRP estimated an average national contamination rate of about 17 percent. TRP's survey included seven MRFs in Washington State and found inbound contamination from commingled recycling collection programs ranging from 5 to 20 percent by weight. Cart lid-lift audits and reviews of drop-box site collection found contamination rates upwards of 40 percent.

2.2.2 Kitsap County (2015)

In April 2015, Kitsap County collected samples from loads of recyclable materials collected from single-family curbside carts. The samples were sorted to identify the composition of curbside materials and quantify the amount of nonrecyclable materials. Kitsap tabulated the results of the study to determine a countywide average contamination rate of 9.5 percent. The highest rates of contamination were found to be from nonrecyclable plastics (e.g., bags, Styrofoam) and nonrecyclable food scraps and other residuals.

2.2.3 Clark County (2015)

In April, June, and October 2015, Clark County conducted composition tests of curbside recyclables collected from single-family homes. A team of volunteers removed a set amount of material from the loads of recyclables collected by Waste Connections for sorting and weighing. These tests were completed before and after the implementation of an outreach campaign conducted in April and May 2015. The contamination rate in Clark County dropped from 26.4 percent to 19.6 percent after the third test.

2.2.4 City of Seattle (2015)

Since 1993, the City of Seattle has conducted recycling composition studies to understand the types and quantities of materials set out by Seattle residents in recycling containers provided by contracted haulers. The study conducted between January and December 2015 collected 270 samples from single-family and multifamily generators and hand-sorted them into 35 categories. The results of the study showed a citywide contamination rate of 10.5 percent, with paper, plastic, and organic nonrecyclable materials making up the largest categories by weight.

3 ACTION STEPS

3.1 Inventory Current Recycling Collection Services and Programs

Recycling collection services and programs are discussed in detail in Section 4.1.1 of the CSHWMP. Residential curbside collection of recyclable materials is legally established under [WCC 8.10.050](#). Solid waste collection companies collect source-separated recyclables at least every other week on the same day of the week as garbage collection. Recycling collection service is provided to all single- and multifamily residences in incorporated areas. Residents in unincorporated areas are offered garbage and recycling collection service, but 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 according to [WCC 8.10.050\(A\)](#). Residents claiming this exemption may subscribe to recycling-only collection.

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 Washington Utilities and Transportation Commission permit (G-Permit) in unincorporated areas or through contracting 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 (see Table 4-1 in Section 4.1.1 of the CSHWMP). Collection companies provide these recycling containers to each residence at the customer's request. To make the best use

of available space, customers may use any bin for accepted recyclable materials, as long as those materials are separated correctly. Recyclable material reconfiguration is intended to reduce curbside overflow. Drivers inspect the bins during pickup and determine if they are properly sorted and which compartment of the truck is appropriate for each material. Cardboard flattened on its side and placed outside the bins is accepted.

3.1.1 Tons of Recyclables Collected

In 2017, the most recent year for which data are available, the County collected 128,158 tons of recycling. The following table provides a summary of total tons of recycling collected since 2007.

Whatcom County Tons of Recyclables Collected

Year	Total Recycling (Tons/Year)
2007	132,007
2008	121,917
2009	92,358
2010	103,385
2011	129,553
2012	120,215
2013	114,055
2014	117,628
2015	125,898
2016	129,252
2017	128,158

3.2 Prioritize Which Recycling Program to Focus on First

The County has identified multifamily recycling as the main priority for the contamination-reduction strategies outlined in this CROP. This decision is driven by historically higher levels of contamination in the multifamily recycling stream, compared to single-family, and the estimated impact on costs and material quality, the number of customers, and the total quantity of material collected.

3.3 Review Existing Acceptable Materials List

The list of materials that the County Council has designated as “recyclable” can be found in [WCC 8.10.050, Section C](#). The following recyclable materials are currently designated for inclusion in the curbside recycling program and are collected from single-family and multifamily customers as part of the three-bin system:

- Newspaper.
- Mixed waste paper.
- Aluminum containers.

- Tin-plated steel containers.
- Glass containers.
- Paperboard cartons (e.g., cereal boxes, shoeboxes, gift boxes, egg cartons, up to 3 gallons).
- All plastic bottles.
- Other plastic containers are eligible as approved by the County and the solid waste collection company (e.g., bottles, jugs, caps and rings, tubs, pails, buckets, and lids, up to 3 gallons).

