2021 COMPREHENSIVE SOLID AND HAZARDOUS WASTE MANAGEMENT PLAN

COWLITZ COUNTY, WASHINGTON

Prepared for

COWLITZ COUNTY

DEPARTMENT OF PUBLIC WORKS

January 11, 2022

Project No. 9041.07.03

MAUL FOSTER ALONGI

Prepared by

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ACRONYMS AND ABBREVIATIONS

2012 Plan	2012 Comprehensive Solid Waste Management Plan
ACS	American Community Survey
BOCC	Board of County Commissioners
Building and Planning	County Department of Building and Planning
C/D	construction and demolition
CCC	Cowlitz County Code
CCHD	Cowlitz County Health Department
CDP	census-designated place
CFC	chlorofluorocarbon
CMSWL	criteria for MSW landfills
the County	Cowlitz County
CPG	Coordinated Prevention Grants
CROP	Contamination Reduction and Outreach Plan
CSHWMP	comprehensive solid and hazardous waste management plan
Ecology	Washington State Department of Ecology
EHU	Building and Planning Environmental Health Unit
ELF	Equipment, Land and Facilities
EPA	U.S. Environmental Protection Agency
E-waste	electronic waste
G-permit	WUTC certificate for solid waste collection
HDPE	high-density polyethylene
HHW	household hazardous waste
HWMA	Hazardous Waste Management Act
I-5	Interstate 5
LQG	large-quantity generator
LSWFA	Local Solid Waste Financial Assistance
MFS	minimum functional standards (refer to WAC 173-304 and 173-350)
MP	mixed paper
MRF	material recovery facility
MRW	moderate risk waste
MSL	mean sea level
MSW	municipal solid waste
MTCA	Model Toxics Control Act
Nippon Dynawave	Nippon Dynawave Packaging Co.
NORPAC	North Pacific Paper Corporation
OFM	State of Washington Office of Financial Management
Pacific Fibre	Pacific Fibre Products
PCB	polychlorinated biphenyl
PCS	petroleum-contaminated soil(s)
PET	polyethylene terephthalate
Plan	2021 Comprehensive Solid and Hazardous Waste Management Plan
Public Works	County Department of Public Works

ACRONYMS AND ABBREVIATIONS (CONTINUED)

QEL	quantity exclusion limit
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SQG	small-quantity generator
Storedahl	J L Storedahl & Sons, Inc.
SWAC	Solid Waste Advisory Committee
Swanson	Swanson Bark and Wood Products, Inc.
SWCAA	Southwest Clean Air Agency
SWHS	Solid Waste Handling Standards
SWMA	Solid Waste Management Act
SWMP	solid waste management plan
Transfer Station	Waste Control Transfer Facility and Recycling Drop-off Facility
TRSD	Hazardous Waste and Toxics Reduction Services Directory
UWR	Universal Waste Rule
VCP	Voluntary Cleanup Program
WAC	Washington Administrative Code
Waste Control	Waste Control Recycling, Inc.
WestRock Longview	WestRock Longview, LLC
WISHA	Washington Industrial Safety and Health Administration
WSDOT	Washington Department of Transportation
WSU	Washington State University
WUTC	Washington Utilities and Transportation Commission

1 INTRODUCTION

1.1 Purpose

The State of Washington has enacted legislation to establish comprehensive statewide programs for solid waste handling and solid waste recovery and/or 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. The statutory requirements that support these programs are contained in Chapter 70A.205 of the Revised Code of Washington (RCW).

Each county in the state is required by RCW 70A.205.040 to prepare a comprehensive solid and hazardous waste management plan (CSHWMP). Washington Administrative Code (WAC) Section 173-304-011 states that

> The overall purpose of local comprehensive solid waste management 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.

Cowlitz County (the County) will include the plan for managing moderate risk waste (MRW), which includes small-volume hazardous materials and wastes that are generated by households and certain businesses.

The County previously satisfied the state requirements with a revision of the 2012 Comprehensive Solid Waste Management Plan (2012 Plan) (final version dated October 24, 2012). RCW 70A.205.075 requires that each plan be reviewed and revised, if revisions are necessary, at least every five years.

The current version of the CSHWMP for years 2021 to 2026 (Plan) reflects changes to the County's capacity to manage solid waste resulting from the acquisition and re-permitting of the Weyerhaeuser Headquarters Regional landfill in 2011 through 2014; the closure of the Tennant Way Landfill (2014/2015); and the transition of that landfill to postclosure care status in 2017. The Headquarters Landfill acquisition provided the County with 50 million cubic yards of new municipal solid waste (MSW) landfill disposal capacity. The County is integrating the management of MSW generated throughout the County.

1.2 Solid Waste System Overview

The waste management system in the County, depicted in Figure 1-1, consists of permitted and exempt solid waste handling facilities as regulated by WAC 173-350, *Solid Waste Handling Facilities*. These facilities consist of the County Headquarters Landfill, the Tennant Way Landfill (managed postclosure), the Waste Control Recycling, Inc. (Waste Control) Transfer Facility and Recycling Drop-off Facility in Longview (Transfer Station), and the Toutle MSW drop-box facility, as well as drop-off centers for recycling, used oil, and antifreeze.

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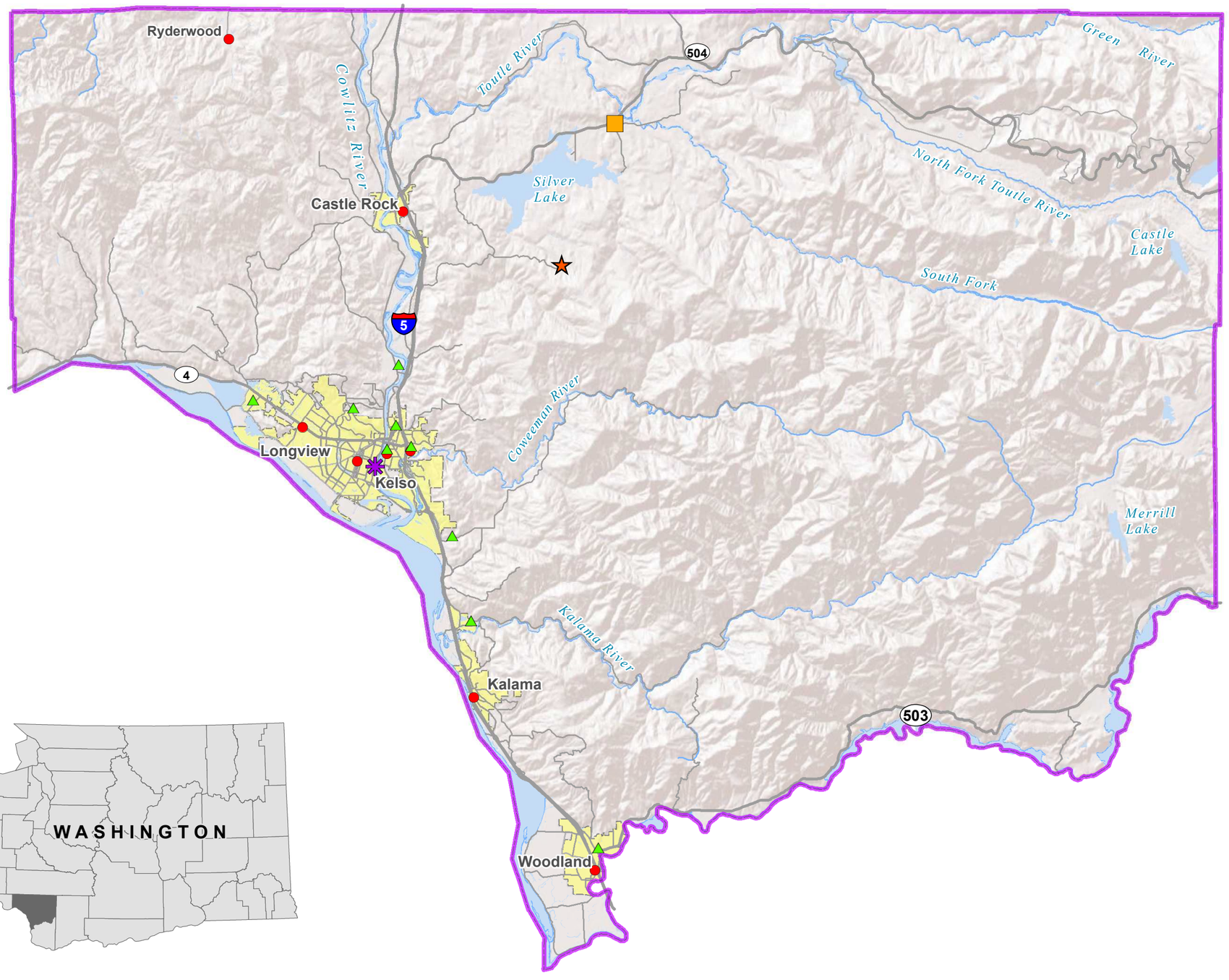
Produced By: jputnam

Project: 9041.07.03

Figure 1-1
Handling Facilities Map

Cowlitz County
Comprehensive Solid and
Hazardous Waste
Management Plan



Legend

Handling Facilities

- Headquarters Landfill
- Toutle Drop Box Facility
- Waste Control Transfer Station
- Used Oil / Antifreeze Recycling Sites
- County Dropsite Recycling

- Major Highways
- Streets
- City Boundary
- County Boundary

0 2 4
Miles

Source: County features obtained from Cowlitz County GIS; Hydrologic features obtained from Washington County DNR.

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The County's solid waste handling and disposal system is a transfer-based system, meaning that all MSW generated in the county is brought to the Transfer Station and then transferred to the Headquarters Landfill for final disposal. An overview of the County's solid waste system is provided below. Specific details on the system components can be found in the corresponding sections of this plan.

1.2.1 Waste Reduction and Public Education

The State of Washington identifies waste reduction as a fundamental strategy and top priority for solid waste management. The County's efforts focus on education to inform the public about the importance of waste reduction, while providing resources and assistance to achieve this goal. Throughout the County, private-sector and nonprofit organizations also provide a wide variety of material reuse opportunities, such as consignment stores, donation centers, and material/waste exchanges. More detail is provided on waste reduction and public education in Section 3.

1.2.2 Recycling

The County provides public recycling opportunities through Waste Control. Recyclable materials include all waste that is recyclable when separated from non-recyclable waste. Unmarketable materials are not accepted at the Transfer Station in Longview. Waste Control, under contract to the County, provides a recycling drop-off center at the Transfer Station for public use and maintains drop-off centers in Willow Grove, Toutle, Kalama, Rose Valley, and Woodland. Waste Control maintains additional drop-off centers, not under contract to the County, in the cities of Kelso, Kalama, Castle Rock, Lexington, and Columbia Heights. More detail on recycling is provided in Section 4.

1.2.3 Organic Material Management

Organic waste, including wood, yard debris, and land-clearing waste, is currently accepted at the Headquarters Landfill for disposal. The Waste Control Transfer Station accepts public drop-off of brush and leafy material. Swanson Bark and Wood Products, Inc. (Swanson) accepts public drop-off of yard waste generated by County residents and landscapers at their retail facility in Longview. The County does not provide curbside collection of organic materials. The management of organic materials is described in Section 5.

1.2.4 Solid Waste Collection

Curbside solid waste collection throughout the County is provided by three private collection companies: Waste Control, Waste Connections of Washington, Inc., and Community Waste and Recycling. Each collection company provides service to a different region of the County and is regulated by the Washington Utilities and Transportation Commission (WUTC). The cities of Longview, Kelso, Kalama, and Woodland contract directly for solid-waste-collection services, and the City of Castle Rock has granted collection authority to Waste Control. Incorporated cities in the County obtain their own solid-waste-collection services through independent contractors, by way of service agreements that must meet County standards. Collected waste is brought to the Transfer

Station, sorted, and delivered to the Headquarters Landfill. The details of solid waste collection are provided in Section 6.

1.2.5 Transfer and Disposal

All residential and commercial MSW generated in the County is commercially collected, brought by the public to the Toutle MSW drop-box facility, or brought by the public directly to the Waste Control Transfer Station and then transferred to the Headquarters Landfill for final disposal. Industrial waste generated in the County is typically handled through commercial haulers. To minimize waste going to the Headquarters Landfill, many industrial waste generators in the County have also developed their own facilities to consolidate and sort material. Recyclable materials are consolidated and sorted at the Waste Control material recovery facility (MRF). The transfer and disposal system is discussed in Section 7.

1.2.6 Miscellaneous Waste

Miscellaneous waste is any material that requires special or separate handling because of bulk, water content, dangerous constituents, or other unique characteristics. Miscellaneous wastes include construction and demolition (C/D) waste, agricultural waste, auto hulks, nonfriable asbestos, petroleum-contaminated soil (PCS), remediation waste, white goods, tires, biomedical waste, industrial waste, and homeless encampment waste. Miscellaneous waste is handled through material-specific programs. The details of miscellaneous-waste management and disposal are provided in Section 8.

1.2.7 Moderate Risk Waste

MRW is any waste that exhibits any of the properties of hazardous waste but is exempt from regulation under RCW 70A.300 because the waste is generated in quantities below the threshold for regulation; it includes household hazardous waste (HHW) and small-quantity generator (SQG) waste. The MRW collection facility is located at the Waste Control Transfer Station. In addition, Waste Control provides mobile collection events for HHW and the County provides 12 collection sites for used motor oil and antifreeze as shown on Figure 1-1. The management of MRW is discussed in Section 9.

1.3 Participating Jurisdictions

RCW 70A.205.005(6c) states that

> It is the responsibility of county and city governments to assume primary responsibility for solid waste management and to develop and implement aggressive and effective waste reduction and source separation strategies.

The County is required by RCW 70A.205.040 to develop this Plan in cooperation with each city in the County. The cities have the option of preparing their own plans for integration into this Plan, preparing a joint city/County plan, or authorizing the County to prepare a plan for the city as part of this Plan.

The incorporated areas of the County are Castle Rock, Kalama, Kelso, Longview, and Woodland. Each city must authorize the County to prepare a plan for its solid waste management for inclusion in the County's Plan. Wahkiakum County, which receives the same disposal services, is included in the County's Plan as well. Each city and Wahkiakum County must also authorize the County to include a plan for management of MSW. Following completion of a preliminary draft Plan document, the County must enter into interlocal agreements with participating jurisdictions. Following the Washington State Department of Ecology's (Ecology) review of the preliminary draft Plan, the County must request a resolution of Plan adoption from each city. These resolutions of authorization and adoption and the interlocal agreement from each city are then included with the revised Plan (see Appendix A). The final draft Plan also includes a resolution of adoption from the County and a letter of participation from the Solid Waste Advisory Committee (SWAC).

The County may request that Ecology conduct a courtesy review of the final draft Plan before its adoption by the cities and the County. Following this adoption, the final draft will be submitted to Ecology for review and approval of the final Plan.

1.4 Required Contents

The 2021 County Plan includes concepts and information presented in the 2012 Plan with an updated format to follow guidelines published in 2010 by Ecology (Ecology, 2010), which is referred to throughout the County's Plan as the "Ecology guidance document" or a variation thereof.

RCW 70A.205.045 mandates the contents for solid waste management plans (SWMPs) 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 jurisdiction that shall include:
  - Any certificate (G-permit) for solid waste collection granted by the WUTC in the respective jurisdictions.
  - Any city solid waste operation in the County and the boundaries of each 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 SWMP'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.
- Management of hazardous waste outlined in RCW 70A.300.
- Contamination Reduction and Outreach Plan (CROP) outlined in RCW 70A.205.045 (10) (see Appendix B of this Plan).

Other documents and sources of information used during the preparation of specific Plan sections or components are noted in the associated Plan section or component and are included in a master reference list provided at the end of this Plan.

1.5 Relationship to Other Plans

This section describes other city and County planning documents related to this Plan.

1.5.1 Cowlitz County Comprehensive Land Use Plan and Zoning Regulations

The comprehensive land use plan and zoning regulations manage growth in unincorporated Cowlitz County. The County Land-Use Plan goals and policies provide guidance to public agencies and private groups in making decisions about future county development. The County Land-Use Plan designates land for agricultural, residential, commercial, and industrial use, and provides general guidance on the siting of utility structures and facilities.

1.5.2 City Comprehensive Land-Use Plans and Zoning Regulations

The comprehensive land-use plans and zoning regulations of cities in Cowlitz County identify land use policies and regulations that affect the siting of solid waste facilities. Not all of the plans specifically address solid waste issues; however, most plans identify the solid waste collection agency in each respective community and the party responsible for transfer and disposal of solid waste. It is expected that cities will update their comprehensive land-use plans to be consistent with the adopted County Plan.

1.5.3 Toutle Drop-Box Facility Operation and Closure Plan

This plan documents Toutle drop-box operations and plans for closure in compliance with the Solid Waste Handling Standards (SWHS). This plan was updated in October 2010.

1.5.4 Cowlitz County Headquarters Landfill Operations Plan

WAC 173-351-210 requires all landfill facilities to have a plan of operation that "shall describe the facilities' operation and shall convey to site operating personnel the concept of operation intended by the designer." Examples of specific items to be included in each plan of operation include inspection and monitoring protocols, corrective action programs, and safety procedures. The regulations also require landfill facilities to develop closure and postclosure plans. Closure and postclosure plans for the Headquarters Landfill are included in the Operations Plan as Sections 11 and 12, respectively. The most recent revision to the Operations Plan for the Headquarters Landfill was made in June 2013.

1.5.5 Cowlitz County Tennant Way Landfill Postclosure Plan

The regulations require closed landfill facilities to develop a postclosure plan. Postclosure activities include maintaining the integrity and effectiveness of the final cover, maintaining and operating the leachate-collection system, monitoring the groundwater, and maintaining and operating the gas monitoring system. The Tennant Way Landfill postclosure plan was issued in August 2016.

1.6 Solid Waste Advisory Committee and Governance Committee

The SWAC provides ongoing public input and advice to the County on solid waste management issues and plays a critical role in the preparation of this Plan. As required by RCW 70A.205.110, the SWAC consists of a minimum of nine members representing a balance of interests including, but not limited to, citizens, public interest groups, business, the waste management industry, and local elected public officials. The SWAC meets periodically to assist in the development of solid waste programs and policies, as well as to review and comment on these programs and policies prior to their adoption.

SWAC members are subject to change, but during this Plan's update, it consists of the following members:

- Gregory Hannon (chair)—City of Longview
- Wayne Wooster (vice chair)—WestRock Longview, LLC (WestRock Longview)

- Jim Hill—City of Kelso
- Keenan Harvey—City of Kelso (replacement for Jim Hill)
- Lisa Heltemes—Nippon Dynawave Packaging Co. (Nippon Dynawave)
- Joe Willis—Waste Control
- Adam Smee—City of Kalama
- Robert Nichols—Agricultural Industry, Swanson
- Josh Johnson—Citizen, Port of Longview
- John Brugman—Citizen

To facilitate development of this Plan, a subcommittee of SWAC members was formed to provide more frequent input to the planning team on an as-needed basis. The SWAC subcommittee consists of Gregory Hannon, Wayne Wooster, Jim Hill, Joe Willis, and ex officio member Ron Williams (solid waste manager).

As defined in the interlocal agreements, the Governance Committee shall review solid waste operations and Plan implementation, as well as any proposed changes or improvements significantly affecting the operation of the solid waste disposal system. The Governance Committee consists of two County representatives and one representative each from the two largest cities in the County. The Governance Committee meets annually to review the status of the solid waste disposal system along with recommendations from the SWAC.

1.7 County Solid Waste Policies

The County's solid waste policy mission statement, as adopted by the Board of County Commissioners (BOCC) on [*pending*] is as follows: provide the residents, businesses, and cities of the County with the most effective solid waste management possible considering economics, the environment, regulatory requirements, and the social and political environment of the community.

In [*pending*], the BOCC adopted the following seven solid waste policies:

- Policy 1—Through collaborative effort, manage the disposal of solid waste in the County, utilizing the County landfill and/or through other disposal options.
- Policy 2—The County shall preserve the capacity and value of the landfill for the benefit of county residents, businesses, and cities.
- Policy 3—The SWAC will assist and advise the BOCC on solid waste issues.
- Policy 4—Evaluate the feasibility of energy recovery at the landfill, in accordance with the goals of the Plan and best management practices.
- Policy 5—Fund County solid waste utility operations and capital improvements through user fees.
- Policy 6—Promote economically sound waste disposal reduction, and recycling programs throughout the County.

- Policy 7—The solid waste manager shall manage the landfill as an asset on behalf of the residents and businesses of the County.

1.8 Plan Goals and Objectives

The goal of this Plan is to provide information and to present management concepts that can be used in support of the County's solid waste policies and mission statement. The following five general objectives are used throughout this Plan development process:

- Ensure that the County complies with applicable RCW and WAC solid waste planning requirements.
- Provide a mechanism for public participation in the County's solid waste planning process.
- Support statewide waste reduction and recycling goals by improving County strategies and management concepts.
- Provide an accurate and complete description of the County's solid waste disposal at the Headquarters Landfill to support the management and preservation of the landfill.
- Employ sound and generally accepted cost analysis methods to determine economic effectiveness.

These general objectives are very similar to those contained in the 1993, 2007, and 2012 plans. Specific objectives or action items were presented to the SWAC and discussed during the preparation of individual Plan sections.

1.9 Process of Updating Plan

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

1.9.1 Development of Solid Waste Plan

The preparation of this Plan began in late 2018 and will proceed through early 2022. At the start of the Plan development, background information available in the previous plan was reviewed, and the SWAC subcommittee members met to prepare the description of the overall County solid waste system. This description was used as the basis for the data gathering, analysis, and reporting process used in the Plan preparation and was provided to all members of the SWAC to ensure that they had an accurate basis for evaluating the path forward.

An evaluation of the system's past performance was conducted using data from the County's annual waste disposal and recycling summary. Data from 2011 to 2018 were compiled and analyzed to understand total tonnage of waste recycled, recovered, and disposed of, as well as the breakdown by type of the County's recycled and recovered materials. This analysis resulted in a detailed understanding of the historical waste profile critical to appreciating the value of specific waste management programs.

A demographic analysis was conducted to understand historical population trends. Population projections were also considered, and the anticipated growth rate was applied to estimate future waste disposal and recycling trends.

Section updates were developed with support from the SWAC. County staff worked with the SWAC and the consultant team to identify goals that would address the needs identified through the planning effort. The County and its partners developed supporting actions to provide a road map for strategic implementation of each goal.

1.9.2 Implementation Plan

The implementation schedule described in Section 11 was developed to assist the County in the systematic achievement of each goal defined in this Plan through specific, measurable actions. Each of these actions is described in detail in the corresponding subsections. The implementation plan is designed to assist the County with decision-making associated with new or expanded programming as funding becomes available.

1.9.3 Major Stakeholders

Major stakeholders in the Plan development process include the County Department of Public Works (Public Works), the County Health Department (CCHD), the County Department of Building and Planning (Building and Planning), the SWAC, the BOCC, city councils, citizens, industry, collection companies, and recycling organizations.

Agencies with responsibilities related to solid waste include Ecology, Public Works, Building and Planning, and individual city solid waste management departments. Ecology is generally responsible for review and oversight of solid waste activities in Washington, but many specific solid waste responsibilities have been assigned to local agencies. For example, Ecology is responsible for review and approval of this Plan, while the Environmental Health Unit of the CCHD is responsible for solid waste permitting and enforcement activities. Public Works' responsibilities include management and operation of the existing landfill facility for disposal of MSW, determining recycling service levels in unincorporated areas of the County, implementing HHW services, administering disposal contracts, providing planning services for MSW and hazardous waste generated throughout the County, and managing the closed landfill at Tennant Way. Each city is responsible for solid waste collection, recycling programs, and nuisance-abatement programs in its jurisdiction.

Major stakeholders contribute throughout the Plan development process by providing comments, data, and information, and by participating in discussions. Public Works, with its solid waste management responsibilities, and the SWAC, with its advisory responsibilities, play particularly important roles because they review draft sections of this Plan throughout the plan development process. The SWAC by-laws are included as Appendix C.

1.9.4 Public Participation

Formulating a procedure to ensure involvement of the general public at an early stage is an important part of the Plan development process. The Ecology guidance document states, "while the local SWAC will play a key role in plan development, considerations should be made for the general public." The Ecology guidance document strongly encourages the local SWAC to actively seek public involvement throughout the planning process and emphasizes that the SWAC should "educate the public on the committee's work and the purpose for the planning" and "seek communication with the public to determine progress in plan implementation, evaluation, and improvement" (Ecology, 2010). Collaborating with the public throughout the process, rather than just informing the public at the end of the process, is also consistent with the County's mission statement. To encourage public participation in the planning process, the County has advertised SWAC meetings throughout the Plan development process.

Ecology recommends that a 30-day public comment period be provided before the preliminary draft Plan is submitted to Ecology, followed by at least one public meeting or workshop to answer questions, collect testimony, and address issues raised during the comment period. Copies of the preliminary draft Plan will then be sent to local planning, health, and public works departments; the public; and participating jurisdictions and made available at local government offices and libraries.

Ecology also recommends that public hearings be included as part of the plan adoption process for each jurisdiction participating via an interlocal agreement, and that a public hearing be part of the County adoption process. Adequate public notice of meetings, hearings, workshops, and comment periods should be provided throughout the Plan development process.

1.9.5 Plan Review and Approval Process

As previously mentioned, draft sections of the Plan are reviewed by the SWAC and County personnel throughout the Plan development process. Review comments are then incorporated into revised draft sections, which are then compiled into a draft of the complete document.