The following materials are collected if placed next to set-out containers:

- Corrugated cardboard
- Scrap metal (e.g., wire, chain, bicycle parts, ductwork, and Christmas lights, no longer than 24 inches in any dimension or heavier than 35 pounds per piece)
- Lead-acid batteries
- Used motor oil (in sealed containers)

Recyclable materials are currently being collected in the county because of their potential for waste stream diversion, collection efficiency, processing requirements, and market demand. Changes in technology, political climate, and markets may necessitate changes in the designated recyclables. As stated in CSHWMP Section 4.1.3, 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.
- Consumer demand for recycling of certain materials, despite market conditions that require additional cost to do so.
- 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.
- Environmental and human health impacts associated with recycling certain materials.
- Legislative mandate.

3.4 Define and Gather Baseline Recycling Contamination Data

Starting with the highest-priority programs, the County will establish baseline levels and types of recycling contamination. In building on the information in the state CROP and the Washington State Department of Ecology's (Ecology) [Resource Library](#) and on the work completed in collecting baseline data, the County will identify and develop ways to track specific contaminants. For example, the number of carts containing plastic bags may be a more useful metric than an estimated overall percentage of contamination by volume.

Data collection methods may include, but are not limited to:

- Recycling stream composition studies
- Survey of the MRF and rejected materials to be disposed of
- Tracking contamination using on-board truck or container-mounted cameras
- Drop-off center studies or surveys (to determine public participation rates and recyclable recovery rate); composition studies or visual audits
- Container lid-lift audits for single-family, multifamily, and commercial accounts

3.5 Identify Key Contaminants and Their Costs and Impacts

Based on the data the County intends to collect, the County will identify the most problematic and costly contaminants, starting with the highest-priority programs. Although the types and impacts of contamination do not vary as much as the levels of contamination across different communities and programs, it is still important to gather locally specific data, which are critical to designing outreach campaigns and other strategies targeting the most problematic materials. These data can also help in calculating the economic and other benefits of removing problematic materials from the recycling stream.

In recent surveys, such as the one conducted by TRP in 2019, MRFs and cities in Washington identified the following recycling contaminants as the most problematic and costly to manage:

- Plastic bags and film
- Tanglers, including rope, cords, chains, and hoses
- Food and liquids
- Shredded paper
- Bagged garbage
- Nonprogram plastics, including clamshells and polystyrene foam
- Hypodermic needles

These contaminants can:

- Slow down the sorting and processing of materials

- Reduce the quality and value of secondary material feedstocks
- Result in costly shutdowns
- Damage collection, processing, and remanufacturing equipment
- Cause serious injuries to collection and processing facility staff

According to TRP, the highest costs associated with managing a contaminant recycling stream at MRFs nationally come from the following, which represent 80 percent of total contamination-related costs:

- Disposal of residuals (40 percent)
- Value lost from contaminated recyclables (26 percent)
- Labor to remove contamination from sorting equipment, etc. (14 percent)

3.6 Develop and Implement Contamination-Reduction Education and Outreach Strategies

The County will develop and implement education and outreach strategies based on best practices. This starts with addressing any inconsistencies in recycling information and messaging identified in the baseline inventories. All new outreach materials and messages will be aligned and consistent across all platforms. Depending on the type of recycling program, outreach and education strategies may include, but are not limited to:

- Evaluating measures to help customer understanding of the collection system, including container type and color and moving toward uniformity among service providers
- Visual, easy-to-understand signage using photos and universal pictures and symbols
- Cart and bin-tagging and rejection
- Continued implementation of on-route monitoring tools, including apps and cameras
- Pairing right-sized recycling and trash bins
- On-site assistance and outreach at drop-off sites
- Up-to-date and easy-to-find and access websites with clear, consistent messaging
- Social media posts, campaigns, mailings, brochures, and other communications
- Online apps for residents and businesses needing answers to their recycling questions
- Community presentations, tabling, and activities at community events
- School presentations and activities focused on recycling correctly
- Translation and transcreation of educational materials and campaigns to ensure that recycling information is clearly understood by all audiences
- Social marketing campaigns to effectively promote long-term behavior change

- Community focus groups and targeted outreach to multifamily customers

Where possible, free and customizable resources will be utilized, including [Ecology's Recycle Right](#) campaign materials and [TRP's Anti-Contamination Kit](#). Ecology's Recycling Contamination Reduction [Best Management Practices \(BMPs\) and Resources document](#) and [Resource Library](#) provide examples of successful anti-contamination programs.

3.7 Evaluate the Effectiveness of Anti-Contamination Strategies and Set Next Steps

The County and/or cities will conduct periodic assessments on the effectiveness of recycling contamination-reduction programs and strategies, including an evaluation of future cost impacts on the recycling system, and will share the results with key stakeholders and the public. These assessments will use, at least in part, the same methodology employed to establish baseline contamination levels.

The assessment results inform what is working and what adjustments to make for better results. This includes reducing contamination in other recycling programs that were not a focus during the initial implementation of this CROP.

3.8 Explore Contamination Education Strategies beyond Education and Outreach

As part of a statewide effort, the County will work with Ecology and other partners to explore strategies and solutions beyond education and outreach. These could address regional planning, operations and collection, contracting, incentives, pricing, policies, mandates, enhanced data collection, etc. Based on this evaluation, the County will identify and pursue the most promising initiatives.

These options may include, but are not limited to:

- Regional planning and aligned or joint contracting for services to harmonize messaging, lower program costs, and improve program performance.
- Evaluating the costs and benefits of operational changes, including collection frequency, level of source separation at the curb, and innovative drop-off container designs, on contamination levels and overall program performance.
- Product bans or restrictions.
- Strengthening contracts with haulers and MRFs to include provisions focused on reducing contamination, collecting and reporting data on program performance, and ensuring that materials on the accepted materials list are responsibly recycled. Consult [TRP's BMPs for MRF contracting](#) and their [supporting materials](#) for guidance.

The County and city coordinators will ensure alignment of this CROP and the CSHWMP and will secure and allocate funding to implement this CROP. This work will take place throughout the process

as needed. Updates to this CROP can be made during the CSHWMP revisions, including the required five-year revision process.

This work includes involving key stakeholders in reviewing, and if necessary, updating related elements in the CSHWMP to ensure that they are aligned and consistent with the contents of this CROP and the implementation work. This information may include, but is not limited to:

- An updated designated recyclables list
- Recycling facilities, including transfer stations, drop-off sites, and MRFs
- Recycling collection services and providers and collection systems and fees
- Waste-reduction and -recycling education and outreach strategies
- Funding sources and mechanisms for recycling programs and services

During this process, the County will also work with Ecology and other key stakeholders to identify and secure new funding and/or allocate existing funding, and to forge partnerships with agencies and organizations that can provide technical and financial assistance.

The state CROP and [Ecology’s Resource Library](#) are tools that will help the County get started on implementing this CROP. The library includes contamination-reduction BMPs, contracting guides, MRF-shed maps, materials from successful programs in Washington State and across the country, and more.

4 IMPLEMENTATION SCHEDULE

An initial three-year implementation schedule for all steps in this CROP is included in the table below. As the County clarifies and defines the scope of work, and identifies the resources needed to complete the work, a more detailed and refined implementation plan, schedule, and budget will be developed.

Whatcom County CROP Implementation Schedule

Actions	Responsible Party	2022	2023	2024
1. Recycling program prioritization.	County and cities	✓		
2. Gather additional recycling contamination data.	County and cities		✓	
3. Identify key contaminants and their associated costs and impacts.	County and cities		✓	
4. Develop and implement education and outreach strategies to reduce contamination to align with the goals and actions in Chapter 4 of the CSHWMP.	County and cities	✓	✓	✓

LIMITATIONS

The services undertaken in completing this plan were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This plan is solely for the use and information of our client unless otherwise noted. Any reliance on this plan by a third party is at such party's sole risk.

Opinions and recommendations contained in this plan apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this plan.