The complete document must be reviewed and approved or adopted by the County, the participating jurisdictions, and Ecology. The review and adoption or approval process for the complete document consists of the following steps:

- Submit revised draft Plan to Ecology for informal courtesy review.
- Preliminary draft Plan submitted for public review.
- Thirty-day public comment period with at least one public meeting or workshop.
- Revision of preliminary draft Plan, as necessary, to address comments.
- Preliminary draft sent to Ecology, Department of Agriculture, and WUTC for formal 120-day preliminary review.

- Meeting between Ecology and County personnel to discuss Ecology's review comments, followed by revision of preliminary draft Plan, as necessary, to address Ecology's comments.
- Public hearings and local adoption of the revised draft Plan.
- Submit the adopted Plan to Ecology for 30-day review and approval.

A State Environmental Policy Act (SEPA) checklist is being prepared in conjunction with this Plan. The submittals and meetings required for SEPA checklist review and approval are timed to facilitate the incorporation of the SEPA checklist (see Appendix D) into the final draft Plan to be submitted to Ecology.

1.10 Plan Organization

This Plan consists of 11 sections and appendices containing interlocal agreements; a participation letter from the SWAC; authorization and adoption resolutions from the County and cities (Appendix A); the CROP (Appendix B); SWAC by-laws (Appendix C); a SEPA checklist (Appendix D); a WUTC cost assessment (Appendix E); and the Hazardous Waste Generators List, County Remedial Action Sites, and County Hazardous Waste Transportation, Storage, Disposal, and Recycling Companies (Appendix F).

As previously discussed, draft sections of this Plan were reviewed by the SWAC and County personnel throughout the plan development process. The timeline for the submission of sections to the SWAC is as follows:

- Section 1: Introduction—September 2020
- Section 2: The Planning Area—August 2019
- Section 3: Waste Reduction and Public Education—September 2020
- Section 4: Recycling—September 2019
- Section 5: Organic Material Management—October 2019
- Section 6: Solid Waste Collection—October 2019
- Section 7: Transfer and Disposal—November 2019
- Section 8: Miscellaneous Waste—November 2019
- Section 9: Moderate Risk Waste—September 2020
- Section 10: Administration and Enforcement—September 2020
- Section 11: Implementation Schedule—September 2020

A preliminary draft of the complete document was made available to the public in [*pending*] 2021. The final revised Plan was adopted and approved on [*pending*] 2021.

2 PLANNING AREA

2.1 Introduction

A review of county characteristics and the County's solid waste history will help provide a framework for understanding current conditions and future solid waste planning options.

2.2 Description of the Planning Area

Cowlitz County is located in southwestern Washington and has a land area of 1,139 square miles. The lower Cowlitz River valley dominates the landscape, with the Columbia River to the south, the Willapa Hills to the west, and the Cascade Range to the east. A map of the County land use is presented in Figure 2-1.

2.2.1 Natural Features

2.2.1.1 Topography

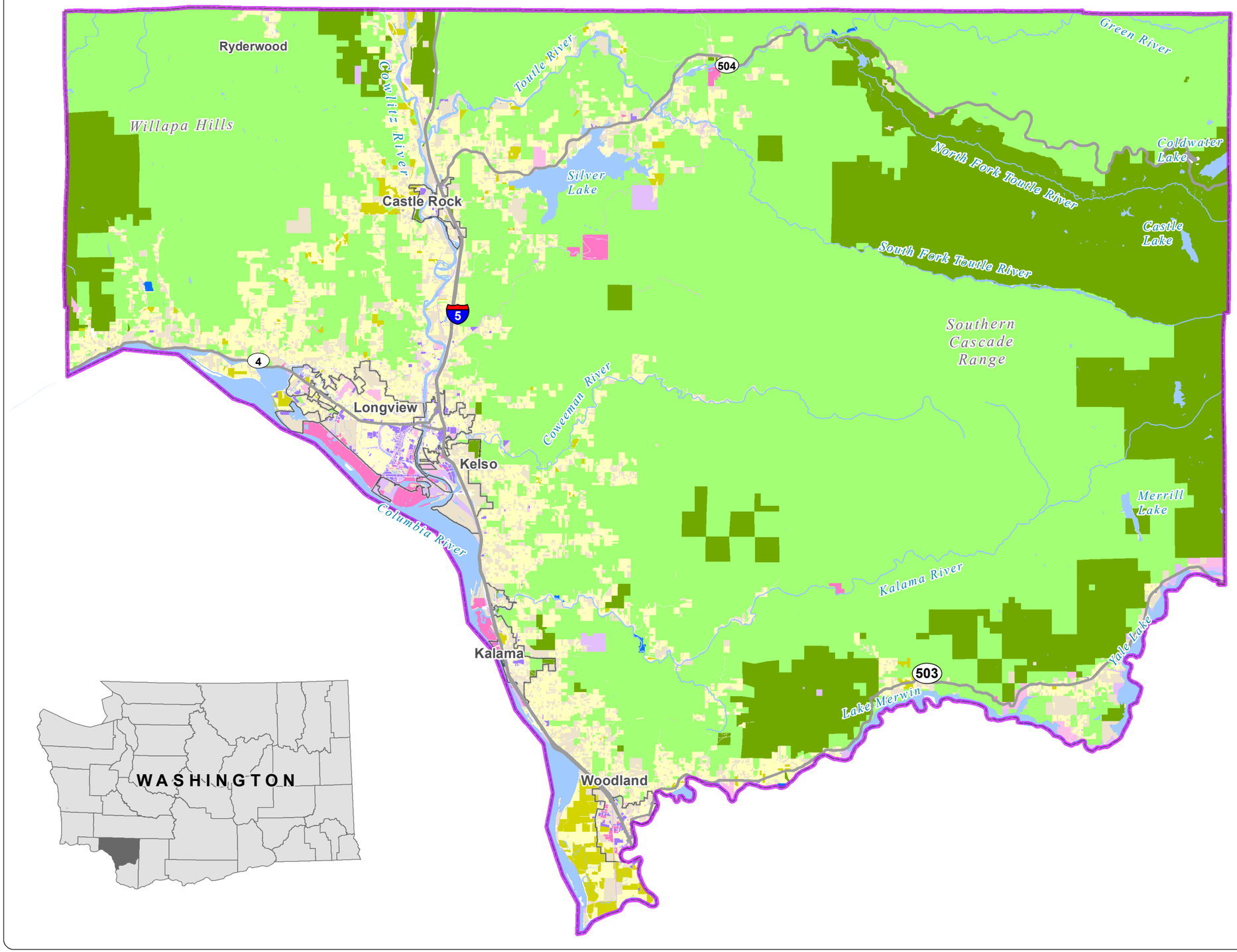
Elevations in Cowlitz County are quite varied, from less than 10 feet above sea level along the Columbia River to elevations approaching 5,000 feet on the eastern edge of the County. Topography in the eastern two-thirds of the County is dominated by several major drainage basins that are separated by upland ridges radiating from the Cascade crest. The ridges and peaks of this part of the County have very rugged relief and steep slopes. The western one-third of the County contains the Willapa Hills, with elevations approaching 2,600 feet. The topography becomes level and open along the Cowlitz and Columbia rivers.

2.2.1.2 Geology and Soils

Geologic processes shaped the soils and topography of Cowlitz County through uplift, volcanism, glaciation, erosion, and sedimentation. The rock types of Cowlitz County consist chiefly of the Columbia River Basalt Group, the Cowlitz Formation, and alluvial deposits. The Columbia River Basalt Group is prevalent adjacent to the Columbia River and the western portion of the County and represents a great volcanic pile of flood lavas originating east of the Cascades. The Cowlitz Formation is prevalent in the eastern two-thirds of the County and is best described as uplifted marine and nonmarine shale, sandstone, siltstone, and coral beds. Interbedded in this material are basalt flows, pyroclastic rocks, andesite, and breccia, overlain in some areas by alpine till. Large alluvial deposits are common throughout Cowlitz County near and adjacent to both the Cowlitz and Columbia rivers, and is commonly associated with loosely consolidated silt, sand, mud, and gravel.

Figure 2-1
Land Uses Map

Cowlitz County
Comprehensive Solid and
Hazardous Waste
Management Plan



Legend

Land Use Type

- Residential
- Commercial
- Manufacturing
- Public Recreation
- Agriculture
- Utilities & Transportation
- Fishing
- Public Forest
- Private & Commercial Forest
- Undeveloped & Open Space
- Water
- Major Highways
- City Boundary
- County Boundary

0 2 4
Miles

Source: County features obtained from Cowlitz County GIS; Hydrologic features obtained from Washington County DNR.

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Print Date: 7/24/2019
Approved By:
Produced By: putnam
Project: 9041.07

2.2.1.3 Climate

Cowlitz County has a rainy climate in the winter, marked by relatively mild temperatures and cloudy skies. Summers are pleasantly mild, with northwesterly winds and very little precipitation. Fall and spring are transitional in nature. Fog occurs frequently in fall and winter. At all times, incursions of marine air are a moderating influence. Extremes in winter and summer come from the continental interior. Destructive winds are infrequent.

The average annual precipitation in the region varies widely, depending on elevation and aspect. The Longview-Kelso urban area has an annual rainfall of 48 inches per year as compared to slopes adjacent to Mount St. Helens, which receive 140 inches per year. The SWHS also require that solid waste handling facilities provide peak rate runoff control for the 25-year, 24-hour storm event.

The Cowlitz County area is generally immune to severe storms. The combination of climatic controls is not conducive to the formation of hurricanes, thunderstorms, or tornadoes. Extreme meteorological events in the Cowlitz County area are usually restricted to high winds and rain from mid-latitude cyclones, or high winds and very cold temperatures from the strong easterly flow of cold continental air through the Columbia Gorge. The latter, if combined with moist air from the west, sometimes results in a freezing rain event commonly referred to as a silver thaw.

2.2.1.4 Hydrology

Both the Cowlitz and the Columbia rivers pass through the County. Additionally, Cowlitz County contains four major river basins: the Toutle, Coweeman, Kalama, and Lewis. The major rivers in these basins originate in the Cascades, flow in a westerly direction, and empty into the Cowlitz or Columbia river. Sizable creeks, the largest ones being the Abernathy and the Arkansas, flow out of the Willapa Hills. The three lakes of significant size that are in or partially in the County are Silver Lake, Lake Merwin, and Yale Lake. Major surface water features of Cowlitz County are shown on Figure 2-1.

Groundwater is generally available throughout Cowlitz County. Most rural areas rely on groundwater as the principal source of potable water.

2.2.1.5 Plants

In general, different habitat types give rise to different plant communities. In Cowlitz County, there are two major habitat types that support vegetation: forests and wetlands. Forest habitat dominates in Cowlitz County.

Forests in the County consist of three vegetation zones: (1) the Western Hemlock Zone (lowland forests), which occurs at elevations up to 2,000 feet mean sea level (MSL); (2) the Pacific Silver Fir Zone (mid-montane forests), which occurs at elevations from 2,000 to 4,300 MSL; and (3) the Mountain Hemlock Zone (upper-montane forests), which occurs at elevations from 4,300 to 6,000 MSL. The Western Hemlock Zone is the principal forest habitat in Cowlitz County and is the habitat most likely to be disturbed by construction of solid waste facilities.

Wetlands are common and widespread in the County. Marshes, swamps, bogs, estuaries, and other saturated soil environments are among the most productive habitats. In addition to their habitat value, wetlands perform vital functions such as water storage, stream flow regulation of water basins, and protection of lakeshore and riverbank areas against severe storms. Wetlands also improve water quality by trapping and filtering sediments and pollutants.

2.2.1.6 Animals

Although human settlement and associated development have displaced animal life in the County, significant areas still harbor a variety of wildlife species. Key animals in the County include herbivores such as deer and elk; omnivores such as black bears, raccoons, and ravens; and carnivores such as cougars, foxes, coyotes, bobcats, owls, hawks, and eagles.

2.2.2 County Demographics

2.2.2.1 Cowlitz County

Waste-generation, recycling, and disposal rates are a function of the County's population and projected growth. The 2012 to 2016 American Community Survey (ACS) data at the U.S. Census Bureau website lists the total 2018 County population as 108,987 (U.S. Census, 2019). Table 2-1 provides a more detailed breakdown of different areas in the County from the federal census data.

Table 2-1
Cowlitz County Population

Place	2000	2010	2018[a]
Castle Rock	2,130	1,982	2,271
Kalama	1,783	2,344	2,718
Kelso	11,895	11,925	12,303
Longview	34,660	36,648	38,112
Woodland	3,780	5,509	6,358
County (unincorporated)	38,700	44,002	47,225[b]
Total County Population	**92,948**	**102,410**	**108,987**

[a] 2018 population data are from the U.S. Census Bureau, Annual Estimates of Resident Population: April 1, 2010, to July 1, 2018.

[b] The breakdown of population was calculated using the available estimates for the total county population and subtracting the population of the incorporated areas of the County.

In unincorporated areas, the U.S. Census Bureau delineates boundaries for census-designated places (CDPs). CDPs are closely settled, named, unincorporated communities that generally contain a mixture of residential, commercial, and retail areas similar to those found in incorporated places of similar size. The 2000 census provides no minimum or maximum population criteria for recognition as a CDP.

A range of population densities for the County is illustrated in Figure 2-2. As can be seen on this figure, the County's population is concentrated along the Interstate 5 (I-5) corridor and the Columbia and Cowlitz rivers. Two pieces of legislation, passed by the Washington State legislature in 1999, define rural counties as those with a population density of less than 100 persons per square mile. As shown in Figure 2-2, most of the County's land base has a population of fewer than 100 persons per square mile. Most of the low-population-density areas consist of private timber holdings or land owned by the federal government. The state Office of Financial Management (OFM) website lists a county population density of approximately 95.7 people per square mile (OFM, 2017).

2.2.2.2 Wahkiakum County

The County offers Wahkiakum County residents the same public solid waste services as Cowlitz County residents through an interlocal agreement. The ACS lists the 2010 population of 3,978 and estimated 2018 population of 4,426. Although the exact number of Wahkiakum County residents utilizing County solid waste services is unknown, these residents comprise a relatively small percentage of the overall population contributing to the Cowlitz County waste stream.

2.2.3 Urban and Rural Designations

The provision of solid waste management services, particularly collection of waste and recyclables, is most efficient within a well-developed urban infrastructure. As a result, solid waste program design and implementation typically differ between urban areas and rural areas. The RCW statutes and Ecology guidelines emphasize that rural and urban areas must be clearly designated for waste reduction and recycling planning purposes. RCW 70A.205.050 states that when designating urban areas, "local governments shall consider the planning guidelines adopted by the department, total population, population density, and any applicable land use or utility service plans."

Beginning with the 2000 Census, the U.S. Census Bureau introduced the concept of urban clusters, defined as areas of any incorporated place (cities) or CDPs of at least 2,500 but less than 50,000 people. During this Plan's preparation, this definition of urban included Kalama, Kelso, Longview, and Woodland. Three CDPs, adjacent to one another, are located at the fringe of the City of Longview: Longview Heights, West Longview, and the Westside Highway, which includes Lexington.[1] All areas not classified as urban were considered rural (including the incorporated area of Castle Rock).

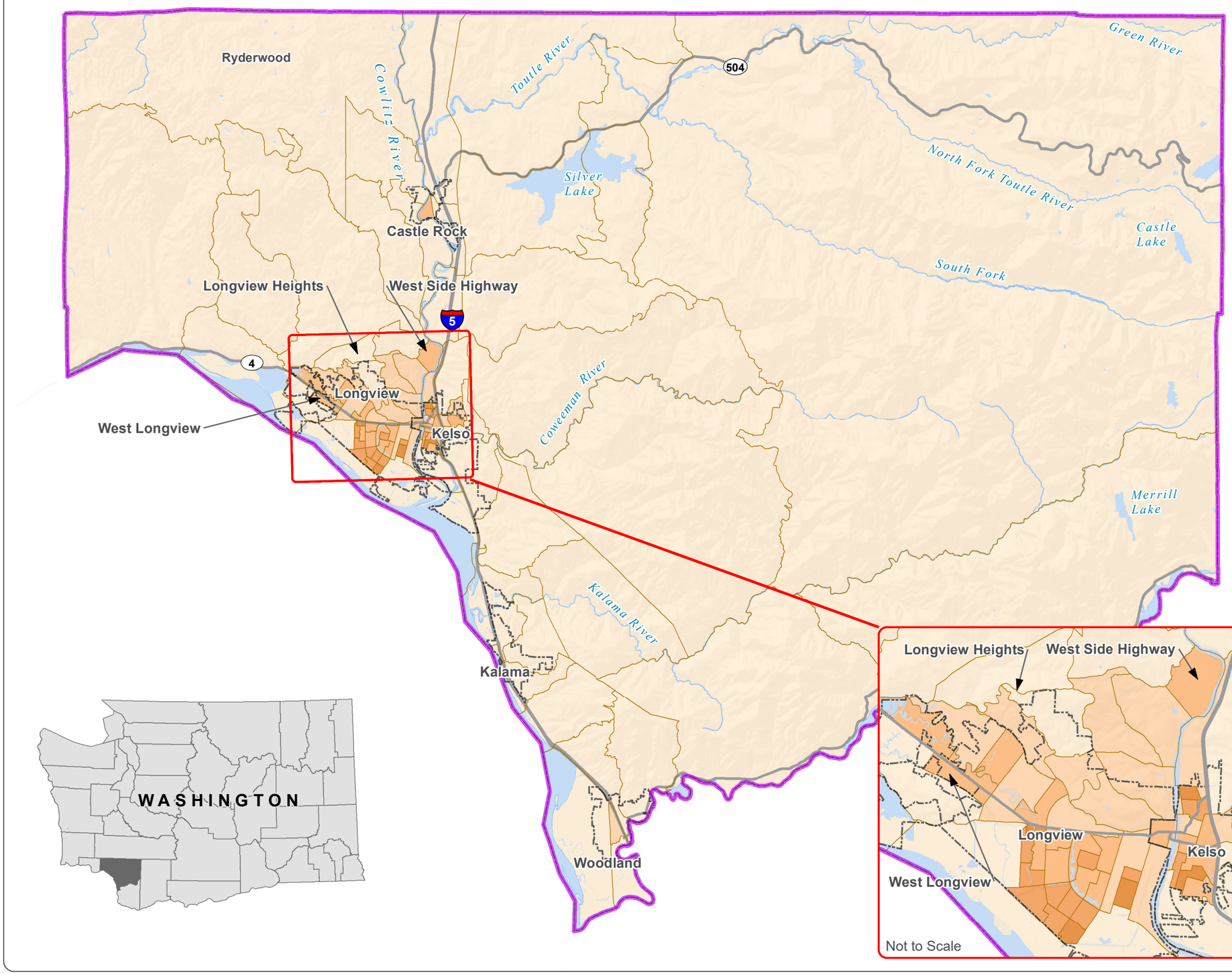
Urban cluster designations are shown on Figure 2-2. Approximately 57 percent of the County population resides in urban cluster areas.

The urban or rural distinction is a required aspect of the Waste Reduction and Recycling components of this Plan. Minimum urban and rural service levels in the context of the urban and rural designations will be discussed as part of the Waste Reduction and Recycling plan elements.

[1] Population estimates are not available for these CDPs through the ACS Demographic and Housing Estimates. CDP populations are assessed only through the census.

Figure 2-2
Population Density Map

Cowlitz County
Comprehensive Solid and
Hazardous Waste
Management Plan



Legend

Census Block Groups

Population per Square Mile

- 3 - 764
- 765 - 2434
- 2435 - 5235
- 5236 - 8967
- 8968 - 14336

Major Highways

City Boundary

County Boundary

0 2 4
Miles

Source: Population and block group data obtained from U.S. Census Bureau American Community Survey; hydrologic features obtained from Washington State DNR.

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Print Date: 7/26/2019
Approved By:
Produced By: J. Elstrott
Project: 9041.07

2.2.4 Employment

The 2017 ACS reports that approximately 42,579 individuals above the age of 16 were employed in the County. The 2017 employment rate is 40 percent.

Employment opportunities in the County are varied; however, the four largest sectors of the local economy are manufacturing, the health service industry, retail trade, and professional services. Table 2-2 provides employment data for the county's largest industry sectors.

Table 2-2
Cowlitz County Employment Figures, 2017

Industry	Number of Employees	Percent of Total Employed Population
Manufacturing	6,535	15.3
Health Services	6,156	14.5
Retail Trade	5,101	12.0
Professional, Scientific, Management, and Administrative and Waste Management Services	3,463	8.1
Educational Services	3,425	8.0
Construction	3,259	7.7
Transportation and Warehousing, and Utilities	2,944	6.9
Food Services	2,598	6.1
Other Services	2,379	5.6
Finance, Insurance, and Real Estate	1,871	4.4
Public Administration	1,812	4.3
Natural Resources and Mining	1,077	2.5
Wholesale Trade	956	2.2
Arts, Entertainment, and Recreation	531	1.2
Information	472	1.1
NOTE: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates. Industry by Sex for the Civilian Employed Population 16 Years and Over.		

2.2.5 Land Use

The topography of the County generally has dictated the settlement of the area as a transportation corridor between the lower Columbia River and the Puget Sound Basin. This pattern, begun in the late nineteenth century, is still prevalent today in all incorporated areas and most unincorporated development adjacent to the I-5 corridor. Longview and Kelso are the most highly urbanized areas of the County.

2.2.5.1 Transportation

The roadway transportation system in Cowlitz County includes an interstate freeway, state highways, regional arterials, and local collectors. The main travel route is the I-5 freeway that runs north and south through the County. Most county residents and businesses are very well served by I-5, allowing for quick travel between outlying areas and the county's population center of the County at Longview-Kelso. Most rural travel is accommodated on county and state roads and highways. Urban areas are well served by local arterial systems.

Although vehicle congestion is still relatively rare in most areas of the County, a number of trouble areas have been identified. At times these areas experience failing, or near failing, levels of service. According to the Washington Department of Transportation (WSDOT), areas of concern in the Kelso-Longview area include:

- **At-grade rail crossings**—At-grade rail crossings along S.R. 432, especially between S.R. 411 and S.R. 433, and at the S.R. 432/433 intersection, cause congestion when trains pass. Commuter traffic contributes to congestion at the S.R. 432/432 intersection as well.
- **Development along S.R. 432**—Industrial developments border the railroad tracks, and the passage of trains causes congestion behind the tracks. Development on the west end of S.R. 432 likely will contribute to congestion. The Millennium Bulk Terminal will increase the number and length of trains using the rail corridor, increasing congestion due to train crossing.
- **California Way/Industrial Way/Third Avenue intersection on S.R. 432**—Driver and train conflicts result from at-grade railroad crossings, poorly configured driveway access near intersections, and heavy freight and commuter traffic.
- **NE Third Ave/Tennant Way interchange on S.R. 432**—Ramp merging issues and backups at ramp terminals result from this interchange's poor configuration for current levels of traffic.
- **S.R. 4 Access points**—Slowdowns in merging and diverging traffic are due to a large number of access points along this section of S.R. 4.
- **No parallel circulation**—The local network as a whole is weakened from a lack of parallel circulation in this area.
- **Millennium Bulk Terminal**—The proposed development of the Millennium Bulk Terminal would result in significant growth in the number and length of trains.

Because most solid waste transportation in Cowlitz County uses freeways and arterials, these roadways are an integral component of the solid waste management system. Any planning for expansion of solid waste facilities or construction of new facilities must consider existing and future traffic levels on haul routes and the capacity of roadways to handle additional truck traffic. In some cases, it may be necessary to improve roadways or adjust haul routes or schedules to mitigate potential impacts.

In addition to roadways, the County is well served by other modes of transportation, most notably rail and barge. The main line of the Burlington Northern Santa Fe Railroad, also shared by the Union Pacific Railroad, runs parallel to I-5 through Cowlitz County. Numerous spur lines provide rail access from the County's industrial areas. Ports along the Columbia River are well developed, with river ports located at Longview and Kalama. There is also a land port in Woodland. A wide range of cargo shipments is transported year-round along the 465-mile Columbia/Snake river navigation system. Rail and barge likely will play an important role in transporting waste into the County or transport of in-county waste to an out-of-county facility.

2.3 Quantity and Characterization of Solid Waste

Identifying and characterizing the waste stream will provide the information needed to evaluate existing programs, develop new strategies, and implement new or revised planning measures.

2.3.1 Solid Waste Definitions

The following definitions describe general categories of waste discussed in this Plan.

2.3.1.1 Solid Waste

For the purposes of this Plan, the term "solid waste" encompasses the total waste stream, which is made up of MSW, miscellaneous wastes, and industrial waste.

2.3.1.2 Municipal Solid Waste

MSW, a subset of solid waste as defined in WAC 173-350-100, includes, but is not limited to, unsegregated garbage, refuse or similar solid waste material discarded from residential, commercial, institutional, and industrial sources and community activities, including residues after recyclables have been separated. MSW in Cowlitz County is restricted to wastes that are managed by the principal MSW handling and disposal system, as represented by all waste delivered to the Cowlitz County Headquarters Landfill and solid waste originating in Cowlitz County handled by the Waste Control MRF. As of 2014, the Headquarters Landfill is permitted for MSW and industrial waste.

2.3.1.3 Household Hazardous Waste

HHW, also known as MRW, includes any waste that exhibits any of the properties of hazardous or dangerous wastes that are exempt from state regulation under RCW 70A.300 Hazardous Waste Management solely because the waste is generated by households. The Plan definition of HHW also includes 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. The County also manages hazardous materials matching the HHW definition that are generated by businesses qualifying as SQGs (i.e., less than 220 lb/month), which are assessed a fee for disposal of the material.

2.3.1.4 Miscellaneous Waste

Miscellaneous wastes require separate handling due to bulk, water content, or dangerous constituents, including but not limited to the following categories:

- C/D
- Agricultural wastes
- Auto hulks
- Nonfriable asbestos
- PCS
- White goods
- Tires
- Biomedical waste
- Dangerous and remediation waste

2.3.1.5 Industrial Waste

Industrial waste includes by-products from manufacturing operations, such as scraps, trimmings, packaging, boiler ash, wood-product residuals, and other discarded materials not otherwise designated as a dangerous waste under WAC 173-303. The County's industrial waste is generated principally by the forest-products industry, which includes companies such as WestRock Longview, North Pacific Paper Corporation (NORPAC), Nippon Dynawave, and Weyerhaeuser. Historically, most of the forest-products industrial waste was directed to private facilities, such as Weyerhaeuser's Headquarters Landfill. With the acquisition and conversion of the Headquarters Landfill to municipal service, the County has assumed responsibility for the management and disposal of industrial waste delivered to that facility.

2.3.1.6 Recycling and Recovery

Recycling is the separation of a given waste material from the waste stream and the processing of it to create materials for products that may or may not be similar to the original. The following materials are generally considered to be recyclable but are subject to change based on market restrictions: newspaper, cardboard, glass, (sorted) plastics, tin cans, aluminum cans and foil, mixed paper (MP), and metals. Unmarketable materials are not accepted at the Transfer Station.

Recovery represents materials that have been diverted from disposal for reuse and are separate from recycled materials. Recovered materials include those that do not fit the definition of recycling as promulgated by Ecology, including antifreeze, concrete and asphalt, ash, sand used in asphalt production, land-clearing debris, and materials for energy recovery (wood, used oil, and tires).

2.3.1.7 Waste Reduction

Waste reduction involves consuming and discarding less material; one way to accomplish this is by redesigning products so that fewer raw materials are used in production, the products have a longer life, and/or the products are reusable. Improvements in product design and/or process management

will lower the quantity of waste that requires treatment and disposal, minimizing waste at its source. Waste reduction includes encouraging consumers to reduce their overall consumption by purchasing these durable, long-lasting products.

2.3.2 Historical Waste Disposal and Recycling Data

In Cowlitz County, solid waste is disposed of at the Headquarters Landfill. Weyerhaeuser opened the Headquarters Landfill in November 1993 to provide capacity for the disposal of its forest product industrial waste. The County purchased the landfill in 2011 and re-permitted it for MSW in 2014.

Prior to 2014, waste from the County was landfilled at the Tennant Way Landfill. In 2014, when the Tennant Way Landfill was closed, the Headquarters Landfill began accepting all waste previously disposed of at the Tennant Way Landfill. Tons landfilled in 2014 reflect waste landfilled at both the Tennant Way and Headquarters landfills; material landfilled in Headquarters/Weyerhaeuser Landfill had not been represented in the earlier data.

2.3.3 Current Solid Waste Disposal

The total amount of solid waste disposed of is represented by waste received at the Headquarters Landfill as well as materials from Cowlitz County that are disposed of in other counties. Before 2005, the waste material from the Waste Control MRF was sent to the Roosevelt Regional Landfill, but this material is now being sent to the Headquarters Landfill. The discussion presented below is based mainly on data obtained from the County, City of Longview, City of Kelso, Weyerhaeuser, and the Transfer Station. Additional information was obtained from the State of Washington's Twenty-Fourth Annual Status Report on Solid Waste, which summarizes solid waste information collected by Ecology for the years 2011–2016 (Ecology, 2015), and annual waste reports submitted to Ecology by the Cowlitz County Headquarters Landfill and the Transfer Station for 2017 and 2018. Population estimates from the U.S. Census for 2018 are used as a basis for the discussion below (U.S. Census, 2019).

2.3.4 Solid Waste Per Capita

In 2018, 134,055 tons of Residential and Commercial MSW was generated in Cowlitz County and disposed of at the Headquarters Landfill (see Table 2-3). With an estimated population of 108,987 in 2018 (U.S. Census, 2019), the County's municipal disposal rate was 2,460 pounds per person per year, or approximately 6.74 pounds per person per day. Table 2-3 summarizes the County's total waste, recycling, and recovery rates per capita from 20112018.

Table 2-3
MSW Summary—Total and Per Capita, 2011-2018

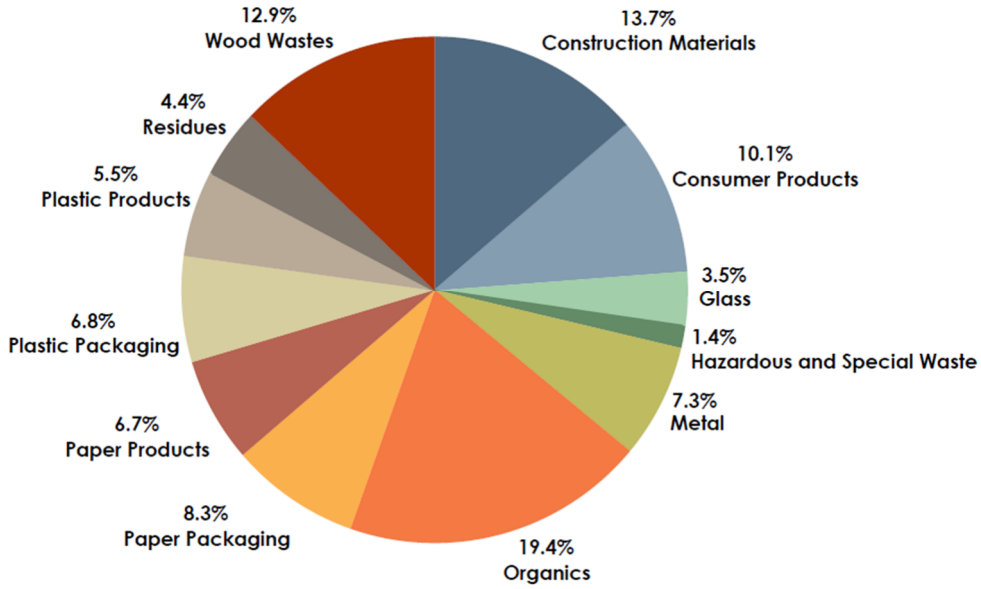
Year		Total Recycling[a] (Tons per Year)	Total Recovery[b] (Tons per Year)	Total MSW Disposal (Tons per Year)		Total Recycling (Pounds per Year)	Total Recovery (Pounds per Year)	Total MSW Disposal (Pounds per Year)
	County-wide				Per Capita Waste Generation			
2011		172,572	32,041	89,536		3,374	626	1,750
2012		119,149	48,867	87,829		2,344	961	1,728
2013		88,489	32,935	87,702		1,744	649	1,728
2014		95,379	44,377	101,426		1,874	872	1,993
2015		82,460	41,014	100,468		1,600	796	1,950
2016		91,734	51,659	130,308		1,750	986	2,486
2017[c][d]		*91,700*	*48,400*	129,849		1,716	906	2,429
2018[c][d]		*94,300*	*51,800*	134,055		1,730	951	2,460

NOTES:
Estimated values are shown in italics
Pounds per person per year calculation based on U.S. Census Population Estimate.
Tons landfilled data for 2011 to 2016 are taken from Ecology Recycling-Diversion Summary. 2017 to 2018.
Tons landfilled and tons recycled data are taken from annual Cowlitz County Landfill records and annual Waste Control records.
Ecology = Washington State Department of Ecology
MSW = municipal solid waste
[a] Recycling represents materials that are transformed or remanufactured into usable or marketable materials for use other than landfill disposal or incineration. Recycling does not include collection, compaction, repackaging, and sorting for the purpose of transport.
[b] Recovery represents the materials that are removed from the waste stream for the purpose of energy production or other beneficial use. Total Recovery excludes recyclable materials.
[c] Total Recycling estimate includes additional 70,000 tons to account for the difference between Waste Control Annual Reports and Ecology published totals.
[d] Total Recovery estimate includes additional 30,000 tons to account for the difference between Waste Control Annual Reports and Ecology published totals.

2.3.5 Disposed-of Municipal Solid Waste Stream Composition

Ecology most recently conducted a four-season MSW characterization study in 2016 to identify major waste stream compositions for specific counties in Washington State (Ecology, 2016). The study included wastes generated from four major sectors: commercial waste, residential waste, self-hauled C/D waste, and self-hauled other waste. Figure 2-3 below shows the disposed-of waste stream composition for the County from all waste sectors averaged over the four seasons.

Figure 2-1
Cowlitz County Solid Waste Stream Detailed Composition



2.3.6 Other Solid Waste Disposal

Table 2-4 shows the major waste streams generated in Cowlitz County in addition to MSW.

Table 2-4
Cowlitz County Total Tonnage of Waste Disposal, 2011–2018

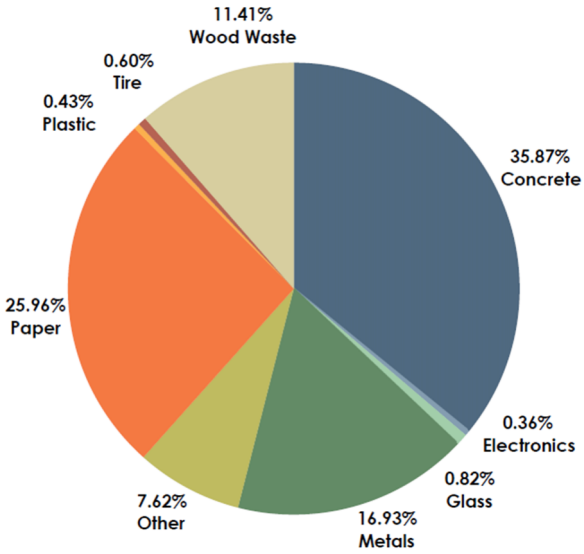
Year	MSW	C/D Waste	Industrial Waste	Ash	Petroleum-Contaminated Soils	Other Contaminated Soils	Recycling Residuals	TOTAL
Tennant Way Landfill								
2011	89,536	3,639	203	0	0	0	0	93,378
2012	87,829	4,411	1,278	0	0	0	0	93,518
2013	87,702	5,920	3,461	0	0	0	0	97,083
Tennant Way Landfill + Headquarters Landfill								
2014	93,771	9,998	120,983	65,059	5,642	656	0	0
Headquarters Landfill								
2015	99,917	6,242	129,838	87,846	318	0	0	324,161
2016	129,886	5,244	96,211	82,835	9,561	4,815	3,922	332,474
2017	129,849	9,220	193,364	61,693	22,585	0	0	416,711
2018	134,055	65,471	143,536	49,890	25,596	0	0	418,542

NOTES:
Data for total tonnage of waste disposed of for 2011–2018 are taken from Cowlitz County Landfill Annual Reports.
C/D = construction and demolition.
Ecology = Washington State Department of Ecology.
MSW = municipal solid waste.

2.3.7 Recovery and Recycling Rates

Recovered waste is the prevention of landfill disposal of generated waste through source reduction, reuse, recycling, energy recovery, or composting. The waste recovery rate for the County in 2018 was 26 percent. The rate of recycled MSW in 2018 was 41 percent. Major recycling and recovery stream compositions include paper, metals, concrete, and woodwaste. Figure 2-4 illustrates the total recovered stream compositions for 2018.

Figure 2-2
Cowlitz County Total Recycled and Recovered Stream Composition 2018



A summary of the overall recovery and recycling rates for 2018 is provided in Table 2-5.

Table 2-5
Cowlitz County Total Tonnage of Waste Generation, Recovery, and Recycling (2018)

Total Tonnage of Waste Generation, Recovery, and Recycling	
MSW Disposed Of	134,055
Other Waste Types Disposed Of[a]	284,493
Recycled MSW[b]	94,300
Recovered MSW[c]	51,800
TOTAL MSW RECOVERED[d]	146,100
TOTAL MSW GENERATED[e]	228,349
TOTAL WASTE GENERATED[f]	564,648
OVERALL RECYCLING RATE[g]	41%
OVERALL RECOVERY RATE[h]	26%

NOTES:
Total tonnage of waste generation, recovery, and recycling from 2018 data are taken from Cowlitz County Landfill and Waste Control Transfer Station Recycling Annual Reports.
C/D = Construction and demolition.
Ecology = Washington State Department of Ecology.
MSW = municipal solid waste.
PCS = petroleum-contaminated soil.
Transfer Station
[a] Other Waste types include: industrial, C/D waste, ash, and PCS.
[b] Total Recycling estimate includes additional 70,000 tons to account for the difference between Waste Control Annual Reports and Ecology published totals.
[c] Total Recovery estimate includes additional 30,000 tons to account for the difference between Waste Control Annual Reports and Ecology published totals.
[d] Total MSW Recovered = Recycled MSW + Recovered MSW.
[e] Total MSW Generated = Total Municipal/Commercial Solid Waste Disposed of + Total Recycled MSW.
[f] Total Waste Generated = Total Recovered + Municipal/Commercial Solid Waste Disposed of + Other Waste Types Disposed Of.
[g] Overall Recycling Rate = Recycled / Total MSW Generated.
[h] Overall Recovery Rate = Total MSW Recovered / Total Waste Generated.

2.3.8 Population Projections

Historically, based on census data from the OFM website, the County experienced an average annual increase in population of 1.12 percent for the years 1960 to 2006. For the 20 years from 1980 through 2000, the average annual percent increase was 0.79 percent, and for the decade from 1990 through 2000, the average annual percent increase was 1.25 percent. The average annual growth rate from 2000 to 2009 was 0.80 percent (OFM, 2010). The average annual growth rate from 2010 to 2018 was 0.60 percent (OFM, 2018).

The OFM has prepared high, intermediate, and low series population projections for Washington counties through 2040 (see Table 2-6 and Figure 2-5). According to a 1995 amendment to RCW 43.62.035, counties may, for purposes of growth management planning, use values between the high

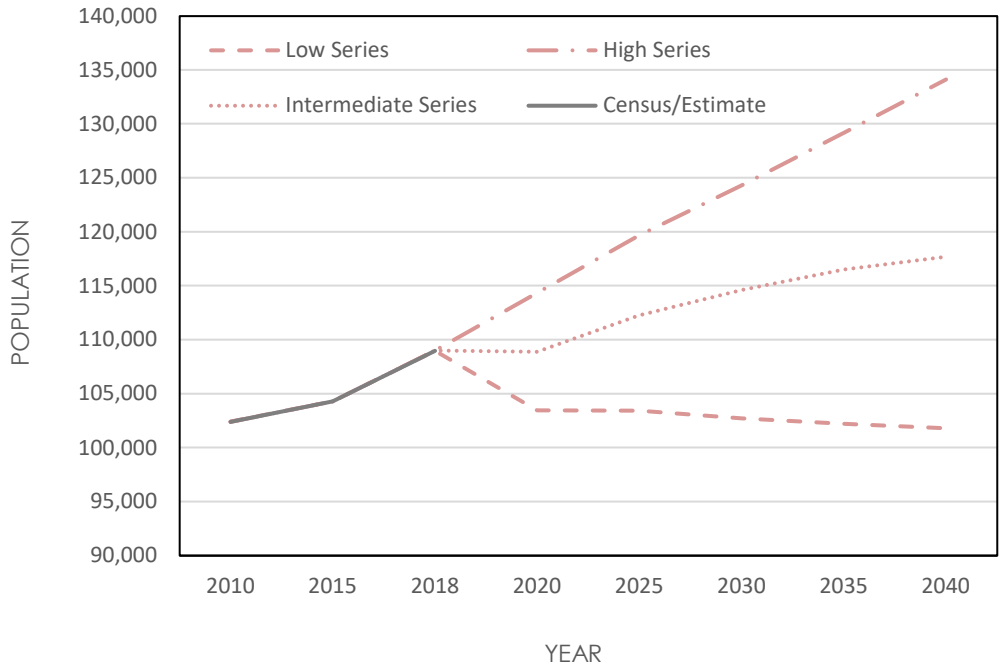
and low projections. The intermediate series population projection predicts a county population of 108,885 in 2020, 112,267 in 2025, 114,611 in 2030, 116,485 in 2035, and 117,682 in 2040. These populations would be attained with an average annual growth rate of approximately 0.3 percent over this planning period. The OFM high and low series projections have average annual growth rates of approximately 0.81 percent and -0.28 percent, respectively.

Table 2-6
Washington State OFM Population Projections

Year	Low Series	Intermediate Series	High Series
2020	103,445	108,885	114,327
2025	103,429	112,267	119,664
2030	102,716	114,611	124,303
2035	102,204	116,485	129,145
2040	101,808	117,682	134,114
Average Annual Percent Growth	-0.08	0.39	0.78

NOTES:
OFM = Office of Financial Management.
Population projection data are taken from OFM Growth Management Act Population Projections for Counties: 2010-2040

Figure 2-3
Washington State OFM Population Projections Cowlitz County



NOTES:
Low, Medium, and High Projections based on existing trends from 2011–2018.
Population data are taken from OFM Growth Management Act Population Projections for Counties: 2010-2040.
OFM = Office of Financial Management.

Most of the population growth is expected to be in areas immediately adjacent to Longview and Kelso. Increases in county population and households will result in increased solid waste generation.

Future per capita waste generation is expected to remain approximately the same based on a combination of factors such as increased tipping fees, uncertainty in recycling markets, and the continuation of existing waste reduction and recycling programs.

2.3.9 Waste-Generation Projections

Table 2-7 illustrates the pattern of waste disposal and recycling trends in the County since 2011. The annual percent change fluctuates, corresponding to changes in population, the impact of waste reduction and recycling efforts, and the available recycling markets. The total waste disposal and recycling are shown in Figure 2-6, highlighting low, medium, and high projections based on the trends from 2011 to 2018. The low, medium, and high MSW disposal projections assume a 0, 1, and 2 percent annual increase, respectively. The low recycling projection assumes a decrease of half a percent annually, and the medium and high projections assume an increase of zero and one percent annually. The County anticipates that the existing facilities will provide enough capacity to handle the projected increase in waste generation.

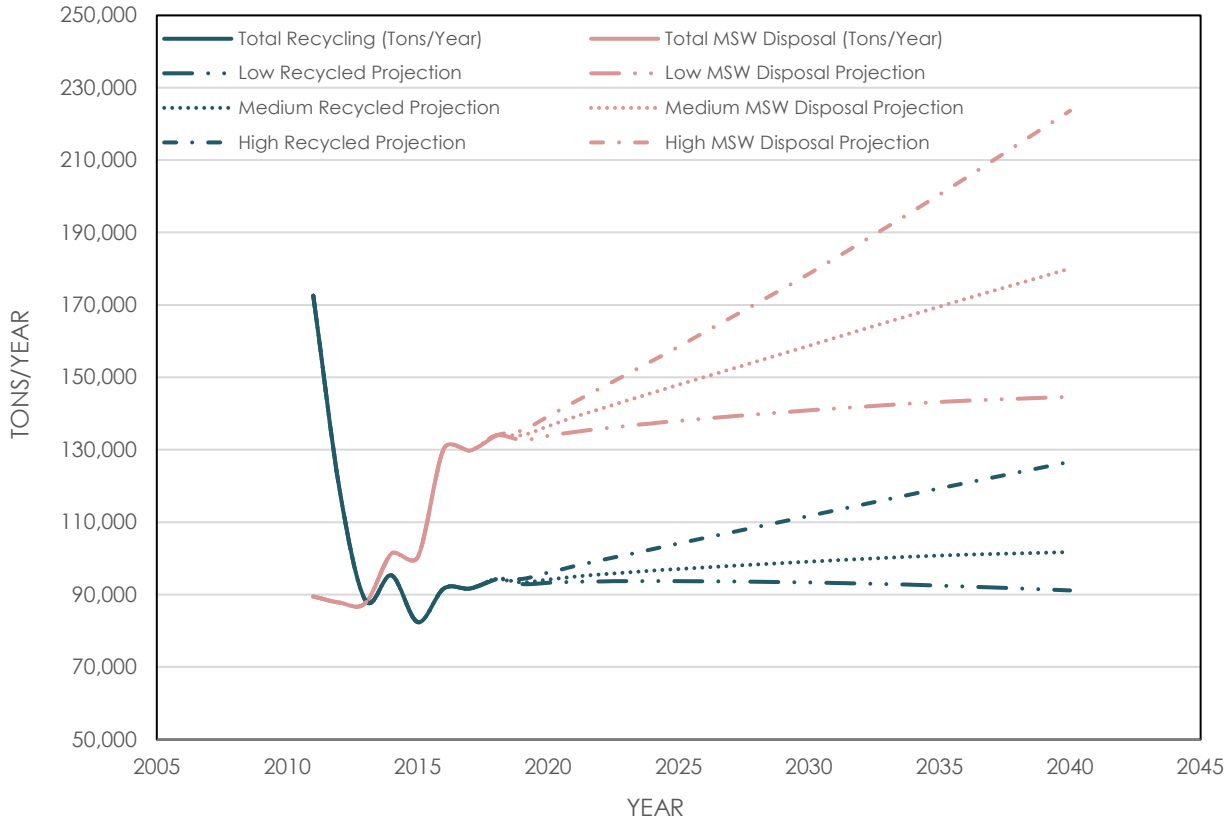
In February 2018, the Chinese National Sword policy came into effect. These regulations set strict new standards on the limit of contamination in imported recyclables and greatly decreased the value of mixed recyclables. In the absence of a viable recycling market, the County has been forced to divert many recyclables to the landfill. Continued instability in the market is expected to contribute to little or no growth in the rate of recycling in the near future as shown in the recycling projections in Figure 2-6. At this time the County has modified collection of recyclables to eliminate processing of un-marketable waste.

Table 2-7
Cowlitz County MSW Summary—Change Over Time 2011–2018

Year	Tons MSW Landfilled	Annual Percent Change in Tons MSW Landfilled	Tons Recycled	Annual Percent Change in Tons Recycled
2011	89,536	--	172,572	--
2012	87,829	-2	119,149	-30.96
2013	87,702	0	88,489	-25.7
2014	101,426	16	95,379	7.8
2015	100,468	-1	82,460	-13.5
2016	130,308	30	91,734	11.2
2017	129,849	0	91,700[a]	0.0
2018	134,055	53	94,300[a]	2.8

NOTES:
Ecology = Washington State Department of Ecology.
MSW = municipal solid waste
Tons landfilled data for 2011-2018 area taken from annual Cowlitz County Landfill records.
Recycled tons area taken from annual Waste Control Recycling, Inc., records.
[a] Total Recycling estimate includes additional 70,000 tons to account for the difference between County and Ecology calculations.

Figure 2-4
Cowlitz County Total Waste Projection



NOTE:
MSW = municipal solid waste.

Estimates for future MSW disposal and recycling are generated by multiplying population projections with per capita waste-generation projections. The medium series total MSW disposal for the County identifies a 20-year waste potential of 180,099 tons disposed of and 101,823 tons recycled.

3 WASTE REDUCTION AND PUBLIC EDUCATION

3.1 Introduction

The objective of this section is to identify locally viable and action-oriented waste reduction and education programs and prioritize them in accordance with the needs and opportunities of the community. Included are an inventory of existing conditions, an assessment of needs and opportunities, a discussion and evaluation of waste-reduction and education options, identification of needs and opportunities, and a summary of goals and actions.

3.2 Waste Reduction

In RCW 70A.205, the State of Washington identifies source reduction of waste as a fundamental strategy and top priority for solid waste management. Therefore, waste reduction must be a critical element of all local CSHWMPs. Waste reduction is defined in RCW 70A.205.015 as "reducing the amount or toxicity of waste generated or reusing materials."

As waste-management strategies, waste reduction and pollution prevention are not as well understood as other efforts, such as recycling, and consequently have not gained the same level of political support and public enthusiasm. Nevertheless, they are the most environmentally beneficial and cost-effective waste management strategies and the top priority in Washington State's plan for reducing solid waste. 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; this makes all solid waste management methods safer and helps develop public confidence in waste management methods. The second 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 reduction is difficult in that it requires a change in personal habits and attitudes. However, through public education and information, the CSHWMP can provide successful programs that achieve the goals of waste reduction and pollution prevention. Partnerships with both public and private institutions can play a vital role in disseminating information, including delivering messages in a variety of ways to reach a growing and increasingly diverse population.

3.3 Existing Conditions

3.3.1 Public-Sector Activities

Many local jurisdictions and institutions in the County have established waste-reduction policies as part of their daily activities. Examples include the use of double-sided copies and the enactment of policies to discourage the printing of emails. Most internal County office memoranda and notices are sent electronically.

The County purchasing office encourages the use of recycled products. The County currently purchases office paper with 30 percent recycled content. To the extent possible, opportunities should be provided for cities and other public agencies to make joint purchases, with the County, of recycled products in order to obtain lower prices.

The City of Longview provides a solid waste and recycling website (http://www.longviewrecycles.com). Visitors to the site can find out what is and is not recyclable, the proper disposal methods for electronic waste (E-waste) and hazardous waste, and what recycling contamination is and why it is important; and can learn more about the recycling inspection process and why it was implemented. The City of Longview also maintains education efforts by holding discussions on waste-reduction activities for local civic organizations, businesses, and schools.

3.3.2 School Curricula

Many jurisdictions around the country have developed materials and tools to educate students about responsible solid waste management, including waste reduction and recycling. Ecology has developed extensive K-12 school curricula, such as the Green Chemistry program available on the Ecology website (https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Green-chemistry). Some Washington counties have effectively used special school presentations in classrooms or assemblies, including plays or skits, magic shows, and hands-on science exhibitions.