APPENDIX D

COMPLIANCE CHECKLIST

Compliance Checklist

Plan Requirements	Plan Location
1. Detailed inventory of all solid waste handling facilities.	<p>Sections 3.1: Waste Reduction and Public Education, Existing Conditions</p> <p>Section 4.1: Recycling, Existing Conditions</p> <p>Section 5.1: Organics Material Management, Existing Conditions</p> <p>Section 7.1: Transfer and Disposal, Existing Conditions</p>
2. Description of any deficiencies in the handling of solid waste	<p>Section 3.2: Waste Reduction and Public Education, Needs and Opportunities</p> <p>Section 4.2: Recycling, Needs and Opportunities</p> <p>Section 5.2: Organics Material Management, Needs and Opportunities</p> <p>Section 7.2: Transfer and Disposal, Needs and Opportunities</p>
3. 20-year solid waste handling projection (facility needs)	<p>Section 2.3.9: Planning Area, Per Capita Waste Projections</p> <p>Section 2.3.10: Planning Area, Total county Waste Projections</p> <p>Section 3.2: Waste Reduction and Public Education, Needs and Opportunities</p> <p>Section 4.2: Recycling, Needs and Opportunities</p> <p>Section 5.2: Organics Material Management, Needs and Opportunities</p> <p>Section 6.2: Solid Waste Collection, Needs and Opportunities</p> <p>Section 7.2: Transfer and Disposal, Needs and Opportunities</p> <p>Section 8.2: Miscellaneous Waste, Needs and Opportunities</p>
4. Meets the minimum functional standards for solid waste handling in Washington State	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 CSHWMP
5. Relationship to other plans is addressed	
6. Six-year capital and acquisition projection	
7. Financing plan for capital and operational costs for the proposed programs	
8. A permitting and enforcement program is clearly defined	
9. Current inventory of all solid waste collection programs (G-certificated and City-operated) including population densities served, address and name of all G-certificated haulers and projected solid waste collection needs for the next six years	<p>Section 6.1: Solid Waste Collection, Existing Conditions</p> <p>Section 6.2: Solid Waste Collection, Needs and Opportunities</p>
10. Waste Reduction Strategies	<p>Section 3: Waste Reduction and Public Education</p> <p>Section 4: Recycling</p>
11. Source Separation Strategies	
12. Inventory of recycling programs	Section 4.1: Recycling, Existing Conditions

Compliance Checklist

Plan Requirements	Plan Location
13. Current and projected recovery rates through the current and proposed recycling programs	Section 2.3.9: 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: Organics Material Management
14. A waste reduction and recycling outreach and education program	Section 3: Waste Reduction and Public Education Section 4: Recycling
15. Recycling strategies, a discussion on existing markets, characterization of the waste stream and a description of existing programs and deficiencies	Section 4.1: Recycling, Existing Conditions
16. Programs to assist the public and private with recycling and an implementation schedule for those programs	Section 4: Recycling
17. A list of designated recyclables	Section 4.1: Recycling, Existing Conditions
18. A WUTC cost assessment questionnaire	Appendix F
19. SEPA checklist and necessary SEPA documents	Appendix E
20. Evidence of SWAC participation (SWAC meeting minutes, signed roster, etc.)	Appendix B
21. Interlocal agreement(s)	
22. Resolution(s) of adoption (*final draft only*) Recommended items: A locally-defined amendment process	
23. A contingency plan for the list of designated recyclables in the case of markets collapse, and a process to easily modify the list of designated recyclables	Section 4.1.3: Designated Recyclable Materials List
24. A discussion of how the plan supports the state's solid waste management plan and solid waste priorities	This is discussed throughout the entirety of the CSHWMP
25. SWAC bylaws included as an appendix	Appendix B

APPENDIX E

SEPA DOCUMENTS

SEPA ENVIRONMENTAL CHECKLIST

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:

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:

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:

2022 Whatcom County Solid and Hazardous Waste Management Plan (CSHWMP)
Update

2. Name of applicant:

Whatcom County Health Department

3. Address and phone number of applicant and contact person:

Jennifer Hayden, Environmental Health Supervisor
Whatcom County Health Department
Bellingham, WA 98225
(360) 778-6036
JHayden@co.whatcom.wa.us

4. Date checklist prepared:

June 21, 2021

5. Agency requesting checklist:

Whatcom County Health Department

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

Proposed implementation of the Whatcom County CSHWMP Update will begin upon adoption and proceed through plan revision in 2021. The CSHWMP recommends various solid waste management programs to be developed and implemented over the next six years.

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

Yes, the CSHWMP will be reviewed every two years after its implementation and updated as necessary, as required by state law (WAC 173-304-011).

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

Washington State law requires that local governments develop a local CSHWMP. 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 CSHWMP 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.

No.

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

In order to participate in the CSHWMP, each local jurisdiction will need to approve and adopt the CSHWMP. These jurisdictions 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.)

The Whatcom County CSHWMP defines goals and action items for the management and disposal of municipal solid waste (MSW) produced by households and commercial generators. The CSHWMP 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 hazardous waste chapter of the CSHWMP is to reduce the generation of hazardous waste and to reduce illegal hazardous waste dumping, including the improper disposal of hazardous waste in public landfills, sewers, storm drains, and septic systems. All local governments or combination of contiguous local governments 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.