Field trips to local industries and agencies that practice waste reduction also help students learn responsible solid waste management techniques for home, school, and play. Field trips to local landfills and recycling facilities can emphasize the importance of and need to practice waste reduction and recycling.

3.3.3 Nonresidential Educational and Technical Assistance

The CSHWMP recognizes the importance of involving nonresidential waste generators in waste-reduction activities. Specifically, nonresidential waste generators could prepare internal waste-reduction/recycling plans and conduct a waste audit. Programs that the County, cities, and other interested parties may implement to assist nonresidential waste generators include:

Material/Waste Exchange—There are several national and regional material/waste exchange programs available for industrial or commercial businesses. Like the local exchange program discussed in Section 3.3.4, these nonresidential exchanges have been developed to help businesses find a market for surplus materials, by-products, and wastes. These exchanges generally allow users to list available materials as well as wanted materials along with contact information. In general, waste exchanges tend to handle hazardous materials and industrial process waste while materials exchanges handle nonhazardous items. The County and cities could promote these waste exchange opportunities by informing local businesses of these services and encouraging them to participate. Because manufacture of new materials, as well as disposal, is avoided with the exchange of waste, it is a very effective form of waste reduction. The King County Hazardous Waste Management Program has set up a regional waste exchange for the Pacific Northwest called the Industrial Waste Exchange (https://www.hazwastehelp.org/IMEX/listings.aspx). Recycler's World (http://www.recycle.net) is

a global trading site for information related to secondary or recyclable commodities, by-products, and used and surplus items or materials. The site includes links to many national and international specialty wastes and materials exchanges.

Technical Assistance Program—Educational and technical assistance can be provided to businesses and public agencies on an informal or formal basis. Informal education might include informational flyers, distribution of program "success" reports on the benefits of reducing waste, or telephone conversations on how to get started. Formal waste-reduction technical assistance often includes conducting an audit to determine sources of waste and providing coaching on possible uses for waste materials and ways to reduce the amount and toxicity of waste. Appropriate waste-reduction options are then selected based on technical and economic feasibility. Incentives for implementing a formal waste-reduction program include the potential for reduced disposal costs, development of a better public image, and preservation of natural resources. A formal waste-reduction program should include measures to estimate or monitor quantities of waste reduced.

3.3.4 Private-Sector Activities

Repair and reuse of durable products represent the most traditional forms of waste reduction and are well-established in the County. Several businesses in the County repair durable products, such as appliances, electronics, and furniture, for resale. Car dealers and wrecking yards sell used automobiles and parts.

Weyerhaeuser, WestRock Longview, Nippon Dynawave, NORPAC, and Steelscape have all implemented a variety of industrial-waste-reduction measures to save money and reduce environmental liability. For example, a large-quantity generator (LQG) of hazardous waste must have a pollution prevention plan in place and produce annual progress reports. Implementation of their pollution prevention plan enables LQGs to reduce the amount of hazardous waste that they generate, decreasing their environmental liabilities, annual reporting efforts, and the annual hazardous waste planning fees that Ecology imposes on them.

Many charitable organizations, such as Goodwill Industries, the Salvation Army, Habitat for Humanity, churches, schools, and nonprofit organizations, accept donations of used furniture, clothes, appliances, toys, books, and housewares. In addition, estate, garage/yard, and church sales are year-round events staged throughout the County, providing an opportunity for citizens to resell items no longer needed.

Online material exchanges such as Craigslist (http://www.craigslist.org) and Offer Up (https://offerup.com) provide residents with convenient access for buying and selling goods, many of them previously used. The Buy Nothing Project (http://buynothingproject.org) relies on the Facebook social media platform for posting goods to be given away or to ask for goods that are needed, all at no cost. All of these online services extend residents' ability to divert usable materials from the waste stream.

3.4 Education and Promotion Programs

3.4.1 Recycling

Local education and information are critical for the success of any waste-reduction and/or recycling program. The importance of citizen education, targeting both adults and children, cannot be understated. Education is generally considered to be reasonably cost-effective, with excellent long-term environmental benefits.

The objective of educating the public is to increase awareness of the environmental consequences of solid waste disposal and so increase understanding of the need for waste reduction and recycling management alternatives. Public education, public participation, and public acceptance of MSW management alternatives have increased as public comprehension of environmental problems broadens.

3.4.2 Organic Materials

The Cowlitz County Washington State University (WSU) Extension provides information about composting on their website (https://extension.wsu.edu/cowlitz/master-composter/) as well as holding classes throughout the year.

The County does not currently provide an outreach program to assist commercial entities in managing their organic material.

3.4.3 Moderate Risk Waste

The County MRW program provides education and outreach materials to residents and businesses of Cowlitz and Wahkiakum counties in the form of brochures and booklets dealing with recycling, waste reduction, and proper disposal of HHW. The brochures are stocked and maintained at all public libraries in Cowlitz County as well as at the HHW facility at the Transfer Station. They are also distributed at county events such as the local Earth Day celebration and the County Fair. Brochures are available upon request at the Transfer Station and Public Works. The County also promotes its HHW, recycling, and SQG programs through newspaper ads.

3.5 Education/Promotion Options

A variety of options exist for public education and promotion. The cost and effectiveness of the programs vary widely. Many of the techniques have little cost for services or materials. However, all require a level of commitment from the County or cities to coordinate activities, target appropriate audiences, and evaluate effectiveness. The following is a list of potential techniques that could be used for a county-wide program:

Active Advertisements—In newspapers or on radio, information can be distributed to a large area. Typically these types of programs are very expensive and are not audience-specific. Since Cowlitz

County has a relatively small population and does not have extensive opportunities for mass communication, paid advertisements are more problematic than other types of advertising.

Direct Mailings—Direct mailings are a flexible form of public information, encompassing everything from newsletters to single-page flyers. While mass mailings may be expensive and limited in effectiveness, mailings to target groups may increase the effectiveness and reduce costs. Information inserts in utility or garbage-collection bills provide a more direct form of public information than mass mailings.

Information presented in mailings could cover a series of topics more broadly than facility pamphlets and could include purchasing habits to support waste reduction, backyard composting, public feedback, and recycling program progress.

Displays—A portable display can be used in public settings to promote awareness and to distribute written information. A portable display could be used at fairs or other community gatherings. A permanent exhibit could be set up at public buildings in the form of a demonstration project. A permanent exhibit could also carry a tally of quantities collected for recycling and be displayed in a sign or billboard at multi-material drop-off sites.

Facility Pamphlets—Facility pamphlets can be used to instruct residents of the full range of recycling services provided in the County. Information may include the types of recyclables accepted, how to prepare recyclables for drop-off/collection, locations for the recycling of nonpriority recyclables, and locations for the drop-off of HHW. All solid waste facilities should distribute information about methods and locations for waste reduction and recycling.

Passive Advertisements—Advertisements promoting recycling activity can be placed on grocery bags, phone book covers, posters, billboards, banners, and point-of-purchase displays.

Recycling Theme—A theme, which is the overall appearance and tone of a public education campaign, should be chosen before materials are developed for an extensive public education program. Choosing and following a theme increases the effectiveness of recycling-education programs by increasing the public's ability to identify program elements.

School Programs—A variety of curricula and presentations have been produced by Ecology and others for use in schools. The "A-Way with Waste" program can be obtained free from Ecology. However, the program will require effort to initiate, coordinate, and maintain.

Audio/Video Materials—Audiovisual materials can be developed for use at public events, schools, and fairs in conjunction with an information booth and at commercial venues such as movie theaters. It is important that the quality of the audiovisual materials be highly professional.

Speakers—Speakers are very useful in communicating a variety of issues and topics to various groups such as the Chamber of Commerce, service organizations, church groups, PTAs, and neighborhood organizations.

Telephone Hotlines—Telephone hotlines have proven to be an excellent way to disburse information as needed to a wide variety of people. A local hotline can provide detailed information about specific programs to homeowners and businesses alike and maintain a detailed database regarding recycling businesses and services offered in the County.

Websites—Websites are a good way to cost-effectively publish information and make it readily available to people who are looking for it. The County and other local jurisdictions maintain solid waste websites that provide information about the County landfill, hazardous waste disposal, and links to the state's recycling web page (http://www.co.cowlitz.wa.us/index.aspx?NID=922).

3.6 Needs and Opportunities

The state has identified citizen participation as a critical element in decreasing the per capita waste-generation rate and prioritizes waste reduction over recycling and safe disposal. As identified in Section 2, the County per capita waste-generation rate is expected to increase annually at approximately 1 percent. Given the significant volumes of material that require disposal and the projections for continued growth in the per capita disposal rate, development of a more formalized waste-reduction and public education program for the County is needed.

Based on the Plan guidelines' recommendation that local jurisdictions such as the County set specific waste-reduction goals and design programs to reduce waste, the County should consider developing waste-reduction programs and measuring the results.

The following criteria and conclusions were previously established by the SWAC and confirmed for the 2021 Plan:

- Waste-reduction options that combine county and noncounty resources and that are effective at a local level should be given high priority. Options that qualify under these criteria include public awareness education, school curricula, nonresidential education and technical assistance, on-site composting, in-house municipal waste reduction, and government and business procurement.
- Waste-reduction options should be incentive-based rather than disincentive-based. Cost recovery for end-of-life disposal of environmentally unfriendly products should be placed on the manufacturers of the product. The County and cities have concluded that educational and incentive-based programs such as modifications in fee structures should be implemented before disincentive-based programs such as product or packaging bans, product or container deposits, and product use/reuse standards. The County supports Product Stewardship efforts, which build end-of-life disposal or recycling costs into the purchase price of products; and the development of statewide or national environmentally sound end-of-life disposal programs, which shift disposal costs to the producer.
- Public information and education efforts across the County should be continued. Given the large degree of overlap between jurisdictions and the activities of the County, it is recommended that the County take a lead in conducting recycling education and promotion. This would ensure a consistent message county-wide.

- Develop and distribute a brochure or packet of materials dedicated to recycling and waste reduction opportunities in the County. The information should be distributed to County residents and made available in public areas such as libraries and government offices. Information inserts should be coordinated for distribution in city and refuse hauler customer billings.
- Develop a waste-reduction and recycling theme and a portable display for use at County events. Materials should be developed for both adults and children.
- Work cooperatively with cities; educators; haulers; and private, nonprofit organizations that are participating in recycling and waste-reduction education and promotion activities through schools and civic activities.
- Evaluate the education programs as a routine part of the public information and education program. Evaluation should consist of public feedback and measurement of program performance.
- Continue maintenance of websites that provide information to the general public related to recycling and disposal of HHW.
- Develop a public education program to prevent improper disposal of batteries.

3.7 Goals and Actions

Goals	Actions
Provide a cohesive and comprehensive waste-reduction and education program.	1. The County and the cities should coordinate their efforts whenever possible and work to develop public education and awareness programs aimed at informing and motivating the community to practice waste-reduction techniques. 2. The cities should continue—and expand—group presentations and work to implement school curricula. 3. The County and cities should continue to provide technical assistance to encourage businesses in the County to evaluate their processes and policies that affect waste generation. These actions might include direct mailing, displays, educational materials, and active advertisements. 4. Make County staff available to respond to questions and requests for education and direction regarding best practices for operational programs and policy making. 5. The County and cities should continue to track waste reduction, recycling, and disposal.
Promote alternatives for consumers to reduce and reuse household goods.	1. The County and the cities of Longview and Kelso should direct interested users to reuse websites such as Craigslist (www.craigslist.org), Offerup (www.offerup.com), and the Buy Nothing Project (www.buynothingproject.org)

Goals	Actions
Provide leadership in areas of waste reduction by adopting best practices.	1. All public agencies in Cowlitz County should continue to provide an example to the community in waste-reduction methods by implementing in-house waste-reduction programs, and should continue to work with local governments to implement waste-minimization programs that include purchasing and waste-reduction practices. Agencies should continue to encourage local industries to do the same.

4 RECYCLING

4.1 Introduction

Recycling is defined by the Ecology guidance document as "transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill or incineration" (Ecology, 2010). Recycling does not include "collection, compacting, repackaging, and sorting for the purpose of transport" (WAC 173-350-100). Recycling is a vitally important component of a solid waste management strategy because it reduces costs and environmental impacts associated with solid waste disposal. Recycling also helps conserve energy and natural resources.

The Washington State Legislature established the goal of reaching a 50 percent recycling rate by 1995. The target date for achieving the statewide recycling goal was revised to 2007 and was not met until 2011. The statewide recycling rate reached an all-time high of 51 percent in 2011, which declined to 44 percent by 2016. In order to meet the established goal, increased recycling activity by local governments, private companies, and households is required.

In 2018, Cowlitz County achieved a residential recycling rate of 41 percent and an overall recovery rate of 26 percent. As of 2017, the statewide MSW recycling rate and the diversion rate are no longer available. To help promote waste reduction and reuse, the new metrics for gauging performance are waste generation per capita (lb/person/day) and the recovery rate.

In 2019, the Washington State Legislature directed Ecology to develop a plan to reduce contamination in recycling, which occurs when people try to recycle nonrecyclable materials, recyclables not accepted by their recycling service, and items containing food or liquid. In August 2020, Ecology developed a statewide CROP. The Cowlitz County CROP is included as Appendix B to this Plan.

4.2 Existing Conditions

4.2.1 China "National Sword" Policy

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 typically had been sent with levels of contamination between 3 to 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 (Washington Recycling Development Center, 2019).

The National Sword policy has drastically impacted the materials that Waste Control is able to collect in Cowlitz County and successfully market. Current recycling opportunities in the County focus on

metals and paper. Waste Control also accepts electronics, auto hulks, wood, and concrete at their recycling facility.

4.2.2 Markets

The following description of markets for recyclables, prepared in accordance with Washington State regulations (RCW 70A.205.045.7.c), provides a brief description of the current conditions impacting recycling in the County.

Table 4-1
2018 Markets and Rates for Recyclable Materials

Material	Primary Market	Rate (cost per ton)
Tin-coated steel cans	Public	$0.055
Aluminum	Public	$0.40
Newspaper	Public	$20
Mixed paper	Public, paper mills	--
Cardboard	Public	$20
Paper food containers	N/A	--
Plastic containers	N/A	--

4.2.3 Residential Curbside Collection

With a strong promotional campaign, containers, and collection on the same day as trash collection, most curbside programs can expect participation rates to exceed 50 percent. Many cities in the Pacific Northwest have reported participation rates near 75 to 80 percent.

Waste Control performs curbside pickup of recyclable materials in Longview and Woodland, using automated recycling trucks that can quickly empty curbside recycling bins of commingled recyclables.

The following recyclable materials are currently included in the curbside recycling program and are collected from single and multifamily customers:

- Tin-coated steel cans
- Aluminum cans
- Newspaper
- MP
- Cardboard
- Paper food containers
- Plastic containers, including beverage bottles, jugs, jars, and dairy tubs

This list may be revised based on market conditions or new recycling technologies. A detailed description of the prioritization of recyclables in the County is provided below in Section 4.2.8.

- **City of Longview**—Each single-family residence is provided with a 90-gallon residential recycling bin, which is picked up once a week. The mandatory curbside recycling program, along with garbage pickup, is funded directly by collection fees. In 2018, curbside recycling in Longview recovered 2,400 tons of recyclables at a cost of $32 per ton of material recycled.
- **City of Woodland**—Each single-family residence is provided with a 60-gallon residential recycling bin, which is picked up once a week. Woodland also provides receiving tanks for antifreeze and motor oil that are maintained by the County's vendor Waste Control. The mandatory curbside recycling program, along with garbage pickup, is funded directly by collection fees. In 2018, curbside recycling in Woodland recovered 639.73 tons of recyclables.

Curbside recycling is not provided in Kalama, Kelso, and Castle Rock. Recycling in these areas is available to residents through drop-off centers, discussed in Section 4.2.5.

4.2.4 Multifamily-Dwelling Recycling

Multifamily recycling is the collection of recyclables from multifamily dwellings where residents place recyclables in bins or dumpsters in a common area rather than in separate containers issued to each unit. Multifamily households are defined as residential structures designed to accommodate two or more families in separate dwelling units.

A successful program must have the support of the owner or management agency. If it does not, the program will become reliant on the rising and falling level of commitment of resident managers. Because many apartments experience a high turnover of resident managers, the program could suffer from lack of consistency. The hauler should have the appropriate equipment for servicing apartments and the local city government must be willing to provide ongoing promotion and education as new residents, unfamiliar with the program, move in.

Participation rates vary widely across the country and are typically less successful than single-family curbside programs. Nonetheless, programs implemented in the Puget Sound region have experienced participation levels equal to 25 to 30 pounds per unit per month. Multifamily recycling systems have proven to be successful when conveniently located, user-friendly, and supported by an involved manager. Successful case studies have resulted in 80 percent participation with a 30 percent reduction in the waste stream.

- **City of Longview**—Multifamily dwellings, consisting primarily of duplexes, are each provided with 90-gallon containers, which are collected once per week. A few large apartment complexes are provided with 300-gallon recycling containers, also collected once per week. In those cases, access is limited primarily to the tenants, and does not include the general public. The mandatory curbside program is funded directly by fees, similar to garbage pickup.

- **City of Woodland**—Multifamily dwellings are serviced once a week, with larger bins for commingled recyclables. The program is funded directly by collection fees. Woodland also provides receiving tanks for antifreeze and motor oil. The tanks are maintained by the County's vendor Waste Control.

4.2.5 Recycling Drop-Off Centers

The simplest form of recycling operation is the drop-off center, to which area residents bring separated materials and deposit them in appropriate containers. Drop-off centers are typically viewed as the first phase of a comprehensive community recycling program, enabling local haulers and processors to become familiar with material-handling techniques and market arrangements on a small scale before embarking on more complex curbside collection programs. Drop-off centers are effective in less densely populated areas that cannot support full-scale curbside programs. Communities in Oregon and Washington have begun to utilize drop-off centers to collect recyclable materials that have been eliminated from commingled collection programs because of high rates of contamination.

A successful drop-off center must be located at a site with high visibility and easy public access. Studies have shown that residents will frequent a center within 3 to 5 miles of their homes, combining the recycling trip with other errands. Larger communities may encourage the operation of several neighborhood drop-off centers, with a larger central site for processing aggregated materials. Public participation rates are strongly dependent on the convenience of the location, site cleanliness and security, and the effort devoted to promotion and education. Typical drop-off programs may achieve participation rates up to 20 percent and divert 1 to 7 percent of the total waste stream.

In 2018, the cost of recycling using drop-off centers for collection in Kelso was approximately $51 per ton. Additional information on public participation and recovery rates is described in the CROP in Appendix B.

Cowlitz County Recycling Drop-Off Center—Through its vendor Waste Control, the County provides a recycling drop-off center at the Transfer Station for public use. Most of the materials are processed before they are shipped to market.

Individuals may use the Transfer Station recycling facility free of charge.

Cowlitz County Drop-Off Centers in Outlying Areas—Waste Control has set up drop-off centers in Willow Grove, Toutle, Kalama, Woodland, and Rose Valley. These areas are not served by curbside recycling or recycling drop-off centers operated by the various cities. Through waste disposal agreements with cities, Waste Control maintains three drop-off recycling centers in Kelso and one each in Castle Rock, Lexington, and Columbia Heights (see Figure 1-1). These drop-off centers were strategically located to provide reasonable access to all county residents in the outlying areas, while making use of suitable existing sites. The County has not received complaints or inquiries for additional drop-off centers and plans to maintain these existing locations.

4.2.6 Private-Sector Recycling Activities

Waste Control operates from two buildings on Third Avenue in Longview. One 44,600-square-foot building houses the varied equipment that the MRF uses to process commingled recyclables. Since opening its doors in 1974, the facility has played an increasing role in reducing the amount of solid waste disposed of in the landfill. The firm has approximately 70 employees who work at the MRF and on collection routes. In 2009, Waste Control added a recycling drop-off center at the new Transfer Station, and in 2011 brought a new auto hulk processing facility online.

In 2018, a combined total of approximately 94,300 tons of recyclables was recovered at the Transfer Station drop-off center, the MRF, and the Waste Control Buy Back Center. Weyerhaeuser, Steelscape, and WestRock Longview all have major recycling operations in place.

Commercial and Institutional Recycling—Waste Control maintains an extensive recycling program for local industry, including WestRock Longview, Weyerhaeuser, Nippon Dynawave, and NORPAC. Waste Control also collects and processes office paper and cardboard from the Longview, Kelso, Kalama, and Woodland school districts, as well as providing scheduled cardboard and office paper recycling to local businesses and government agencies within the city limits. In 2018, 3,727 tons of MP and 8,231 tons of cardboard were collected. The company also maintains drop-off sites for recyclable materials throughout the County.

4.2.7 Facilities

Table 4-2 identifies the recycling centers in Cowlitz County and the materials they accept.

Table 4-2
Current Cowlitz County Recycling Centers

Municipality	Location	Recyclables
Castle Rock	Castle Rock Recycling Center Wastewater Treatment Plant 215 Michner Street	Mixed paper, PET[a], HDPE[a], aluminum, tin, cardboard, glass
	Wilcox & Flegel 110 Allen Avenue	Oil, antifreeze
Toutle	Toutle Recycling Center Toutle Drop-Box Facility 200 S Toutle Road	Mixed paper, aluminum, tin, glass, HDPE[a], PET[a], oil, antifreeze
Kalama	Kalama Recycling Center City Shop 6315 Old Pacific Hwy S 673-3706	Mixed paper, PET[a], HDPE[a], aluminum, tin, oil, antifreeze

Municipality	Location	Recyclables
Kelso	Kelso Drop Center Super 8 Motel 250 Kelso Drive	Mixed paper, PET, HDPE, aluminum, tin, glass, oil, antifreeze, cardboard
	Kelso Drop Center Huntington Junior High Red Path Street	Mixed paper, PET, HDPE, aluminum, tin, cardboard
	Kelso Drop Center Quick Stop—behind store 807 S. Pacific Avenue	Glass, mixed paper, PET, HDPE, aluminum, tin, oil, antifreeze, cardboard
Longview	Waste Control Transfer Station 1150 Third Avenue— (360) 425-4302 7 days/week 7:30 am–5:30 pm	Mixed paper, PET, cardboard, HDPE, glass, aluminum, ferrous (iron), nonferrous, tin, antifreeze, auto batteries, oil, glass
	Swanson 240 Tennant Way (360) 414-9663	Green waste, wood product residuals, uncontaminated soils
	Goodwill Industries Donation Center 710 14th Avenue— (360) 425-6929 Mon–Fri: 8 am–4:30 pm; Sat: 9 am–5 pm; Sun: 12–4:30 pm	Reusable items
	Lakeside Industries 500 Tennant Way— (425) 313-2600	Asphalt
Lexington	Fire District 2 Fire Station West Side Highway	Cardboard, tin, aluminum, PET, HDPE, mixed paper
Unincorporated Cowlitz County	Columbia Heights Baptist Church 6136 Columbia Heights Road	Mixed paper, PET, HDPE, aluminum, tin
	Rose Valley Road	Glass, mixed paper, PET, HDPE, OCC, aluminum, tin
Lions Club	Multiple locations	Mixed paper
Boy Scouts of America	Multiple locations	Mixed paper
County-Wide	Thrift Stores Multiple Locations	Reusable items
	Multiple Locations	Car battery recycling

NOTES:
Plastics were not collected at the time of the 2021 draft.
Additional sites, in the outlying areas of the County, are currently being considered for inclusion.
HDPE = high-density polyethylene.
OCC = old corrugated cardboard.
PET = polyethylene terephthalate.

4.2.8 Designation and Prioritization of Recyclable Materials

Ecology's guidelines for the development of local solid waste management plans (Ecology, 2010) require all local SWMPs to develop a list that defines recyclable materials. For purposes of this section, materials are defined as recyclable if they are marketable and result in waste-stream diversion. A marketable recycled material is defined as a material with established end users who purchase recyclable materials, use them as raw materials, and transform them into new products. Waste-stream diversion potential is represented as the percent of a specific material in the County waste stream.

Prioritization of recyclable materials is based on existing conditions, such as the marketability of the products, current collection programs, and their potential for waste-stream diversion. All high-priority materials have been incorporated into local curbside recycling programs. High-priority materials that are not collected at recycling drop boxes should be incorporated into these programs in the near future. Medium-priority materials should be considered on a case-by-case basis for inclusion in existing or future programs; low-priority materials are currently not included in County recycling programs.

The results of the ranking will be used as a guide to identify materials to be recovered and recycled. The prioritization of these materials may change based on future markets, new legislation, local demand, emerging technologies, or other conditions not anticipated at this time. Proposed changes to this list may be periodically modified by the SWAC without update of this Plan.

High Priority

Ferrous Metals—Ferrous metals, or steel, are iron-based and therefore magnetic. Most ferrous metal in MSW consists of steel packaging in the form of food and tin beverage cans. Other major sources are automobile hulks, large appliances, automobile parts, office equipment, and worn-out fixtures. Because ferrous metal represents significant waste-stream diversion and is marketable in Cowlitz County, it is considered a high-priority recyclable.

Aluminum Cans—Aluminum cans were the most prevalent nonferrous metal in the disposed-of southwest Washington MSW stream in 2009. Although aluminum comprises a small portion of the waste stream, its relatively high economic value makes it an important component of a recycling program. Therefore, aluminum is considered a high-priority recyclable.

MP—Mixed waste paper is a broad category of paper products typically of lower quality and value. MP is easy to identify, but handling may be difficult because it tends to be bulky and come in a variety of shapes and sizes. Because of its high volume and market stability, MP is considered a high-priority recyclable.

Cardboard and Kraft Paper—The recycling industry includes cardboard and kraft paper under the designation of old corrugated containers. Unbleached kraft paperboard is used to manufacture a wide variety of corrugated containers that are the most widely used for shipping. The relatively high volume and value of cardboard and kraft paper make them high-priority recyclables.

High-Grade Office Paper (white ledger, colored ledger, and computer printout)—Office paper consists of high-quality printing and writing paper. Most office paper is made from virgin fiber, giving

it a high value among recyclers. Because of consumer demand, increasing amounts of office paper are being manufactured using postconsumer paper. As the paper commodity of highest value and with strong source separation potential, office paper is considered a high-priority recyclable.

White (Metal) Goods—Although white goods/appliances do not represent significant waste-stream diversion in southwest Washington, the potential for illegal disposal and the hazards these materials represent make white goods a high-priority recyclable.

Medium Priority

Glass—Postconsumer glass consists of three types: container glass, refillable container glass, and non-container glass. Refillable container glass is not currently collected in Cowlitz County. Glass was once considered marketable in Cowlitz County; however, current market conditions, including the cost of cleaning, do not favor glass as a recyclable product. Since glass can provide for a moderate level of waste-stream diversion, it is considered a medium-priority recyclable material.

Nonferrous Metals—The processing of nonferrous metal is typically labor-intensive because of its bulky nature and multiple components. Nonferrous metals are therefore a medium-priority recyclable. The obvious exception to this is the aluminum can, identified above as a high-priority recyclable.

Used Motor Oil—Waste motor oil does not represent a significant waste-stream diversion but does represent a serious negative environmental impact if disposed of improperly. Because of the serious negative impacts associated with improper disposal and the stable outlets for collected material, used motor oil should be considered a medium-priority recyclable.

Woodwaste/Biomass—Hog fuel offers the largest potential market for wood from C/D and land-clearing activities. Hog fuel is wood that has been reduced to 3 inches or smaller and burned in boilers to produce steam and electricity. There is an established local demand for hog fuel from pulp and paper mills. Woodwaste is easily stockpiled, ground, and used for hog fuel by local industries. Based on the local demand and relative availability of woodwaste, it is considered a medium-priority recyclable.

Asphalt—Recycled asphalt is used primarily for repairing roads, driveways, and paved lots. In recent years there has been increasing use of "cold" systems that chew up, remix, and lay asphalt as they move slowly up the road. The market of concern is for asphalt removed from its original site of placement, recycled, and applied to new sites. The recycling process involves heating and the addition of small quantities of new asphalt and emulsifiers. City, county, and state road departments provide the primary market for this material. It is estimated that recycled asphalt costs about one-third as much as new material. Because of the specialized nature of asphalt recovery and the high economic incentive, the material is a medium-priority recyclable.

Concrete and Inert Material—Most concrete inert material is stockpiled and crushed for reuse as rock fill or processed on site at demolition projects and reused in the on-site construction project. Waste Control and J L Storedahl & Sons, Inc. (Storedahl) are the two main recyclers of concrete in Cowlitz County. For material to be acceptable as inert fill, it must be free of organics, oil, and other contaminants, and must meet applicable regulatory requirements. Generally, it must be broken into 2-

foot-diameter pieces or smaller. Since the demand for recycled concrete and inert material is impacted by the specialized nature of inert-waste recovery, the material is considered medium priority.

Low Priority

Plastics—The use of plastics for packaging materials has increased dramatically since the early 1990s and is expected to increase further, replacing more traditional materials such as paper, glass, and steel. Consequently, plastics show potential for significant waste-stream diversion.

Markets for polyethylene terephthalate (PET) and high-density polyethylene (HDPE) plastic have been volatile over the last decade and are currently weak. Despite a strong history of marketability and a good recycling infrastructure in place, these plastics are considered low-priority recyclable materials. The remaining types of plastics—Types 3, 4, 5, 6, and 7, and low-density polyethylene—are considered low priority because of low volumes and lack of market value.

Tires—The markets for granulated rubber, buffings, stampings, retread casings, and tire chips (for tire-derived fuel and other applications) are all growing but are still small compared to available supplies. Problems associated with the cost of transporting tires to processing facilities still arise; as a result, tires are considered to be a low priority.

4.3 Needs and Opportunities

4.3.1 Residential Recycling Recommendations

1. Residential curbside recycling for single-family households is recommended as the minimum recycling service level in the designated urban areas of Cowlitz County. Alternative programs/methods that are as effective as curbside collection may be implemented if acceptable to Ecology and consistent with the criteria identified in RCW 70A.205.045 (7)(b)(i). Designated urban areas include the cities of Longview, Kelso, Woodland, and Kalama and the adjacent unincorporated urban areas of Longview Heights, West Longview, West Side Highway, and Lexington. A detailed description of urban and rural designations in Cowlitz County is provided in Section 2.

2. Cowlitz County and the SWAC should periodically consider residential curbside recycling for single-family households in unincorporated urban areas as a long-term goal for Cowlitz County. This goal aims to support the 2021 County Solid Waste policy to "promote economically sound waste disposal reduction and recycling programs throughout the County."

3. Recycling drop-off centers should be provided for the rural areas of Cowlitz County. Remote areas of the County should be investigated for possible sites and local support for recycling drop-off centers. Areas include the southwestern part of the County near the communities of Stella and Willow Grove/Coal Creek, the extreme northwestern corner of the County near the retirement community of Ryderwood, and the unincorporated Lewis River area of Woodland. A county-wide option that would serve populated rural drainage basins should be looked into. All recycling drop-off centers should collect all high-priority recyclables, except where safety might be an issue. The County should prioritize development of each site, based

on the potential population base served, and seek state grant funds to develop the potential sites. Also, an increase in rural/self-haul disposal rate structure to support the rural drop-off recycling program should be considered.

4. Multifamily units outside the urban service boundary should be encouraged to use recycling drop-off centers.

5. A periodic evaluation of the effectiveness of the recycling program, including tracking of contamination, is recommended to help the County track its waste-reduction progress and identify opportunities for improvement.

4.4 Nonresidential Recycling Recommendations

State law does not require a jurisdiction to establish nonresidential recycling programs. However, it does require monitoring the collection of source-separated waste at nonresidential sites where there is sufficient density to sustain a program, with a focus on wastes handled or disposed of by the County solid waste system. Ecology planning guidelines recommend that nonresidential waste recycling be encouraged. This is all the more important for Cowlitz County, given that over 50 percent of its waste stream is generated by the nonresidential sector. Nonresidential recycling becomes feasible when the economics of separating and marketing specific materials is favorable. Businesses that generate a waste stream containing a large amount of homogenous recyclable material, such as corrugated containers, ledger paper, computer paper, glass, plastic, and wood, are typically good candidates for recycling.

Five nonresidential recycling program recommendations are discussed below. To the extent possible, programs are discussed in the context of local conditions in Cowlitz County.

1. The existing commercial recycling collection routes in Cowlitz County should remain available to all commercial business in the designated urban service areas. The routes may be expanded at the discretion of the local hauler/recycler. Commercial generators in outlying areas of the County should be encouraged to utilize multi-material drop-off centers when possible. Drop-off centers should be designed to accept materials from nonresidential generators.

2. The County, cities, and haulers should provide technical assistance to businesses and institutions in the County to encourage the development of in-house recycling programs. Technical assistance, which may include waste audits, would provide recycling/broker lists, market information, waste exchange catalogs, and model procurement policies. The County should work closely with Ecology in making the best use of existing expertise and relevant publications. Initially, the Plan stakeholders should focus only on businesses that demonstrate a strong interest and have high potential for waste-stream diversion.

3. The County, in conjunction with waste haulers, recyclers, and business, should work to monitor nonresidential recycling activities and build a comprehensive list of generators in the County. The purpose is to facilitate evaluation of program success and plan for program modifications and expansion. In addition, it will be useful to apply commercial recycling statistics toward the state's recycling goal. As part of a nonresidential waste-recycling program, the County, city, or hauler could establish a database that identifies nonresidential generators,

the waste generated, and the amount of recyclables available. Such a program would be instrumental in waste audits, program promotion, and implementation.

4. Public agencies should continue to lead by example in the implementation of department-wide recycling programs. Jurisdictions should establish, maintain, or expand recycling programs and monitor the results for promotional purposes. To demonstrate the effectiveness of these programs, jurisdictions should have in-house recycling policies and programs to complement the programs recommended for nonresidential entities. The County and cities could set examples and promote local waste-recycling efforts by publicizing their own efforts to reduce the amount of waste produced in all departments. In combination with waste-reduction efforts, existing recycling programs should be expanded to include all departments as well as a wider range of materials. Quantities of recycled waste could be monitored periodically so that results could be used for promotional purposes, economic analysis, and the jurisdiction's annual quantification of waste-recycling efforts.

4.5 Goals and Actions

Goals	Actions
Enhance Residential Recycling.	1. Maintain curbside collection. 2. Evaluate the need to increase collection service area. 3. Evaluate the need for additional drop-off centers. 4. Promote collection and drop-off for multifamily residential units. 5. Maintain the current level of service and access to drop-off locations over the six-year planning horizon.
Enhance Commercial Recycling.	1. Evaluate the need to increase the collection service area. 2. Encourage use of drop-off centers by users outside urban areas. 3. Provide technical assistance to businesses to develop in-house recycling programs. 4. Monitor recycling activities and develop a database to track waste generation and recycling. 5. Maintain in-house recycling programs at public agencies to set a strong working example.
Increase Awareness of Recycling Programs.	1. The cities should develop a coordinated education and outreach program. 2. The cities should engage with schools to promote recycling education and awareness. 3. Maintain websites for public access to current information, including Ecology's Recycle Right campaign and toolkit. (https://ecology.wa.gov/recycleright).
Reduce Contamination in the Recycling Stream.	1. Implement the County's new CROP.

5 ORGANIC MATERIAL MANAGEMENT

5.1 Introduction

As organic materials have a biological origin, they may be returned to the soil, used as an energy source, or turned into other products. These materials include yard waste, food waste, manures, crop residues, wood, soiled/low-grade paper, land-clearing waste, and biosolids. Organics represent a significant portion of the waste stream in the County and statewide. In 2015 and 2016, Ecology conducted a four-season MSW characterization study in selected counties across the state, including Cowlitz County (Ecology, 2018). The study found that organic material made up approximately 20 percent of the total MSW stream generated in southwest Washington, and more than 36 percent of the residential waste stream that is currently being disposed of at landfills. Food waste accounts for nearly 13 percent of all landfilled material in southwest Washington, and half of that is classified as edible.

The Washington State Legislature recently established a goal for the state to reduce by 50 percent the amount of wasted food generated annually by 2030. The legislation directs Ecology, with the Department of Health and the Department of Agriculture, to adopt a wasted-food-reduction and food-waste diversion plan by 2020. The legislation also expands the programs to be funded for wasted-food reduction and food-waste diversion (MRSC, 2019).

In 2010, the State Legislature amended RCW 70A.205.040 to require that SWMPs address source separation and collection of organic materials. Plans updated after June 10, 2010, are required to address "organic material including yard debris, food waste, and food contaminated paper products for composting or anaerobic digestion." Solid waste plans are also required to "consider and plan for…source separation of…organic materials" and "handling and proper preparation of organic materials for composting or anaerobic digestion."

State law (RCW 70A.205.045 (7)(a)) requires that SWMPs include waste reduction strategies that "may include strategies to reduce wasted food and food waste that are designed to achieve the goals established" in a statewide wasted-food-reduction and food-waste-diversion plan. When this section was being written (2020–2021), the statewide plan was still under development. RCW 70A.205.045 (7)(b)(iii) also requires that SWMPs include source separation strategies that address yard-waste- and food-waste-collection programs where "there are adequate markets or capacity for composted yard waste in or near the service area to consume the majority of the materials collected." The law implies that, when cost-effective, yard waste and food waste should be processed into compost. The types of programs needed to satisfy this provision are not clearly stated, but it is generally assumed that a mix of drop-off and curbside programs is adequate for meeting this provision.

A new law adopted in 2020, the Compost Procurement and Use bill (House bill 2713), amended RCW 43.19A to add three new sections. Among other provisions, these sections:

- Recognize the benefits of organics diversion and compost use.

- Requires state agencies and local governments to consider the use of compost in government-funded projects, and to use compost if it is reasonably priced and available and if the compost meets existing procurement, health, and other standards.
- Encourage state agencies and local governments to give priority to locally produced compost.
- Encourage local governments that provide "residential composting service" to buy back at least 50 percent of the compost produced from the collected organics.

5.2 Existing Conditions

5.2.1 Collection

The County does not currently provide curbside collection of organic materials. The one exception is Christmas tree pick up once per year.

5.2.2 Facilities

Waste Control Transfer Station

The Waste Control Transfer Station accepts brush and leafy material, as well as dimensional lumber, for public drop-off. This material is processed and sold as hog fuel to local mills. The Transfer Station does not accept grass or painted wood.

Swanson

Yard waste generated by county residents and landscapers is accepted for public drop-off at Swanson via their retail facility located at 240 Tennant Way in Longview. Swanson recycles yard waste, woodwaste, and other wood residuals for use in the production of biomass to be burned for heat and power. Swanson also processes yard and woodwaste as soil amendments, landscaping mulches, and engineered wood fiber, as well as for use as playground chips.

Pacific Fibre Products

Pacific Fibre Products (Pacific Fibre) processes wood residuals from the lumber industry around the Pacific Northwest. The residuals are made into wood chips for the paper industry as well as shredded into bark mulch and hog fuel, or for topsoil. The bark mulch, soil, and hog fuel are wholesaled throughout Washington, Oregon, and California. Some of the wood residuals that are processed at the facility are classified by the State of Washington as solid waste.

Cowlitz Valley Composting

Formerly operated as part of a joint venture with Swanson, Cowlitz Valley Composting currently accepts green waste from the Portland Metro area and Clark County. Organic material waste from

Cowlitz County is not received at this facility. Swanson has purchased fine compost from Cowlitz Valley Composting for use as soil amendments, mulch, and bioretention soil.

5.2.3 Agricultural Waste

Agricultural wastes result from the production of agricultural products, which include crop-processing waste and manure. Agricultural wastes are defined in WAC 173-350-100 as: farm wastes resulting from the production of agricultural products including, but not limited to, manures and large (over 15 pounds) animal carcasses.

Most of the agricultural activity in the County takes place in the Woodland Bottoms area, adjacent to the community of Woodland. The principal agricultural activities in this area are dairy farming, berry farming, flowers, and vegetable crops such as sweet corn, green peas, and carrots. Delameter Valley also has significant agricultural activity, including several large chicken-raising facilities. In total, there are approximately 500 farms in the County, which generated approximately 33,855 tons of agricultural waste in 2018, the most recent available data. The amount of agricultural waste generated was estimated from the County's estimated crop acreage and livestock numbers applied to a waste-generation rate developed for each unit.

Agricultural wastes are a significant source of organic material. Typically, very little of this material is disposed of at a solid waste disposal facility. The typical current practice is to return as much of the material as possible to the soil. On-site agricultural waste disposal can be problematic in areas that are close to bodies of water, particularly in situations involving livestock.

The Transfer Station accepts individual animal carcasses.

5.3 Needs and Opportunities

County residents are provided with adequate opportunities to manage bulky organic wastes at the Transfer Station and at Swanson. While currently there is no option for managing grass clippings, there has not been demand for this service. If such a demand were to develop, the County could evaluate opportunities for service with Cowlitz Valley Composting.

5.4 Goals and Actions

The County and cities should continue to coordinate efforts and work with nonprofit and volunteer groups to implement home composting programs and should continue to provide funding assistance to the local demonstration site and WSU Master Composter training programs.

Goals	Actions
Comply with new state regulations for reducing food waste (HB 1114-2019-20).	1. Evaluate new regulations as they are established in order to identify priority actions that the County can take. 2. Evaluate and pursue opportunities for public funding to implement new regulations.
Increase recovery of organic materials.	1. Transfer Station and local woodwaste recyclers should continue to provide convenient drop-off facilities to handle yard waste and encourage source separation by the customer by providing lower rates for yard-waste disposal than for refuse disposal. 2. Public agencies should evaluate their contracting policies, which could be revised to encourage or require contractors to segregate land-clearing waste.
Provide more options for disposal and management of organic materials.	1. Fixed drop-off sites—fixed sites can be located at a variety of places, but the best locations are generally at existing disposal sites such as landfills and transfer stations, sites (primarily private facilities) that are already devoted to the handling of similar materials, and recycling drop-off sites. At the fixed site, a separate container would be provided for the deposit of yard waste. 2. Household (curbside) collection, urban areas—curbside collection in urban areas can pick up a substantial amount of the yard waste generated by the urban residential sector. 3. Investigate the viability of curbside collection for commercially generated yard waste in Kelso and Longview. 4. Provide outreach and information to larger businesses to understand the current County collection programs.

6 SOLID WASTE COLLECTION

6.1 Introduction

Solid waste collection refers to the activities of certified and contract haulers who collect mixed solid waste and recyclables from residences, businesses, and institutions. This section describes the current solid waste collection system in Cowlitz County, including legal authority, collection practices, and the interrelationship between solid waste collection and waste-reduction/recycling activities.

6.1.1 State Regulations

The state authorities that govern collection activities are Ecology and WUTC. RCW 70A.205.010 also assigns responsibilities to local government for the management of solid waste handling while encouraging the use of private industry. The various laws that may apply to solid waste collection companies include:

- RCW 81.77, Solid Waste Collection Companies: This law establishes the state regulatory authority for solid waste collection companies and the procedures and standards with which they must comply.
- RCW 35.21, Cities and Towns: This law establishes the authority of towns and cities in regard to solid waste. Per RCW 35.21.120,

  > A city or town may by ordinance provide for the establishment of a system or systems of solid waste handling for the entire city or town or for portions thereof. A city or town may provide for solid waste handling by or under the direction of officials and employees of the city or town or may award contracts for any service related to solid waste handling.

- RCW 36.58, Solid Waste Disposal, and RCW 36.58A, Solid Waste Collection Districts: RCW 36.58A authorizes counties to form a collection district that would enable the adoption of mandatory waste collection. RCW 36.58 addresses disposal activities primarily, including the ability to form a solid waste disposal district, but one section (RCW 36.58.045) authorizes counties to "impose a fee upon…a solid waste collection company" to fund compliance with an SWMP.
- WAC 480-70, Rules for Solid Waste and/or Refuse Collection Companies: This chapter establishes standards for public safety, fair practices, reasonable charges, nondiscriminatory application of rates, adequate and dependable service, consumer protection, and compliance for solid waste collection companies.

6.1.2 Local Regulations

Solid waste enforcement in the County is governed by Cowlitz County Code (CCC) 15.30, Solid Waste Rules and Regulations of the Cowlitz County Board of Health, which adopts the following WAC chapters:

- MFS for solid waste handling (WAC 173-304)
- Litter receptacles (WAC 173-310)
- SWHS (WAC 173-350)
- Criteria for MSW landfills (CMSWL; WAC 173-351)

Enforcement actions for solid waste violation are "complaint driven." The County does not seek out violations and prefers a strategy of achieving compliance rather than pursuing punishment. CCHD staff work with homeowners to correct and resolve compliance violations. When the County is unable to achieve cooperation and compliance, CCHD staff may pursue monetary fines pursuant to the Civil Enforcement Code (CCC 2.06).

6.2 Existing Conditions

Companies holding G-permits from WUTC or operating under municipal contract may collect solid waste for a fee. Weekly curbside garbage and recycling collection service throughout the County is provided through three private collection companies, each providing service to a different region of the County and regulated by the WUTC or municipal contracts. Currently, there are no curbside collection options for organic materials.

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.

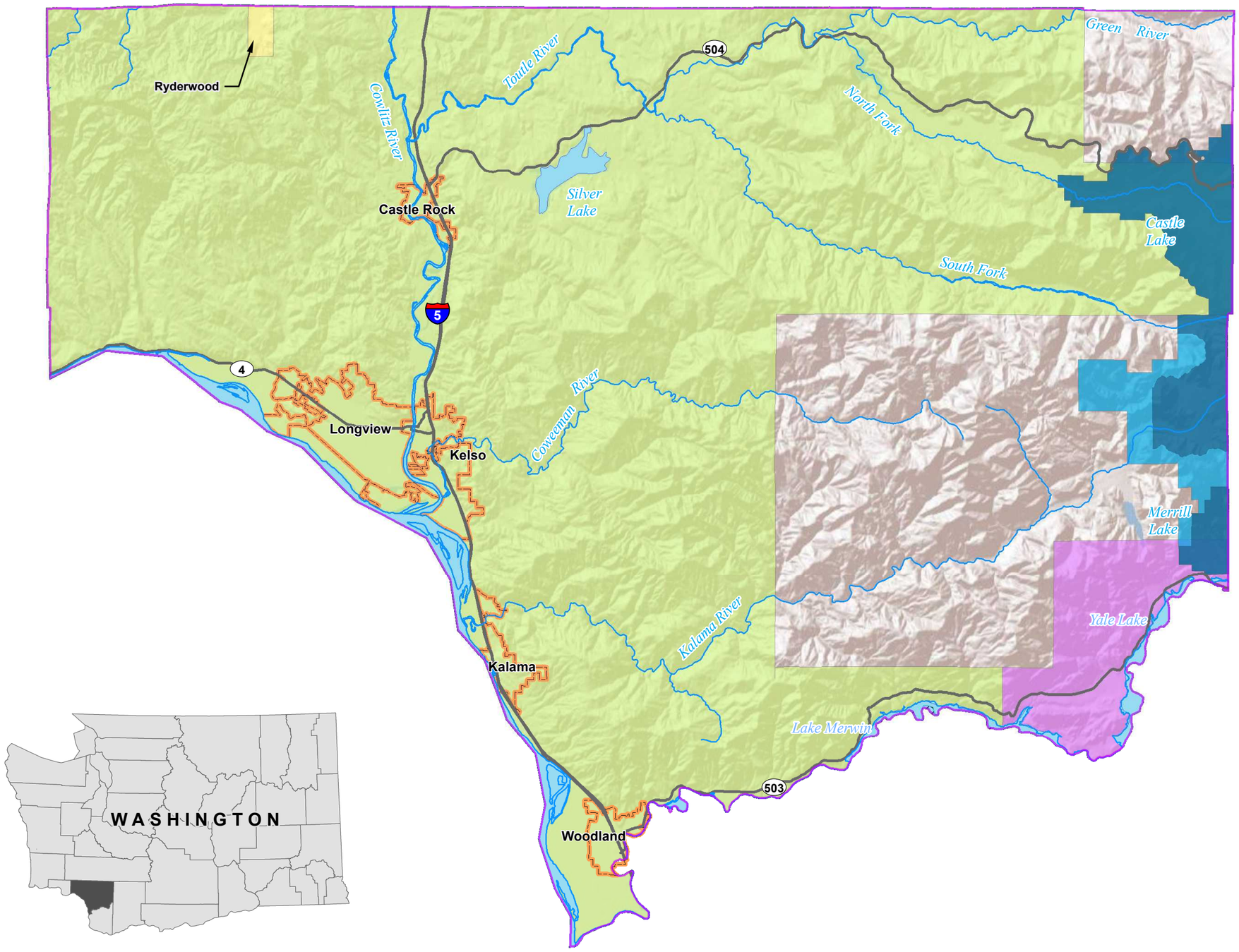
Collected waste is brought to the Waste Control Transfer Station. Loads are lightly sorted and then combined in transfer trucks, which then deliver waste to the Headquarters Landfill. As an alternative to curbside collection, several facilities are available for public drop-off. These facilities are discussed in Section 7.

6.3 Solid Waste Collection Companies

Solid waste collection services are provided throughout the County by private certificated haulers and private franchised operators. The cities of Longview, Kelso, Kalama, and Woodland contract directly for solid waste collection services, and the City of Castle Rock has granted collection authority to Waste Control. Collection certificate areas are shown in Figure 6-1. The certificated collection companies serving Cowlitz County are identified below in Table 6-1.

Figure 6-1
Collection Certificate Areas

Cowlitz County
Comprehensive Solid and
Hazardous Waste Management
Plan



Legend

- City Limits
- County Boundary
- Major Highways
- Mt. St. Helens National Monument
- Gifford Pinchot National Forest

WUTC Certificate

- G-219, Community Waste and Recycling
- G-101, Waste Control Inc.
- G-253, Waste Connections of WA

0 2 4
Miles

Source: Basemap provided by ESRI, Inc. ArcGIS Online/Bing Maps; County features obtained from Cowlitz County GIS.

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Print Date: 10/23/2019
Approved By:
Produced By: J. Elstott
Project: 9041.07

Table 6-1
Cowlitz County Solid Waste Collection Certificate Holders

Name (WUTC Certificate No.)	Address	Population Served	Land Area (Square Miles)	Density (People per Square Mile)	Collection Rates
Waste Control Recycling, Inc. (G-101)	1150 Third Avenue Longview, WA 98632 (360) 425-4302	44,781	880	51	32-gal: $17.16 60-gal: $21.22 90-gal: $25.28
Waste Connections of Washington, Inc. (G-253)	12115 NE 99th Street, Suite 1830 Vancouver, WA 98682 (360) 832-8749	198	42	4.7	32-gal: $27.06
Jeffery K. Cummins d/b/a/ Community Waste & Recycling (G-219)	157 Black Bird Lane Chehalis, WA 98532 (360) 748-7387	395	2	196	$71.91/ton

NOTES:
gal = gallon.
WUTC = Washington Utilities and Transportation Commission.