The jurisdiction of the CSHWMP 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 (including Newhalem and Diablo), which is serviced by the Skagit County waste hauler and managed within their program. Certain plan action items are intended for specific areas within the County.

B. Environmental Elements [\[HELP\]](#)

1. Earth [\[help\]](#)

a. General description of the site:

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

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

This criterion does not apply. There are no site-specific actions recommended in the CSHWMP. 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.

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.

Does not apply. There are no site-specific recommendations in the CSHWMP. 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.

Does not apply. There are no site-specific recommendations in the CSHWMP. 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.

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

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

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

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

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

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

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

2. Air [\[help\]](#)

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.

No significant amounts of emissions to the air are anticipated as a result of any recommendations made by the CSHWMP. 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.

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

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

Does not apply.

3. Water [\[help\]](#)

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.

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.

Does not apply. There are no site-specific recommendations in the CSHWMP.

- 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.**

Does not apply. There are no site-specific recommendations in the CSHWMP.

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

Does not apply. There are no site-specific recommendations in the CSHWMP.

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

Does not apply. There are no site-specific recommendations in the CSHWMP.

- 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.**

Does not apply. There are no site-specific recommendations in the CSHWMP.

b. Ground Water: [\[help\]](#)

- 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.**

Neither groundwater withdrawal for use as drinking water or other purposes, nor discharge of water to groundwater is contemplated as part of the CSHWMP. 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.**

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.**

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.

Does not apply.

3) 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:

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?

Does not apply.

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

Does not apply.

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

Does not apply.

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

Does not apply.

5. Animals [\[help\]](#)

- 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:

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.**

Does not apply.

- c. **Is the site part of a migration route? If so, explain.**

Does not apply.

- d. **Proposed measures to preserve or enhance wildlife, if any:**

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 [\[help\]](#)

- 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.**

Petroleum-based fuels will be used for transportation of solid waste and equipment operation. The programmatic action items recommended as part of the planning process look to reduce waste generation, and therefore minimize the need for solid waste transportation and usage for petroleum-based fuels.

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

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:**

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

7. Environmental Health [\[help\]](#)

- 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.

No environmental risks are anticipated as a result of new or additional programs proposed by the CSHWMP. 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 CSHWMP.

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 CSHWMP.

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 CSHWMP. 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 CSHWMP recommendations.

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

There are no net increases in risk caused by the CSHWMP 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)?

There are no facilities proposed as part of the CSHWMP. 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.

Does not apply.

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

Does not apply.

8. Land and Shoreline Use [\[help\]](#)

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.

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?

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.

Does not apply.

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

Does not apply.

e. What is the current zoning classification of the site?

Does not apply.

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

Does not apply.

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

Does not apply.

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

Does not apply.

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

Does not apply.

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

Does not apply.

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

Does not apply.

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

Does not apply.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

Does not apply.

9. Housing [\[help\]](#)

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

Does not apply.

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

Does not apply.

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

Does not apply.

10. Aesthetics [\[help\]](#)

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

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

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

b. Proposed measures to reduce or control aesthetic impacts, if any:

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

11. Light and Glare [\[help\]](#)

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

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?

Does not apply.

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

Does not apply.

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

Does not apply.

12. Recreation [\[help\]](#)

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

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

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:**

Does not apply.

13. Historic and cultural preservation [\[help\]](#)

- 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 ? If so, specifically describe.**

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

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.**

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 [\[help\]](#)

- 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.**

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

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?**

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).**

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.**

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?**

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:**

Does not apply.

15. Public Services [\[help\]](#)

- 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.**

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

Does not apply.

16. Utilities [\[help\]](#)

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

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

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 CSHWMP 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 CSHWMP 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 CSHWMP's recommendations.

Recycling, waste reduction, composting, and educational programs, along with the construction and demolition debris diversion incentives, recommended in the CSHWMP 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 programming for recycling, waste reduction, composting, and educational programming, the County will look at ways to better manage special waste streams, in particular, beneficial reuse alternatives for street sweepings and contaminated soil.

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

Implementation of the proposed CSHWMP 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 CSHWMP'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 CSHWMP should conserve energy in that much of the collected hazardous 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 CSHWMP 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 CSHWMP 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 CSHWMP 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:

The CSHWMP 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 CSHWMP was 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 F

WUTC COST ASSESSMENT QUESTIONNAIRE

The WUTC cost assessment questionnaire to be included following approval of the Comprehensive Solid and Hazardous Waste Management Plan by Whatcom County Council