6.3.1 WUTC-Certified Collection Companies

WUTC regulates solid waste collection companies by issuing a certificate of public convenience. The following companies provide service in Cowlitz County.

Waste Control—In 2020, Waste Connections of Washington, Inc., acquired Waste Control and assumed control of all operations in the County. Waste Connection will continue to operate under the Waste Control name and no changes to existing services or facilities are anticipated as of this writing. Currently Waste Control provides collection services for the area covered by WUTC Certificate G-101. Most of the permit area is in Cowlitz County, with the remaining portion in Clark County and Skamania County. The area in Cowlitz County covers approximately 880 square miles, or over 75 percent of the total area of the County. Approximately 44,781 people live in this collection area, which has a population density of about 38 persons per square mile. Included in this collection area are the cities of Longview, Kelso, Castle Rock, Woodland, and Kalama, and the unincorporated communities of Toutle; Ostrander; Woodbrook; Beacon Hill; Lexington; Rose Valley; the "Woodland Bottoms," a 14-mile-long corridor up the Lewis River Highway adjacent to Woodland; and Coldwater Ridge in Skamania County. Residential pickup options include weekly collection of 32-, 60-, or 90-gallon containers. Larger containers and biweekly pickups are also available.

In 2018, Waste Control provided service to approximately two-thirds of potential customers in the G-101 collection area (Willis, 2019). The remaining residences either dispose of waste on their own property or haul directly to a disposal facility.

Equipment owned by Waste Control includes four 28-cubic-yard, automated, side load packer trucks; one 40-cubic-yard commercial front loader; and three drop-box trucks. They also own at least

120 drop boxes with varying capacities. The firm employs a total of 70 persons, 17 of them involved in collection in the G-101 area (Willis, 2019).

Waste Connections of Washington, Inc.—This firm, based in Vancouver, Washington, serves the extreme southeast corner of Cowlitz County. Included in the certificated collection area are the upper end of Yale Lake on the Lewis River and the small, tourist-oriented rural community of Cougar. Because of its proximity to Mount St. Helens, Cougar experiences heavy tourist activity, primarily during the summer months. A single collection vehicle provides weekly service. Residential pickup options include weekly collection of 20- or 32-gallon containers. Larger containers and every-other-week pickups are also available. There are approximately 198 customers in the service area.

Jeffery K. Cummins d/b/a Community Waste & Recycling—The remote retirement community of Ryderwood in northern Cowlitz County is served by this company, a WUTC-certified hauler. Jeffrey K. Cummins, of Chehalis, Washington, owns and operates the firm, which collects waste from the 395-person community. The estimated population density is 196 people per square mile. Residential pickup options include a weekly collection of a 30-gallon container with options for additional containers and monthly pickups as well. One rear-loader compactor truck is used to haul collected waste to the Waste Control Transfer Station. Community Waste & Recycling serves approximately 283 residential customers and ten commercial customers and collected 445 tons of waste in 2018.

6.3.2 City Contract Collection

City contract collection operations involve private companies contracted by a municipality to collect and haul MSW. The municipality collects service fees for services provided by the hauler. Usually the contracts are awarded on a competitive basis to the lowest bidder. Haulers typically must furnish suitable performance bonds. Collection practices by jurisdiction are described below.

It should be noted that in the spring of 2007 the County and all cities in the County entered into an Interlocal Agreement for Management of Municipal Solid Waste, which designates the County system for disposal of certain solid waste generated within the corporate limits of each city for calendar years 2006 through 2045. A copy of the agreement is provided in Appendix A.

Unless otherwise noted, all population and residential account information is from 2018, to remain consistent with waste-generation data available to the County.

City of Longview—Longview is the largest city in Cowlitz County and has a population of 38,112. There were approximately 11,303 residential accounts in 2018. With a total area of 15.18 square miles, the population density is estimated to be 2,510 people per square mile. A City of Longview ordinance prohibits residents from hauling their own waste. The solid waste collection contract is renewable every five years and allows the city to specify where the waste is disposed of. Currently the city requires that all waste go to the Headquarters Landfill.

Waste Control contracts with the City of Longview to provide service to all residential and commercial customers, using fully automated collection equipment. Waste Control also provides curbside collection of recyclables as an option to the waste-collection contract. An estimated 86 percent of commercial customers use the 300-gallon, plastic, solid waste tubs that are picked up with a fully

automated collection vehicle; an estimated 11 percent use 90-gallon containers; and the remaining commercial customers (3 percent) use frontload/drop-box containers. Approximately a quarter of the residential customers are serviced weekly (for garbage only) with 300-gallon, plastic tubs located in alleyways shared by two to four residential customers. Each time a single 300-gallon tub is picked up, an average of three customers have been serviced, resulting in a highly efficient collection system. Residential customers not on alley service have a 90-gallon roll-cart that is picked up weekly at the curb. The city has provided 90-gallon containers to all residents for recycling collection. Monthly garbage and recycling collection rates vary for single- and multifamily residences.

City of Kelso—The County's second-largest city, Kelso has a population of 12,303. There were approximately 3,976 residential accounts in 2018. With a total area of 8.5 square miles, the population density of the city is estimated to be 1,447 people per square mile. Collection is mandatory. Waste Control provides curbside collection of solid waste and recyclables under contract to the City of Kelso. The contract between the city and Waste Control gives the city the right to specify where waste is disposed of; currently all waste is hauled to the Headquarters Landfill.

To collect the garbage generated in Kelso, Waste Control currently uses the same automated collection system described above for Longview. Most commercial/industrial accounts are located in and around the downtown business district, near the I-5/Allen Street interchange, in West Kelso, and in the South Kelso industrial area. Residential customers are located throughout Kelso.

City of Kalama—Kalama has a population of approximately 2,900 (OFM, 2019), with a land area of 2.22 square miles; the population density is estimated to be 1,318 people per square mile. Kalama has granted Waste Control a city contract to collect all solid waste in the city. The contract gives Waste Control the license to collect garbage in Kalama; however, the garbage-collection rates are regulated by the WUTC. Kalama bills Waste Control's customers in exchange for 15 percent of gross fees collected. In 2019, 1,244 residential and commercial customers participate in the mandatory curbside garbage pickup program. Residential pickup options include a 32-, 60-, or 90-gallon container, with weekly collection billed monthly.

City of Castle Rock—Castle Rock has a population of approximately 2,271. With a land area of 1.56 square miles, Castle Rock has a population density of 1,455 people per square mile. Castle Rock is the only city in Cowlitz County that does not have mandatory collection. Castle Rock Ordinance No. 86-5 grants Waste Control the authority to provide weekly garbage-collection service to the residents of Castle Rock. Because collection efforts are more efficient in areas with denser populations, Castle Rock residences are charged less per month than residences in unincorporated areas of the County. Pickup options include a 32-, 60-, or 90-gallon container. There is a franchise agreement between Castle Rock and Waste Control.

City of Woodland—A portion of the city falls in Cowlitz County. This area has a population of 6,358 and a total land area of 3.28 square miles, resulting in a population density of 1,938 persons per square mile. Currently Waste Control disposes of collected solid waste at the Headquarters Landfill. Woodland bills customers in exchange for 15 percent of the gross fees collected. There are currently approximately 1,600 customers. Pickup for residential and small commercial customers includes mandatory weekly curbside garbage and recycling collection. Larger commercial customers pay a higher rate for larger pickup containers.

It should be noted that a portion of Woodland also falls in incorporated Clark County. The waste generated in this area is also collected by Waste Control and disposed of at the Headquarters Landfill. Waste Control also provides service to residents of the unincorporated area surrounding Woodland in Clark County. In 2018, Waste Control recorded an additional 497 residential and commercial customers living in the unincorporated Clark County area around Woodland.

6.4 Needs and Opportunities

This section discusses the adequacy and availability of solid waste collection services in Cowlitz County and identifies areas where the level of service provided may not match the current or projected need.

Table 6-2 below provides a summary of the projected solid waste collection needs for the above jurisdictions over the six-year planning timeline from 2021 to 2026.

Table 6-2
Solid Waste Collection Needs (Six-Year Projection)

Jurisdiction	Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
City of Longview	A. Maintain current level of solid waste collection service while accounting for projected increase in solid waste generation.	✓	✓	✓	✓	✓	✓
City of Kelso	A. Maintain current level of solid waste collection service while accounting for projected increase in solid waste generation. B. Investigate feasibility of curbside recyclables collection.	✓	✓	✓	✓	✓	✓
City of Castle Rock	A. Maintain current level of solid waste collection service while accounting for projected increase in solid waste generation.	✓	✓	✓	✓	✓	✓
City of Kalama	A. Maintain current level of solid waste collection service while accounting for projected increase in solid waste generation.	✓	✓	✓	✓	✓	✓
City of Woodland	A. Maintain current level of solid waste collection service while accounting for projected increase in solid waste generation.	✓	✓	✓	✓	✓	✓
Unincorporated Cowlitz County	A. Investigate feasibility of implementing mandatory curbside collection.	✓					

Jurisdiction	Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	B. Maintain current level of solid waste collection service while accounting for projected increase in solid waste generation.	✓	✓	✓	✓	✓	✓
NOTE: Solid waste collection needs are based on the solid waste projection shown on Figure 2-6 Cowlitz County Total Waste Projection.							

City of Longview—No special solid waste collection needs have been identified for Longview. Mandatory curbside garbage and recycling programs are currently in place.

City of Kelso—Kelso has no additional need for solid waste collection of mixed municipal waste. However, Kelso residents are not provided with any financial incentive to practice waste-reduction/recycling activities. The city currently has no curbside recyclables collection program.

City of Castle Rock—Castle Rock should consider mandatory collection of garbage to increase subscriptions and potentially reduce the cost of collection.

City of Kalama—No special solid waste collection needs have been identified for Kalama. Mandatory garbage collection is in place.

City of Woodland—No special solid waste collection needs have been identified for Woodland. Mandatory curbside garbage and recycling programs are currently in place.

Unincorporated Cowlitz County—Most of the self-haulers in the County reside in unincorporated areas. Certificated haulers should continue to solicit additional subscriptions for collection service in these areas. The demand for solid waste collection in the rural unincorporated areas of Cowlitz County will depend on population growth. Implementation of mandatory garbage collection to the maximum extent permissible by law would increase subscriptions and potentially reduce the unit cost of collection in those areas. Mandatory collection could also result in less illegal dumping.

As illustrated in Figure 6-1, there is an unincorporated area of east Cowlitz County that is not currently served by any WUTC certificate. It is recommended that the County inquire with the WUTC regarding the expansion of the Waste Control (G-101) or Waste Connections (G-253) certificate to provide service for residents in this area.

6.5 Goals and Actions

Goals	Actions
Increase availability of local collection to more areas in the County.	1. Evaluate the need to extend curbside solid waste collection to incorporated and urbanized areas of the County not currently receiving service.
Take stronger action to eliminate illegal dumping.	1. Maintain enforcement through patrols and/or remote monitoring at highly impacted areas. 2. Evaluate the need to extend mandatory curbside garbage collection throughout the County.

7 TRANSFER, PROCESSING, AND DISPOSAL

7.1 Introduction

The Cowlitz County solid waste system provides facilities that offer opportunities for recovery of certain materials from the waste stream for reuse or recycling. The remaining solid waste materials are then transferred to a landfill for final disposal. In accordance with the interlocal agreements (Appendix A), all MSW that is generated in the County is disposed of at the Headquarters Landfill.

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 shipping it to a disposal site. Consolidation improves the economics of waste hauling and reduces traffic impacts at land disposal sites.

Material-processing activities include the separation, preparation, and consolidation of recyclable/recoverable material collected through curbside programs and drop-off sites or removed from incoming loads. Removal of these materials accomplishes the state's goal of waste minimization, allows the County to more effectively manage costs associated with waste management, and preserves landfill volume for materials for which there is no longer a beneficial use.

Landfilling is the practice of disposing of solid waste on land over a protective barrier and then covering it with other protective layers and soils. Landfilling has traditionally been the primary method of MSW management in the County and throughout the state. Although this plan emphasizes both reduction and recycling of solid waste, environmentally safe landfill capacity is needed for materials that are nonrecyclable, noncompostable, or noncombustible.

State law identifies priorities for the collection, handling, and management of solid waste. Under the state system of prioritizing, landfilling is the least preferred management method for solid waste compared to waste reduction; recycling, with source separation of recyclable materials as the preferred method; energy recovery, incineration, or landfill of separated waste; and energy recovery, incineration, or landfill of mixed MSW (RCW 70A.205.005(8)).

This section will discuss the County's existing solid waste handling and disposal system, identify needs and opportunities, and conclude with system recommendations.

- Transfer Station—A facility that receives compact and loose waste from both commercial sources and the general public. Waste materials from multiple small loads are consolidated and loaded into larger transfer vehicles for hauling to a landfill, increasing transportation efficiency.
- Drop-Box Facility—A staffed location where county residents and commercial businesses can deposit solid waste directly into a drop-box container. When the drop-box is full, it is

loaded onto a roll-off truck and hauled to the Waste Control Transfer Station. Drop-box facilities are common in rural areas, as they require lower capital expenditures for land, structures, and equipment. Drop-box facilities can also provide opportunities for recycling and for the separate collection of yard debris, woodwaste, and/or C/D waste.

- MRF—An MRF receives commingled materials and separates the recyclable portion for marketing to end-user manufacturers. The remaining solid waste is sent to a landfill for disposal.
- Landfill—An MSW landfill is a discrete area of land or excavation that receives solid waste. The MSW is placed on a series of protective barriers, compacted, and then covered with other protective layers.

7.2 Existing Conditions

As a result of the County's acquisition of the Headquarters Landfill and the construction of Waste Control's Transfer Station, the County solid waste handling and disposal has shifted to a transfer-based system, which integrates material recovery and transportation efficiency before materials are disposed of at a remote landfill location.

All residential and commercial MSW generated in Cowlitz County is commercially collected, brought by the public to the Toutle MSW drop-box facility, or brought by the public directly to the Waste Control Transfer Station. Commercial collection trucks and drop boxes are then routed to the Transfer Station and MRF, where the MSW may be lightly sorted to recover recyclable or reusable materials and then consolidated into transfer trucks. The transfer trucks then transport the MSW to the Headquarters Landfill and place it in the active fill area.

Industrial waste generated in the County is typically handled through the commercial haulers. Weyerhaeuser, WestRock Longview, NORPAC, and Nippon Dynawave have developed their own facilities in which they consolidate and sort materials to minimize their waste streams going to the Headquarters Landfill.

Table 7-1 below provides a summary of the types of waste accepted at each facility in the County, as well as the current tip fee. A detailed description of each facility is provided in Section 7.2.1.

Table 7-1
Waste Accepted and Tip Fee by Facility

Facility Name	Type of Waste Accepted	Tip Fee
Headquarters Landfill	Commercial and Residential MSW; Industrial Waste; C/D Waste; PCS; Auto Shredder residuals	Truck/Trailer: $26/ton
Waste Control Transfer Station and MRF	Residential MSW, Recycling, HHW, SQG Waste; Wood and Concrete Recycling; C/D Waste; Tires	Minimum Load: $4.00 Truck/Trailer: $51.02/ton Passenger Tires: $1.25 each Truck Tires: $6.00 each
Toutle MSW Drop-Box	Residential MSW	Minimum Load: $3.86 Additional cans/bags: $1.45/each Pickups/Trailers: $13.51/each Dual wheel/Tandem axle: $8.20/cy

NOTES:
C/D = construction and demolition.
cy = cubic yards.
HHW = household hazardous waste.
MRF = material recovery facility.
MSW = municipal solid waste.
PCS = petroleum-contaminated soils.
SQG = small-quantity generator.

7.2.1 Drop-off and Transfer

Waste Control Transfer Station

Waste is currently delivered directly to the Waste Control Transfer Station by the public and commercial haulers. The waste is sorted and processed at the Transfer Station before Waste Control hauls it directly to the Headquarters Landfill. The Transfer Station is constructed on a 5.7-acre parcel of land adjacent to the existing Waste Control MRF. The facility consists of a 31,200-square-foot transfer station building, a knuckle-boom crane for compacting waste in rail-compatible containers, and a rail spur. Waste Control has received a permit for the Transfer Station from the Building and Planning Environmental Health Unit (EHU).

A Letter of Understanding between Waste Control and the BOCC, signed on December 17, 2013, sets the parameters and issues that have been incorporated into the contract for solid waste disposal in the County. Terms of the contract provide for a private-public partnership through December 31, 2043, with the option for two five-year extensions.

Toutle MSW Drop-Box Facility

After the 1980 eruption of Mount St. Helens, local tourism increased throughout the Toutle area, contributing to the community's garbage-disposal burden. To assist local businesses in handling the increased volume of waste requiring disposal, the BOCC decided to open an MSW drop-box facility in the Toutle area. The facility opened in 1986. A recycling drop-off center was added to the Toutle site in the early 1990s.

The drop-box facility is located at 200 South Toutle Road in the unincorporated community of Toutle, which is located in the north-central part of the County. Toutle is 23 miles from the Waste Control Transfer Station, where the waste is disposed of. The site is currently open Wednesdays and Saturdays from 9:00 a.m. to 5:00 p.m. and is staffed by one part-time attendant. The facility has a maximum 5-cubic-yard drop-off restriction, which precludes its use by most commercial haulers. Two 40-yard drop boxes are located at the Toutle site. Each day's operation fills an average of 1.8 drop boxes. Recorded annual solid waste tonnage hauled to the landfill was approximately 1,151 tons in 2010 and 1,221 tons in 2018. In 1999, transportation was $34 per ton; in 2018, it was $38.70 per ton. Revenue for 2018 was approximately $60.75 per ton. The operating cost of the facility is approximately $27.52 per ton, which includes the full disposal fee of $20.35 per ton at the landfill. In 2018, the County subsidized a total of $25.82 per ton for the operation of this facility.

7.2.2 Material Recovery

Waste Control MRF

The Waste Control MRF recycling operations are described in Section 4. The primary function of the MRF is the sorting of commingled recyclables obtained from curbside recycling programs, drop-off sites throughout the County, and the consolidation and transfer of recyclable materials from industrial and commercial sources. Tailing-off waste, i.e., waste remaining after recovery of the recyclables at the facility, is transferred from the MRF to the Headquarters Landfill.

WestRock Longview Recycling Yard

The WestRock Longview recycling yard operates primarily as an internal transfer station. Recycled materials from throughout the facility are consolidated in the recycling yard and then transported by Waste Control to appropriate facilities. Waste consolidated in the recycling yard is currently transported to the Headquarters Landfill by Waste Control.

Pacific Fibre

Pacific Fibre processes wood residuals from the lumber industry around the Pacific Northwest but does not accept woodwaste from the general public. The residuals are made into wood chips for the paper industry, shredded into bark mulch and hog fuel, and shredded and added to soil for sale as topsoil. These products are wholesaled throughout Washington, Oregon, and California.

7.2.3 Landfills

MSW generated in Cowlitz County is disposed of at the Headquarters Landfill.

Headquarters Landfill

The Headquarters Landfill, purchased from Weyerhaeuser in 2014, is the primary disposal location for the entire county. Commercial and residential self-haul waste currently goes to the Transfer Station for consolidation prior to disposal at the Headquarters Landfill. The facility is located in eastern

Cowlitz County, approximately 7 miles east of I-5 and 2.5 miles southeast of Silver Lake. The permitted landfill footprint is 308 acres, 49 acres of which Weyerhaeuser has developed since 1993 and the County has developed since 2014. The facility was designed for an approximate maximum 250-foot fill depth above existing topography and has an overall permitted capacity of 54.8 million cubic yards of air space, with approximately 6 million cubic yards consumed to date. The BOCC has established a goal of 750,000 tons to be disposed of at the landfill annually to ensure that lease obligations and operational expenses are met. Use of the Headquarters Landfill is regulated by the Solid Waste Handling Operating Permit 13-SW407, which is issued by the CCHD and updated annually in June.

Tennant Way Landfill

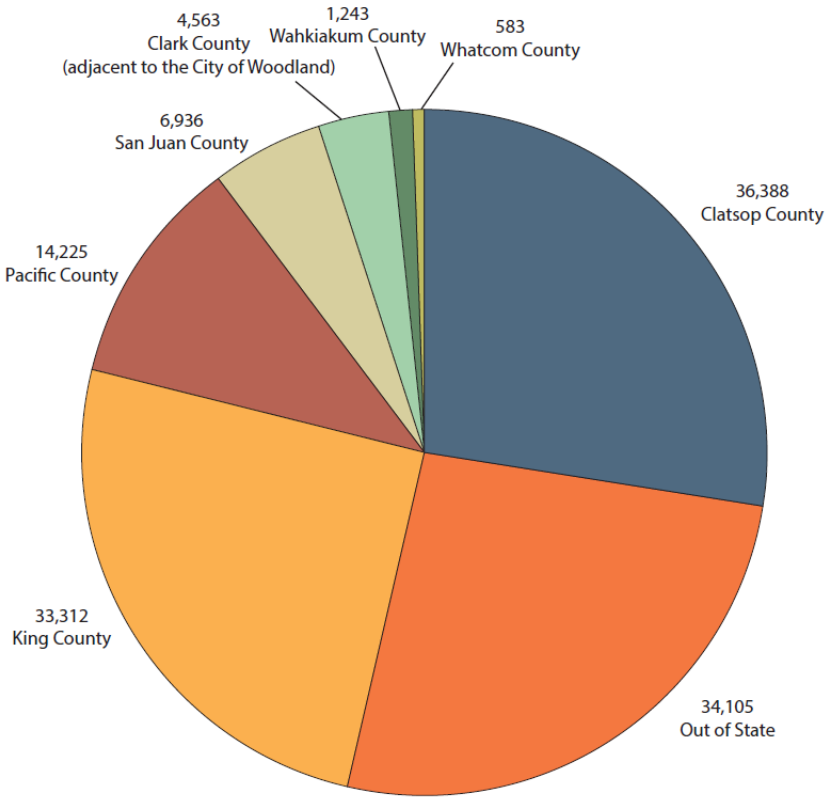
The 100-acre landfill was purchased by the County in 1984 and was closed in 2014. The landfill is estimated to contain approximately 2.4 million cubic yards of solid waste underlying the cover soil. The facility is monitored under permit during postclosure consistent with WAC-173-304. The facility has in place a leachate-collection system as well as a system that controls landfill-gas migration and odors.

7.3 Solid Waste Import and Export

7.3.1 Import of Waste to Headquarters Landfill

The Headquarters Landfill serves as the principal disposal facility for MSW generated in Cowlitz and Wahkiakum counties. The facility received approximately 131,396 tons from outside the County, or approximately 47 percent of the total MSW disposed of at the Headquarters Landfill in 2018. Figure 7-1 below shows the breakdown of all imported MSW (in tons) disposed of at the Headquarters Landfill in 2018. The imported MSW from Wahkiakum County is governed by an interlocal agreement; however, that is currently the only interlocal agreement between Cowlitz and the other counties that acknowledges this import activity. The Headquarters Landfill is permitted to receive industrial waste, auto shredder residues, PCS, and C/D waste.

Figure 7-1
Out-of-County MSW Disposed of at Headquarters Landfill (Tons), 2018



Data Source: 2018 Headquarters Landfill Annual Report

7.3.2 Export of Cowlitz County Miscellaneous Waste

The following miscellaneous wastes are exported from Cowlitz County:

Biomedical Waste—Unknown quantities of biomedical waste are being collected and hauled to other counties for treatment and disposal. In addition, Stericycle collects biomedical waste generated by the St. John Medical Center in Longview and transports the material to Morton, Washington, in Lewis County, for treatment.

Waste Tires—Many local tire dealers and the Waste Control Transfer Station export waste tires to processors in Portland, Oregon, such as Tire Disposal & Recycling, Inc. It is not known how many tires are exported.

PCS—Unknown quantities of PCS from underground storage tanks are being exported to the Hillsboro Landfill in Washington County, Oregon. The Headquarters Landfill also receives this material.

Dangerous Waste—Although not addressed by this Plan, significant volumes of dangerous waste are exported to hazardous waste facilities outside Cowlitz County. MRW and HHW generated in the County are described in Section 9 of this Plan.

7.4 Needs and Opportunities

This section discusses the existing transfer system's capacity to provide uniform service in Cowlitz County.

North Cowlitz County—The Toutle drop-box facility adequately serves the needs of residents in north Cowlitz County. The option of direct hauling Toutle drop boxes to the landfill for disposal should be evaluated.

Central Cowlitz County—The central areas of Cowlitz County, which include the urban areas of Longview-Kelso and the communities of Castle Rock and Kalama, are currently served by the Waste Control Transfer Station.

The waste disposal agreement between Waste Control and the County allows for County control of the Transfer Station should Waste Control default on the contract.

The County should prepare a contingency plan in case of an interruption of service (such as a transportation slowdown or a natural disaster) or dissolution of the partnership with Waste Control. The contingency plan should identify alternative methods of transport.

South Cowlitz County—There is currently a need in the southern part of Cowlitz County for transfer-system services. The area is the largest growth area in the County and consumers currently have to drive the farthest in the County on I-5 to dispose of their waste at the Waste Control Transfer Station in Longview.

Currently, collection vehicles from the south county travel a minimum of 40 miles round-trip to use facilities in the central county area. A south county transfer station would serve, principally, the Woodland/Cougar corridor, and would be open to all haulers, including self-haulers. If transfer services for the southern part of Cowlitz County become economically advantageous to the general public, then a south county transfer station could be considered.

Waste Control transports waste from south Cowlitz County directly to the Headquarters Landfill; the waste collected by Waste Connections is transported to the Finley Buttes Landfill in Boardman, Oregon, by way of transfer stations in Clark County. Taking into account the Waste Control Transfer Station in the central county area, the economics of a south county transfer station may at some point prove to be better for these ratepayers.

7.4.1 20-Year Planning Horizon

The Headquarters Landfill has a total capacity of 54.8 million cubic yards, with 6 million cubic yards consumed to date, as described above in Section 7.2.3. Based on the capacity and future solid waste

projections discussed in Section 2, it is anticipated that the Headquarters Landfill will provide sufficient disposal for the County and imported waste beyond the 20-year planning horizon.

7.5 Goals and Actions

Goals	Actions
Maximize the value of the landfill to county residents through managed import of waste.	1. Current Cowlitz County solid waste import activities should be permitted to continue. 2. The County should develop interlocal agreements with other counties, recognizing current solid waste import activities. 3. The County should continue to evaluate the capacity of the current MSW system to ensure that it will provide adequate disposal for the next 20 years.

8 MISCELLANEOUS WASTE

8.1 Introduction

Miscellaneous waste is any material that requires special or separate handling due to bulk, water content, dangerous constituents, or other unique characteristics. Miscellaneous wastes discussed in this section are:

- C/D
- Auto hulks
- Nonfriable asbestos
- PCS
- Remediation waste
- White goods
- Tires
- Biomedical wastes
- Industrial waste
- Homeless encampment waste and derelict vessels

This section discusses the management needs and opportunities associated with miscellaneous waste and recommends management strategies to encourage recovery and reduce environmental impacts.

8.2 Existing Conditions

8.2.1 Construction and Demolition Waste

Cowlitz County has several facilities where C/D waste can be recycled or disposed of. Recycling options are available for asphalt, concrete, brick, wood, and wood residuals. C/D that cannot be recycled is disposed of at the Headquarters Landfill.

Lakeside Industries—Lakeside Industries is located in Longview at 500 Tennant Way. Lakeside accepts approximately 5,000 to 15,000 tons of asphalt per year, depending on the community's activity.

Storedahl—Storedahl is located in Kelso at 2233 Talley Way. Storedahl accepts approximately 1,000 tons of clean concrete rubble per year. The material is crushed for use as road-base material, using a standard rock crusher at the Coal Creek Pit.

Swanson—Swanson operates a permitted woodwaste recycling facility at 240 Tennant Way. Swanson recycles residuals from the lumber industry and wood-product manufacturers from around the Pacific Northwest. The residuals are processed into mulches, soils, soil amendments, and biomass fuels. Products are sold both retail and wholesale throughout the country.

Waste Control—The Waste Control MRF is located in Longview at 1150 Third Avenue. The Waste Control MRF processes mixed and source-separated C/D waste. In 2018, Waste Control processed 538 tons of in-county C/D waste and 74,800 tons of out-of-county C/D waste. The facility processes clean wood in addition to unpainted concrete, asphalt, and brick, which are crushed and used for road-base material. A sorting fee is charged for mixed loads.

Pacific Fibre—Pacific Fibre processes wood residuals from the lumber industry around the Pacific Northwest. The residuals are made into wood chips for the paper industry as well as shredded into bark mulch and hog fuel, or for topsoil. The bark mulch, soil, and hog fuel are wholesaled throughout Washington, Oregon, and California. Some of the wood residuals that are processed at the facility are classified by the State of Washington as solid waste.

Headquarters Landfill—The County accepts all C/D waste types for management in the landfill. In 2018, the Transfer Station accepted approximately 65,471 tons of C/D waste for disposal. The County seeks C/D waste from outside sources because it acts as a waste stabilizer, enhancing the landfill stability and drainage.

8.2.2 Auto Hulks

Auto hulks are the entire body of a junked automobile. Junked automobiles are an important source of ferrous steel scrap. The United States Council for Automotive Research LLC's Vehicle Recycling Partnership reported that 95 percent of all end-of-life vehicles go through an end-of-life recycling process that recycles 84 percent of each vehicle.

The Waste Control MRF has an auto hulk recycling facility that allows the company to process auto hulks for metal recycling in an enclosed area.

There are several other auto-hulk recyclers in the County that recover and reuse parts and then recycle the rest as scrap metal. Markets for auto hulks are located in Vancouver and Tacoma, Washington, and in Portland, Oregon. The Headquarters Landfill does not accept auto hulks; however, pieces of automobiles occasionally appear in the waste stream. An unknown quantity of junked automobiles is illegally disposed of in the County every year. Abandoned vehicles in rights-of-way of local roads are addressed by local police and public works departments. Vehicles abandoned on state highways and I-5 are addressed by the State Patrol and WSDOT. Hulks abandoned elsewhere are addressed by local abatement officers in Kelso and Longview, or by the CCHD.

8.2.3 Nonfriable Asbestos Wastes

Asbestos is a group of naturally occurring minerals that have a fibrous structure and heat-resistant properties, allowing it to be made into useful products but also allowing it to break down into microscopic fibers that can become airborne. When inhaled by humans, asbestos can cause lung cancer, mesothelioma (a cancer of the chest and abdominal linings), and asbestosis (irreversible lung scarring that can be fatal). Depending on its physical state, asbestos can be classified as friable or nonfriable. Friable asbestos can easily break apart and become airborne, and thus it presents a much greater risk to human health, while nonfriable asbestos has less of a tendency to break apart.

Nonfriable asbestos is accepted at the Transfer Station and transported to the Roosevelt Regional Landfill for disposal. Asbestos is considered nonhazardous when properly encapsulated. Asbestos handling is regulated by the Southwest Clean Air Agency (SWCAA); asbestos disposal, arranged by Waste Control at the Transfer Station, is part of the operations plan.

Asbestos may be removed by residential owner/occupants or certified asbestos-abatement contractors only. A Notice of Intent to Remove or Encapsulate Asbestos must be procured from the SWCAA. This permit requires 24-hour advance notice and costs $25 for residential work performed by the owner-occupant. For work performed by a contractor, the advance notice is ten days, and the fee is higher, except for very small projects.

The SWCAA provides guidance (SWCAA 476) for lawfully removing and packaging asbestos and maintains a list of certified asbestos-abatement contractors. Asbestos must be collected for disposal in a sealed, leak-tight container at least 6 millimeters thick. Containers must be individually marked with:

- Date on which the material was collected for disposal
- Name of the waste generator
- Name and affiliation of the certified asbestos supervisor, if applicable
- Location at which the waste was generated
- Plastic bags with preprinted asbestos warning labels (available at Waste Control)

Asbestos is accepted at the Transfer Station by appointment only, arranged at least 24 hours in advance. The name and address of the property owner and contractor, if applicable, a description of the asbestos, and the quantity of asbestos must be provided at the time of scheduling

8.2.4 Petroleum-Contaminated Soil

The primary statute governing cleanup of PCS in Washington State is the Model Toxics Control Act (MTCA), RCW 70A.305. WAC 173-340 contains regulations regarding implementation of MTCA, including sections on corrective action requirements for leaking underground storage tanks and on cleanup standards.

It is possible that lead, benzene, polycyclic aromatic hydrocarbons, or polychlorinated biphenyls (PCBs) could be present in PCS, which could 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.

Currently, PCS considered dangerous waste is treated on site, treated off site, or transported to landfills that can legally accept dangerous waste. Material requiring treatment may go to the Miles Resources thermal desorption facility in Lakewood, Washington, or to the Fife Sand and Gravel bioremediation facility in Fife, Washington. The nearest landfill that accepts PCS considered dangerous waste is the Chemical Waste Management facility in Arlington, Oregon, operated by Waste Management, Inc. Dangerous waste is also accepted at the U.S. Ecology, Inc. landfill in Grand View, Idaho.

The Headquarters Landfill accepts PCS that complies with the County-approved contaminated soils waste-acceptance process for disposal or daily cover.

8.2.5 Remediation Waste

Contaminated soils that are generated during construction, remediation, and facility maintenance projects must be managed in accordance with applicable regulations. When dealing with remediation wastes, it is important to consider how the contaminated soil is generated in addition to the type and concentration of contaminants that are present. Then a case-by-case waste determination is made on whether the contaminated soil is regulated as a federal hazardous waste (not MSW) and/or as a state 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. The generator of dangerous and/or hazardous waste should coordinate management options with Ecology.

When the Headquarters Landfill receives requests to dispose of contaminated soils, a waste-profile process must be followed. The County has developed contaminated waste-acceptance procedures against which contaminated soils must be reviewed prior to acceptance for disposal at the Headquarters Landfill. After reviewing waste generation and contamination information, the County can decide if the soil will be placed directly into the fill or if it may be used as daily cover.

8.2.6 White Goods

The term "white goods" refers to large appliances such as refrigerators, washers, and dryers. These items typically contain large amounts of steel and are a traditional source of ferrous scrap. Because these wastes are very bulky and extremely difficult to compact in a landfill, they consume significant landfill space.

Two environmental problems are associated with recycling white goods: the handling of PCBs and the recovery of chlorofluorocarbons (CFCs). PCBs are present in the electrical capacitors of some appliances produced or repaired prior to 1979. Because these capacitors leak PCB-contaminated oil when shredded at steel-shredding facilities, scrap dealers no longer accept appliances known to contain PCBs. Starting July 1, 1992, the Clean Air Act prohibited releasing refrigerants into the atmosphere; thus, refrigerants must be recovered before disposal of refrigeration and air conditioning equipment and other appliances.

White goods are accepted at the Transfer Station for a small fee and are then set in a staging area from which the items are sorted; components of white goods containing PCBs are removed for proper disposal, units with CFCs are set aside, and all remaining items free of PCBs and CFCs are recycled. Waste Control processes white goods containing CFCs by recovering the CFCs for recycling. The compressors are removed and the metal is scrapped.

There are also a number of private companies in the County that accept and recycle white goods.

8.2.7 Tires

Waste tires present a variety of management problems, ranging from storage to disposal. The storage of tires may present a potential fire hazard, and tires provide protected spaces that encourage the breeding of rodents and mosquitoes. The disposal of tires in sanitary landfills can lead to problems. Because of their bulkiness and resilience, tires tend to rise to the surface, damaging the cover materials, which allows water to seep into the landfill. Because of this, the County hauls tires collected at the Transfer Station to tire-processing facilities.

In 2018, 275 tons of tires (approximately 27,500 tires, assuming 100 tires per ton) were collected and recycled at the Transfer Station. Tires accepted at the Transfer Station are shipped to Tire Disposal and Recycling, Inc., in Portland, Oregon. Retail tire sales stores also receive significant quantities of used tires that are exchanged during the purchase of new tires. The quantity handled by these retail stores is not known.

WAC 173-350-350 provides storage requirements for tire piles. The U.S. Uniform Fire Code also regulates tire piles, since they present a fire hazard.

8.2.8 Biomedical Waste

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.228). 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 a local health department or local government. Biomedical waste is defined as 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 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 human teeth, 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.

In general, 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.

The concerns associated with the management of biomedical waste arose after a number of high-visibility national incidents of improper disposal. In addition, the focus on the recovery of recyclable materials has resulted in increased handling and processing of solid waste and, consequently, increased risk to the health of solid waste personnel should they come in contact with biomedical waste.

Currently, the WUTC, the Washington Industrial Safety and Health Administration (WISHA), Ecology, the CCHD, and other separate agencies regulate Cowlitz County's biomedical waste management.

WUTC—The WUTC has developed a number of rules for commercial transporters, related to the safe transportation of biomedical waste: WAC 480-70-456, -461, -466, -471, and -476.

WISHA—WISHA has developed safe workplace practices to prevent occupational exposure to hepatitis B virus and human immunodeficiency virus.

Ecology—WAC 173-300 requires that the owner or operator of a solid waste incineration facility, including biomedical waste incinerators, employ a certified operator. In addition, it is required that biomedical waste incineration be conducted so that no part of the combustible material is visible in its uncombusted state.

CCHD—Currently the CCHD does not have rules for the management of biomedical waste generated in Cowlitz County because the state regulates this waste. The CCHD has developed a pamphlet for distribution to clinics on the proper handling of biomedical waste. There have not been any documented cases of improper disposal of biomedical waste in Cowlitz County in recent years.

The St. John Medical Center in Longview is the only general hospital in Cowlitz County. Currently the hospital contracts with Stericycle for proper handling of biomedical waste. Stericycle requires that biomedical waste be bagged, boxed, and labeled. The material is then sent to its processing facility in Morton, Washington, where it is shredded and then microwaved until sterile. The shredded material is then processed to remove recyclable steel and plastic. Paper recovered from the process is pelletized and sold as a fuel.

Sharps waste generated by residents is accepted at the Transfer Station HazWaste building. The sharps must be enclosed in a durable container, such as a PET or other rigid plastic bottle, which is capable of maintaining its structural integrity. The container should be sealed, and the lid should be secured

with duct tape. The sharps material that is brought to the Transfer Station by residents is kept separate from other wastes and is disposed of in such a manner as to avoid possible injury to landfill personnel. Sharps should not be disposed of in residential trash, as there is no way that landfill personnel or Transfer Station personnel can know that there are needles in containers.

8.2.9 Industrial Waste

Industrial waste is defined as waste by-products from manufacturing operations, such as scraps, trimmings, packaging, and other discarded materials not otherwise designated as a dangerous waste under WAC 173-303. The primary industrial waste in Cowlitz County is forest-products industry waste. A number of forest-products facilities producing a variety of pulp and paper products are concentrated in the Longview manufacturing complex. Three pulp and paper mills currently operate in Cowlitz County:

- WestRock Longview operates a pulp and paper mill that produces linerboard, corrugated and kraft boards, and specialty papers.
- Nippon Dynawave operates a kraft pulp and paper mill that produces a wide range of paperboard products for food packaging and pulp used in printing paper and tissue products.
- NORPAC operates a recycling facility, a thermomechanical pulp mill, and three paper machines producing a variety of printing and packaging papers. The mill is owned by One Rock Capital Partners.

In 2018, a combined total of approximately 163,782 tons of forest-products waste generated by WestRock Longview, Nippon Dynawave, and NORPAC was disposed of at the Headquarters Landfill. WestRock Longview and Nippon Dynawave contract with Waste Control for disposal of boiler ash; in 2018 they disposed of approximately 23,069 tons of boiler ash at the Headquarters Landfill. The ash is used as daily cover and comes into the landfill during operating hours.

Additionally, the processing of fine paper recycling by pulp and paper mills in the County results in the material becoming reject fiber, which must be managed as industrial waste.

8.2.10 Homeless Encampment Waste

A solid waste issue is developing in the County as a result of the significant social crisis of rising rates of homelessness. Significant volumes of waste materials are often left behind when the homeless encampments are cleared out. In addition to MSW, waste materials encountered while cleaning up a former homeless encampment may include auto hulks, derelict vessels, and E-waste, and sometimes present a significant hazard in the form of medical waste (needles) or other human wastes. The cleanup and disposal of materials from encampments is a municipal responsibility and is typically carried out by volunteer groups organized in an ad hoc fashion, responding to cleanup needs as they arise, typically when an encampment is abandoned. Recovered materials must be managed appropriately under the procedures discussed in this Plan.

This issue is considered an emerging topic for Ecology and county departments of health around the state. The Department of Health can designate or identify items from homeless encampments as solid waste in their jurisdiction under WAC 173-350. Solid waste should be addressed as part of an overall comprehensive plan to address homelessness.

8.3 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 handle it illegally. The County's facilities for managing miscellaneous solid wastes fully accommodate the demands on the system for processing and disposal of materials generated in the County.

The cities and the County must work together to address the social issue of homelessness. However, it is essential that these parties develop a program for ensuring that abandoned encampments are rapidly cleaned up in order to protect the health of the public.

8.4 Goals and Actions

Goals	Actions
Maintain existing management procedures for miscellaneous wastes.	1. Encourage farmers and ranchers to continue their current agricultural-waste management.
Maintain compliance with landfill permit requirements prohibiting receipt of hazardous waste.	1. Continue to follow the waste-profiling and review procedures that have been developed before accepting potentially contaminated soils and sediments at the landfill. 2. Consistently provide a public drop-off location for HHW at the Transfer Station in addition to regular public collection events.
Protect landfill workers from inadvertent exposure to biomedical wastes that are handled at the landfill.	1. Continue to consistently implement the Worker Health and Safety program that has been developed for the landfill and provide appropriate personal protective equipment.
Protect the public from health hazards that may be associated with homeless encampments.	1. Work with Ecology and Department of Health to ensure that proper solid waste management procedures are followed during the cleanup of encampments. 2. Research the ability to track the expenses related to homeless encampment cleanup and disposal.

9 MODERATE RISK WASTE

9.1 Introduction

RCW 70A.300.010 defines MRW as any waste that exhibits any of the properties of hazardous waste but is exempt from regulation under RCW 70A.300 solely because the waste is generated in quantities below the threshold for regulation. As it is exempt from these state regulations, MRW is typically regulated by local jurisdictions. MRW is composed of HHW and SQG waste. HHW is generated from the disposal of substances identified by Ecology as hazardous household substances. SQG waste is hazardous waste generated by businesses that do not produce quantities above the regulatory threshold. Table 9-1 contains the household hazardous substance list developed by Ecology. All of these products become HHW when discarded (if they are flammable, corrosive, toxic, or reactive).

Cowlitz County's goals for its MRW program are to promote the safe management and disposal of MRW and to encourage residents and businesses to reduce their use of hazardous products. The County aims to manage MRW in a manner that protects human health and the environment and that follows the waste hierarchy established in RCW 70A.300.260. The hierarchy, in descending order of priority, is: waste reduction; waste recycling; physical, chemical, and biological treatment; incineration; solidification/stabilization treatment; and landfilling. Proper handling and disposal of HHW (e.g., paints, used motor oil, antifreeze, gasoline, diesel fuel, flammables, fertilizers, pesticides, herbicides, poisons, cleaners, household and car batteries) will save landfill space, reduce contamination of soils and surface and groundwater supplies, and minimize potential environmental and public health threats.

A list of all SQGs, medium-quantity generators, and LQGs in Cowlitz County and Wahkiakum County is provided in Appendix F of this document. Currently an interlocal agreement (pursuant to RCW 39.34) is in effect between Cowlitz County and Wahkiakum County as of 2014 and continuing through 2053. This agreement allows the use of MRW facilities in Cowlitz County for disposal of certain types of solid waste, including MRW as defined in RCW 70A.300.010, generated by residents and SQGs in Wahkiakum County. For the duration of the interlocal agreement, Cowlitz County will provide Wahkiakum County access to all operating HHW and SQG collection programs the County operates.

There are currently no hazardous waste treatment, storage, or disposal facilities with U.S. Environmental Protection Agency (EPA)/state ID numbers in Cowlitz or Wahkiakum counties. Cowlitz Clean Sweep, Inc., Waste Control, and NW Tankcar Services are the only companies in Cowlitz County registered to transfer hazardous waste.

The MRW and HHW collection facilities were moved from Cowlitz County Landfill to the Transfer Station before the 2011 Solid Waste Management Plan Update. These facilities are described in additional detail in Section 9.4.1.

9.1.1 Public Involvement Process

Involving the general public at an early stage of the Plan development is an important part of the process. Ecology guidance encourages the local SWAC to actively engage the public throughout the planning process. The County has advertised SWAC meetings throughout the plan development process to encourage public participation. Additionally, SWAC members are selected to represent the various stakeholders, including citizens, the waste management industry, local elected public officials, and businesses, as required by RCW 70A.205.110(3). The County presented a summary of the draft Plan to the public on [*pending*] 2021.

Table 9-1
Hazardous Household Substances List

Substance or Class of Substance	Flammable	Toxic	Corrosive	Reactive
GROUP 1: Repair and Remodeling				
Adhesives, Glues, Cements	•	•		
Roof Coatings, Sealants		•		
Caulking and Sealants		•		
Epoxy Resins	•	•		
Solvent-Based Paints	•	•		
Solvents and Thinners	•	•	•	•
Paint Removers and Strippers		•	•	
GROUP 2: Cleaning Agents				
Oven Cleaners		•	•	
Degreasers and Spot Removers	•	•	•	
Toilet, Drain, and Septic Cleaners		•	•	
Polishes, Waxes, and Strippers	•	•	•	
Deck, Patio, and Chimney Cleaners	•	•	•	
Solvent Cleaning Fluid	•	•	•	•
Household Bleach (>8% solution)			•	
GROUP 3: Pesticides				
Insecticides	•	•		
Fungicides		•		
Rodenticides		•		
Molluscicides		•		
Wood Preservatives		•		
Moss Retardants		•	•	
Herbicides		•		
Fertilizers		•	•	•

Substance or Class of Substance	Flammable	Toxic	Corrosive	Reactive
GROUP 4: Auto, Boat, and Equipment Maintenance				
Batteries		•	•	•
Waxes and Cleaners	•	•	•	
Paints, Solvents, and Cleaners	•	•	•	•
Additives	•	•	•	•
Gasoline	•	•	•	•
Flushes	•	•		
Auto-Repair Materials	•	•		
Motor Oil		•		
Diesel Oil	•	•		
Antifreeze		•		
GROUP 5: Hobby and Recreation				
Paints, Thinners, and Solvents	•	•	•	•
Chemicals (including photo and pool)	•	•	•	•
Glues and Cements	•	•	•	
Inks and Dyes	•	•		
Glazes		•		
Chemistry Sets	•	•	•	•
Pressurized Bottled Gas	•	•		•
White Gas	•	•		•
Charcoal Lighter Fluid	•	•		
Batteries		•	•	•
GROUP 6: Persistent Bioaccumulative Toxins(PBTs)				
Mercury-Containing Products	•	•	•	•
Lead-Containing Products		•		
E-waste		•		
Polycyclic Aromatic Hydrocarbons (PAHs)		•		
Polychlorinated Biphenyls (PCBs)		•		
GROUP 7: Miscellaneous				
Ammunition	•	•	•	•
Asbestos		•		
Fireworks		•		
Marine Aerial Flares		•		
Pharmaceuticals		•		
Noncontrolled Substances		•		
Sharps		•		
Personal Care Products	•	•	•	•

9.2 Existing Conditions

This section provides a summary of MRW and hazardous waste disposed of and managed by the County.

9.2.1 Moderate Risk Waste Inventory

Table 9-2 provides a summary of participation in and costs of the MRW program, and Table 9-3 provides a material breakdown of waste collected. In 2018, oil represented the largest waste stream collected, including 478,934 pounds by volume or approximately 39 percent of the material collected in the County. The next highest category of waste is E-waste, totaling 332,260 pounds. Oil, E-waste, paint (oil and latex), flammable liquids, and antifreeze accounted for more than 82 percent of the MRW waste collected by the County in 2018. These trends in the County have been consistent over the last several years.

Table 9-2
Cowlitz County Moderate Risk Waste Disposal

Customers Served				Pounds Disposed Of	Disposal Cost	Disposal $/customer	Disposal $/pound
Year	Mobile	Fixed	Total				
2011	117	1,439	1,556	--	--	--	--
2012	110	1,849	1,959	--	--	--	--
2013	124	2,048	2,172	--	--	--	--
2014	116	2,135	2,251	--	--	--	--
2015	100	1,957	2,057	--	--	--	--
2016	112	1,574	1,686	--	--	--	--
2017	101	1,781	1,882	243,980	142,706	76.83	0.58
2018	79	1,945	2,024	317,713	112,921	55.79	0.36
Total	859	14,728	15,587	561,693	255,627	132.62	0.94
Average	107	1,841	1,948	280,847	127,814	66.31	0.47

NOTE:
-- = no data available.

Table 9-3
Cowlitz County Moderate Risk Waste Disposal Material Breakdown

Material, in pounds (DOT Haz Class)	2018	2017	2016	2015	2014	2013	2012	2011
Aerosols (2.1)	8,661	4,557	6,981	7,124	4,940	3,525	3,771	4,672
Antifreeze	30,880	31,860	25,664	14,976	23,080	10,200	13,880	28,648
Batteries, Dry Cell (8)	4,709	7,642	5,690	5,705	4,697	1,795	3,455	4,591
Batteries, Wet Cell (8)	25,256	20,660	15,060	11,176	17,637	8,610	9,863	18,390
Batteries Li, Ni-Cd	362	634	--	2	34	26	320	595
Corrosive Acids (8)	9,311	5,762	3,652	3,652	2,327	2,078	1,600	1,110
Corrosive Bases (8)	41	90	3,862	4,041	4,230	2,117	2,602	2,600
Flammable Liquids (3)	11,137	22,078	21,228	15,323	14,187	7,960	8,846	17,820
Latex Paint—Landfill	--	--	--	--	--	--	--	--
Latex Paint—Recycle	132,913	177,274	140,673	152,724	122,937	89,649	110,246	60,700
Oil	478,934	355,680	299,869	297,800	268,920	275,560	280,280	278,797
Oil-Based Paint	19,074	18,236	24,903	28,334	17,940	24,408	13,156	16,568
Oil Filters	1,660	2,800	3,955	4,550	3,410	6,925	5,225	12,250
Oxidizers (5x)	127,235	70	127	603	90	--	235	982
PCBs/Ballasts (9)	--	634	2,053	1,306	2,277	3,409	1,319	1,506
Sharps	--	--	--	--	--	--	--	--
Toxic/Poison (6)	6,951	13,559	10,351	15,148	5,960	11,345	4,600	8,812
Other Wastes n.o.s.	10,596	640	775	14,930	11,635	16,344	2,310	1,468
CRT monitors	24,360	352,180	723,469	723,469	723,469	605,376	642,802	291,546
E-waste	332,260	352,180	431,460	422,440	364,800	314,540	316,680	291,540
TOTAL	1,224,340	1,366,536	1,719,772	1,723,303	1,592,570	1,383,867	1,421,190	1,042,595

9.2.2 Hazardous Waste Inventory

An inventory of the hazardous waste generators is provided in Appendix F. This list is based on information provided by Ecology and includes generators of dangerous waste; remedial action sites; transporters and facilities that manage, treat, and store hazardous waste; and zone designations. This information was updated on June 1, 2009.

9.2.2.1 Generators of Dangerous Waste

Ecology maintains a list of dangerous waste generators in Cowlitz County (see Appendix F). Dangerous wastes are solid wastes designated as dangerous waste or extremely hazardous waste under WAC 173-303-070 through WAC 173-303-100. The term "Dangerous Wastes" includes federal Hazardous Wastes and wastes regulated only by Washington State. Washington State regulates small, medium, and large hazardous waste generators, defined as follows:

- SQGs: A generator whose monthly dangerous waste generation is less than the quantity exclusion limit (QEL) (220 pounds for most common wastes or 2.2 pounds for acutely

hazardous wastes) and whose accumulation (at any time) is less than 2,200 pounds for waste with a QEL of 220, or 2.2 pounds for waste with a QEL of 2.2 pounds.

- Medium-Quantity Generators: A generator whose monthly dangerous waste generation or accumulation is at least 220 pounds but includes less than 2,200 pounds of dangerous waste.
- LQGs: A generator whose monthly waste generation or accumulation includes 2,200 pounds or more of dangerous waste, or 2.2 pounds or more of acutely hazardous waste.

9.2.2.2 Remedial Action Sites

Ecology conducts site hazard assessments for suspected contaminated properties and includes in its Integrated Site Information System those confirmed as a potential threat. Ecology identified 110 sites in Cowlitz County as either "awaiting cleanup" or "cleanup started" as of January 2019.

The date a site changes status from Awaiting Cleanup to Cleanup Started could be the date on which the site characterization or remedial investigation report was received. The following are site status definitions pertinent to solid waste planning:

- **Awaiting Cleanup:** The site has been discovered. There may have been an initial investigation or a Phase I or Phase II (sampling) site assessment. A remedial investigation has not been started. There has been no independent, Voluntary Cleanup Program (VCP), or Ecology-supervised work toward cleaning up the site. In general, sites will NOT be put back into Awaiting Cleanup status once cleanup work has started.
- **Cleanup Started:** Site remedial investigation or cleanup work has begun, including completed interim actions. Such sites include Ecology- or EPA-supervised sites; VCP sites; and independent sites where an emergency action, remedial investigation, interim action, feasibility study, site characterization, or any other type of cleanup work has begun.

The focus in providing this information is to improve the awareness of entities that regulate or manage local solid waste systems regarding the range of waste material types and volumes that may be generated and introduced into the solid waste system from potential cleanup actions in their service areas. This information can be helpful to these entities in developing or evaluating the processes by which facilities are deemed suitable to handle waste from cleanup sites. It can also be helpful to generators of this waste in identifying potential disposal options.

9.2.2.3 Transporters and Facilities

Transporters and facilities in the County that provide transportation and disposal services are listed in Ecology's Hazardous Waste and Toxics Reduction Services Directory (TRSD). As of the drafting of this Plan, no facilities in Cowlitz County are identified in the TRSD.

Contractors that may offer assistance to Cowlitz County businesses for hazardous and dangerous waste transportation to permitted out-of-county disposal facilities include:

- Clean Harbors Environmental Services, Portland, Oregon
- Stericycle Environmental Solutions, Portland, Oregon
- Veolia Waste Services, Vancouver, Washington

9.2.2.4 Zone Designations

As required by RCW 70A.300.370, the County must identify zoning districts where hazardous waste facilities would be permitted to operate. Each city and the County identify these zoning districts within their respective zoning codes and should be contacted to determine site-specific allowances for handling of hazardous substances and hazardous waste. The Cowlitz County Hazardous Materials Emergency Response Plan (https://www.co.cowlitz.wa.us/DocumentCenter/View/6541/Res-13-127-adopting-emergency-management-plan?bidId=) addresses hazardous waste spill procedures and should be consulted in the case of a spill.

9.3 Funding and Governance

Ecology's Local Solid Waste Financial Assistance (LSWFA) program (formerly known as Coordinated Prevention Grants [CPG]) supports most of the MRW programs in the County. The LSWFA program is funded by a 0.7 percent tax on all hazardous substances generated in the state. Cowlitz County has received funding from the LSWFA program since its inception as the CPG program in 1991. The LSWFA program is not an entitlement program—local governments are required to prove their eligibility, follow priorities contained in approved solid and hazardous waste management plans, and provide a 50 percent match to the funding.

Cowlitz County funds their portion of the MRW program through solid waste tip fees and SQG fees. The SQG fees (Table 9-4) cover only the costs of the actual disposal of generated materials—labor for processing and packaging the waste and for administration is covered by the Solid Waste Enterprise Fund.

The funding of MRW programs by Ecology and the County is meant to encourage the public use of the program and to divert MRW from disposal in local landfills. It is likely that if residents or businesses were asked to pay the actual handling and disposal costs associated with MRW, participation rates would be much lower and disposal of MRW in local landfills would continue.

Table 9-4
Cowlitz County Small-Quantity Generator Fee Schedule

Wastes	$/gal	$/pound	$/each	Hazard Class
Aerosols (flammable or toxic)	N/A	$1.20	$0.55	2
Antifreeze	$0.80	N/A*	N/A*	nr
Ballasts (PCBs)	N/A*	$0.87	N/A*	9
Batteries, Dry	N/A*	$0.75	N/A*	8
Batteries, Automotive Wet	N/A	N/A	N/A	8
CRTs (computer monitors)	N/A*	N/A*	$10.00	2
Corrosive (acid or base)	$7.00	$0.88	N/A*	8
Fixer (silver-bearing waste)	$1.00	N/A	N/A*	6
Flammable Liquid	$2.35	$0.34	N/A*	3
Flammable Liquid—halogenated	$3.05	$0.44	N/A*	3
Flammable Solid—loose pack	$5.60	$1.47	N/A*	4
Grease/sludge—nontoxic	$5.30	$0.66	N/A*	3
Non-RCRA debris/soils/stock materials	$5.30	$0.66	N/A*	nr
Latex Paint	$2.30	$0.25	N/A*	3
Mercury (liquid, or contained in article)	N/A	$2.75	N/A*	8
Mercury, Contaminated Debris	N/A	$4.00	N/A*	8
Oil-Based Paint (and related material)	$3.30	$0.41	N/A*	3
Motor Oil	N/A	N/A	N/A	3
Oil Filters	$73.00 / 55-gal drum crushed or uncrushed			
Organic Peroxide	$30.00	$3.50	N/A*	5.2
Oxidizers	$15.25	$1.91	N/A*	5.1
Reactive	$30.00	$3.50	N/A*	4.x
Solvents/Flammable Liquid	$2.35	$0.34	N/A*	3
Toxic/Poison—solid	N/A	$1.46	N/A*	6
Toxic/Poison—liquid	$7.00	N/A	N/A*	6
Alkaline	N/A	$0.75	N/A*	8
Lead acid	N/A	$0.33	N/A*	8
Ni/Cd	N/A	$0.85	N/A*	8
Lithium	N/A	$2.75	N/A*	9
Silver oxide	N/A	$0.85	N/A*	5.1

NOTES:
*Minimum $2.00 charge on each line item.
N/A = Fee amount not set

Table 9-5
Hazardous Waste Classification

Type	Class Number
Explosives	1
Compressed Gases	2
Flammable Liquids	3
Flammable Solids	4
Oxidizers	5
Poisons	6
Corrosives	7
Radioactive Material	8
Miscellaneous	9

9.4 Household Hazardous Waste Collection

Cowlitz County offers public drop-off opportunities at the Waste Control Transfer Station and at mobile collection events.

9.4.1 Transfer Station

Cowlitz County collects HHW through its vendor at the Waste Control Transfer Facility and Recycling Drop-off Facility, 1150 Third Avenue, Longview, Washington 98632. Members of the general public are invited to come to the Transfer Station on Tuesdays and Saturdays between 9:30 a.m. and 11:30 a.m. to properly dispose of pesticides, herbicides, fertilizers, paints, thinners, solvents, motor oil, antifreeze, pool chemicals, cleaning products, propane tanks, E-waste, and any other toxic, flammable, reactive, or corrosive material. The total volume of these items cannot exceed 25 gallons or 200 pounds, and individual items cannot be larger than 5 gallons or 50 pounds, without prior approval. The Transfer Station does not accept materials from businesses, farms, schools, or churches during these hours, nor does it accept unlabeled products, fluorescent light tubes, empty paint cans, leaking containers, explosives, ammunition, radioactive material, or biological/infectious material.

E-waste is also accepted at Goodwill Industries at 1050 15th Avenue in Longview from 9 a.m. to 9 p.m. Monday through Saturday and from 10 a.m. to 7 p.m. on Sunday.

9.4.2 Mobile Collection

Waste Control also provides mobile HHW-collection events. These events are held annually in Castle Rock, Kalama, Cathlamet, Ryderwood, and Woodland. Waste Control provides the calendar of events on its website:

http://wastecontrolrecycling.com/waste-disposal/disposal-residential/household-hazardous-waste/

9.5 Used-Oil Collection

The County provides 12 collection sites for used motor oil and antifreeze (see Table 9-6 and Figure 1-1). These sites include three in Longview; two in Kelso; one site each for Castle Rock, Cathlamet, Kalama, Ryderwood, Toutle, and Woodland; and one at the Transfer Station. Each site is monitored, cleaned, and maintained on a weekly basis. The residential used-oil collection program meets the sign and container requirements of RCW 70A.224.040 and RCW 70A.224.030. Annual statements of the quantity of used oil collected are provided to Ecology. In 2018, the County collected 65,607 gallons of used motor oil.

Table 9-6
Cowlitz County Used-Motor-Oil and Antifreeze Collection Sites

Castle Rock	110 SE Allen Avenue—corner of Allen and Cowlitz
Cathlamet	276 E SR-4—near Chevron Gas Station (on east side)
Kalama	6315 Old Pacific Highway South (1st)—next to Kalama City Shop
Kelso East	250 Kelso Drive—behind Super 8 Motel at recycling center
Kelso	807 South Pacific Avenue—behind convenience store near alley
Longview	1150 Third Avenue—Transfer Station
Longview East	1116 15th Avenue—in alley behind NAPA Auto Parts
	1165 15th Avenue—O'Reilly Auto Parts
Longview West	3725 Ocean Beach Highway—next to O'Reilly Auto Parts
Ryderwood	In alley between library and fire station
Toutle	200 S. Toutle Road—at entrance to refuse-disposal site
Woodland	1025 Pacific Avenue—Woodland Auto Supply (NAPA)

9.6 Small Business Collection and Technical Assistance

Businesses that generate and/or accumulate small amounts (less than 220 pounds per month and less than 2,200 pounds on site, respectively) of hazardous waste may also use the hazardous waste collection facility at the Transfer Station. Individuals or entities must register as an SQG and call ahead to make an appointment. Charges are based on types and quantities of hazardous waste. County staff is not providing on-site technical assistance to businesses at this time. SQG registration forms and fee information can be obtained at the Waste Control website:

http://wastecontrolrecycling.com/waste-disposal/disposal-business/small-quantity-generator-collection/

SQGs disposing of fluorescent tubes are referred to a private firm such as Ecolights, which provides pickup and disposal services. Additional online resources such as Family Handyman (https://www.familyhandyman.com/electrical/how-to-safely-dispose-of-fluorescent-light-bulbs/) provide information on how to safely dispose of fluorescent light tubes, including links to retail stores and collection sites that accept them. For further details and an expanded list of safe and local disposal options, residents can visit Earth 911 (https://earth911.com/).

Propane tanks are accepted for a $5 fee and are recycled by Waste Control.

When inquiries are received, staff makes the SQG aware of the collection program, and the County's vendor provides general disposal education during waste screening activities at the Transfer Station.

9.7 Basis for Enforcement

RCW 70A.300.350(1)(a and b) mandates that MRW plans address the laws and regulations that relate to MRW management. Section 10 of this Plan provides a review of administration and enforcement of solid waste management law. The following is a summary of the enforcement regulations that apply to hazardous waste management in particular.

Federal

Resource Conservation and Recovery Act (RCRA)—Established in 1976, RCRA provides a comprehensive framework for managing solid and hazardous waste so as to eliminate or minimize public health threats and environmental contamination. In 1984, RCRA was modified by the Hazardous and Solid Waste Amendments, which revised the minimum technical standards for the design and operation of solid waste facilities because of concerns about the disposal of unregulated quantities of hazardous waste at municipal landfills.

Universal Waste Rule (UWR)—In 1995, EPA adopted the UWR, 40 CFR Part 273, to allow generators of certain hazardous wastes to use alternative regulatory requirements for those wastes in place of the more complex hazardous waste requirements. Wastes covered by the UWR are typically generated in small quantities by numerous businesses. They include batteries, mercury-bearing thermostats, and fluorescent lamps. UWR is intended to promote recycling as well as proper disposal, and it eases some of the regulatory requirements for storing, collecting, and transporting universal wastes.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)—CERCLA, more commonly known as the "Superfund" Act, complements RCRA by providing for the cleanup of sites contaminated by hazardous waste.

State

Solid Waste Management Act (SWMA)—Solid waste handling and disposal are regulated under the SWMA, RCW 70A.205. The SWMA provides for the development of both statewide and local SWMPs, establishes MFS for solid waste handling and disposal, and sets criteria for siting solid waste facilities.

The statute establishes a waste management hierarchy in which waste reduction and recycling are the most preferred options and land disposal is the least preferred. These requirements are codified in the state SWHS, WAC 173-350; were adopted in 2003; and became effective in 2005.

WAC 173-350-360 specifies standards for facilities that accept segregated MRW; certain MRW transporters; mobile collection; collection events; limited-MRW facilities; and product take-back centers.

Hazardous Waste Management Act (HWMA)—The HWMA, RCW 70A.300, regulates the transport, treatment, storage, and disposal of hazardous waste. The statute requires a comprehensive statewide hazardous waste plan; local hazardous waste management plans; dangerous waste regulations that address hazardous waste generation, handling, and disposal; criteria for siting hazardous waste management facilities; and identification of local areas that meet siting criteria and zoning for hazardous waste management facilities.

Ecology has provided rules to implement the HWMA. The Dangerous Waste regulations, WAC 173-303, address the designation of dangerous wastes and the requirements for generators, transporters, and facilities handling these wastes. Waste generators must identify hazardous wastes at the business site, properly store and label wastes, and ensure that wastes are handled by qualified transporters and are disposed of at a permitted facility. Generators are responsible for their wastes until the wastes are no longer hazardous. Failure to comply with requirements can result in civil and criminal penalties.

Used Oil Recycling Act—The 1991 Used Oil Recycling Act, RCW 70A.224, requires each local hazardous waste management plan to establish used-oil collection sites based on local goals, enforce sign and container requirements, educate the public on used-oil recycling, and create funding estimates for used-oil collection. Local governments must also submit annual reports to Ecology describing the number of collection sites and amounts of used oil collected from households. The act also specifies the requirements for transport, treatment, recycling, and disposal of used oil.

Electronic Product Recycling Act—In 2006, the Washington legislature passed the Electronic Product Recycling Act, RCW 70A.500, requiring a convenient, safe, and environmentally sound system for collecting and transporting covered electronic products. Covered electronics include televisions, computers, computer monitors, and portable or laptop computers. The statute mandated a system that encouraged the design of less toxic and more recyclable electronic products and that shared responsibility for the system among all stakeholders. Manufacturers must finance the collection, transportation, and recycling system. Regulations set by Ecology in WAC 173-900 govern program implementation.

Local

The agencies involved in the enforcement of solid waste regulations in Cowlitz County are: the EHU, the County, and the cities. Detailed information regarding enforcement of solid waste regulations is provided in Section 10 of this Plan.

The EHU is responsible for issuing permits for solid waste facilities. The EHU may contract any portion of its permit/enforcement program to Ecology, subject to restrictions and compliance with RCW 70A.205.110. Every application for a permit is reviewed to determine whether the facility meets all applicable laws and regulations, conforms to the approved Plan, and complies with all zoning requirements. The EHU is also responsible for enforcing laws restricting illegal disposal.

CCC—Title 15 of the CCC governs waters, sewers, and waste disposal. Chapter 15.30 Solid Waste Management provides specific standards for solid waste facilities and general solid waste management. Chapter 15.38 addresses hazardous chemicals, includes regulations of public nuisances related to hazardous chemicals in areas under County jurisdiction, and defines the responsibilities of the EHU in enforcing the code provisions. These regulations are enforced by the County through the review and approval of permits.

Cities—The cities of Longview, Kelso, and Woodland all have abatement officers who deal with a range of general nuisance issues, including illegal dumping.

9.8 Needs and Opportunities

The current status of the MRW program provides county residents with adequate options for disposal of MRW, including the permanent drop-off facility at the Transfer Station and the mobile collection events. The County and cities should continue to advertise the free resources that are available to county residents and SQGs as described in Section 3.4.3 of this Plan. Inquiries for assistance in managing hazardous waste should be directed to the Ecology hazardous waste program.

9.9 Goals and Actions

Goals	Actions
Reduce the generation, illegal dumping, and improper disposal of hazardous waste.	1. The County will continue the current level of service, including HHW, SQG, and business education and outreach. 2. The County, cities, and Waste Control will continue hosting collection events and will maintain permanent collection facilities. 3. Ensure that businesses and facilities handling MRW comply with environmental laws and regulations. Encourage as much reuse and recycling of MRW as possible.
Improve public participation in reducing and properly disposing of HHW.	1. Develop a more comprehensive list of covered electronics to be addressed through the existing product stewardship infrastructure of the E-Cycle Washington Program. 2. Provide additional resources for the public to reduce improper disposal of batteries.

10 ADMINISTRATION AND ENFORCEMENT

10.1 Introduction

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.

10.2 Existing Conditions

The administration and enforcement of solid waste regulations in Cowlitz County is carried out by various public entities with different degrees of responsibilities.

10.2.1 Administration

The agencies involved in the administration of solid waste regulations in Cowlitz County are: Ecology, Public Works, and collectively, the incorporated cities of the County. In addition, the SWAC is responsible for assisting the County in the development of solid waste policies and the evaluation of solid waste issues.

10.2.1.1 Washington State Department of Ecology

Through RCW 70A.205, Ecology regulates the handling of solid waste in Washington State. The law assigns primary responsibility for solid waste planning and management to local governments but requires Ecology to review and approve all plans. In the late 1980s and early 1990s, Ecology developed the Washington State SWMP and the Best Management Practices Analysis for Solid Waste as a guide for carrying out a coordinated state solid waste management program. Through WAC 173-304, Ecology set MFS for solid waste handling. WAC 173-350, SWHS, was established in 2003 and amended in 2018, and WAC 173-351, the CMSWL, was implemented in 1993 and updated in 2015, replacing the MFS and implementing the RCW statute.

10.2.1.2 Cowlitz County Department of Public Works

Since 2004, one full-time Public Works employee has been responsible for solid waste administration. The Public Works Solid Waste Division has the authority and responsibility to prepare and revise the Plan, own and operate solid waste facilities, or contract for services and set rates and hours of operation and conditions for access to public facilities (RCW 36.58). Public Works may also contract for the collection of recyclables generated in unincorporated areas of the County.

The Solid Waste Division monitors the amount of waste that enters the landfill through tonnage data collected at the entrance scales. Solid Waste Division uses a software package that tracks all of the materials entering the landfill over the scale system. The Transfer Station has similar tracking software

in place. In addition to the information produced by the tracking software, the Solid Waste Division conducts periodic surveys of the landfill (at least twice per year) to assess remaining landfill capacity and to estimate waste placement density in the landfill as part of the financial assurance plan (RCW 70A.205.165).

10.2.1.3 Cities

Incorporated cities may develop, own, and operate solid waste handling facilities, and are responsible for providing collection services in their own jurisdictions (RCW 35.21). Cities may also elect to develop their own SWMPs. The five incorporated cities of the County (Longview, Kelso, Woodland, Castle Rock, and Kalama) have agreed to participate with the County in preparing the Plan.

10.2.1.4 Cowlitz County Solid Waste Advisory Committee

The Cowlitz County SWAC, formed in accordance with RCW 70A.205.110, consists of appointed members and alternates from incorporated cities, business, citizens, and the solid waste industry. The County SWAC performs several critical administrative functions:

- Advises County staff and County Commissioners on solid waste management issues
- Assists in the development, updating, and implementation of this Plan
- Assists in the formation of County solid waste policies and ordinances, or rules related to solid waste
- Meets periodically with city councils and citizen groups to exchange ideas, ask for opinions, and disseminate information on solid waste issues
- Meets annually to review the Plan

10.2.2 Enforcement

The agencies involved in the enforcement of solid waste regulations in Cowlitz County are the EHU, Ecology, and, collectively, the cities of Longview, Kelso, and Woodland in their respective jurisdictions.

10.2.2.1 Environmental Health Unit

The EHU is responsible for the enforcement of state statutes and regulations and of local regulations at the County level. According to RCW 70A.205.120, a solid waste facility cannot receive waste without the issuance of a solid waste permit. The EHU is responsible for issuing permits for solid waste facilities and verifying compliance. The EHU inspects permitted facilities on an annual basis, reviews solid waste facility design documents, and observes landfill construction activities to verify consistency with the design. The EHU may contract any portion of its permit/enforcement program to Ecology, subject to restrictions and compliance with RCW 70A.205.110. Every application for a permit is reviewed to determine whether the facility meets all applicable laws and regulations, conforms to the approved Plan, and complies with all zoning requirements. The EHU is also responsible for enforcing laws restricting

illegal disposal. Funding for solid waste enforcement duties comes from Ecology grants and solid waste permit fees; additional funding, if needed, comes from the County General Fund.

10.2.2.2 Washington State Department of Ecology

Generally, state statutes do not grant Ecology a clearly defined solid waste management enforcement role; its role is primarily one of oversight. Ecology is given responsibility to review and approve SWMPs, review solid waste facility permits and provide technical assistance, appeal permit issuance to the Pollution Control Hearings Board, approve permit variances, and enforce state littering laws.

10.2.2.3 Cities of Longview, Kelso, and Woodland

The cities of Longview, Kelso, and Woodland all have abatement officers who deal with a range of general nuisance issues, including illegal dumping, vehicle abandonment, and disaster response.

10.2.3 Solid Waste Flow Control

Through interlocal agreement with the cities and the County's contract with Waste Control, all MSW generated in the County must utilize the established disposal system in order to achieve flow control. Since a city's decision to dispose of its MSW at a different disposal facility could prevent the County from providing the amount of MSW guaranteed by the contract, the participants must establish flow control for the duration of the contract. Interlocal agreements giving control of waste disposal to the County have been established for all public entities that use the County's contract for disposal with Waste Control. The most recent interlocal agreement between the County and the cities for management of MSW was executed on May 15, 2007, and is included in Appendix A.

The cities maintain control of their waste and its disposal through contract mechanisms between the city and the waste hauler. Waste Control is currently under contract to haul waste from several incorporated communities to a designated disposal site, currently the Headquarters Landfill.

The G-permit for unincorporated areas of the County should require disposal in the County disposal system, which, for the duration of the Waste Control contract, is defined as the Headquarters Landfill. The County has an agreement with Waste Control for the disposal of both incorporated and unincorporated areas' waste as a single stream to provide the best transportation and disposal rates for MSW from county residents.

HHW, asbestos, and materials that are known to exacerbate hydrogen sulfide gas generation, such as sheet rock, are the only materials that do not go to the Headquarters Landfill. These materials are collected at the Transfer Station, where they are sorted, consolidated, and shipped off site for disposal at appropriate facilities. HHW is also collected at public collection events.

10.3 Funding and Finance

The County's solid waste programs and facilities are funded through a combination of grants and tipping fees. Tipping fees typically provide more than 95 percent of the overall annual solid waste budget, with the remaining revenues coming from Ecology grants and other sources. The County's

solid waste programs and facilities are "self-funded" in the sense that they do not require the input of revenue from other sources of County funding. Maintaining this financial independence while providing high-quality, low-cost service requires prudent financial planning by the Solid Waste Division.

The tipping fee is collected at the Transfer Station and transferred to the County in accordance with the contract. The amount of waste disposed of at the landfill, and thus the amount of money collected from tipping fees, could fluctuate for a variety of reasons.

10.3.1 Solid Waste System Expenses

Operational expenses for the landfill are controlled directly by the Solid Waste Division and are driven by the need to accommodate waste that is received at the landfill. Most of the operational expenses for the landfill scale up and down with changes in the waste volumes that are received. Nonoperational program expenses that are not controlled by the County include postclosure care of the Tennant Way Landfill; funding of the Headquarters Landfill closure fund; and administration of the Plan, the recycling program, and the HHW program. These nonoperational expenses will not decrease even if the amount of waste handled by County-owned and -operated facilities decreases. Some expenses, such as environmental monitoring and administering the Plan, will still be the responsibility of the County, even if the County contracts for solid waste disposal. If the County is not receiving sufficient revenue from the tipping fees to fund solid waste programs, it will be necessary for the County to cut nonmandatory programs or to adjust the tipping fees to maintain the programs.

Table 10-1 details revenues and expenses from 2021 through 2025.

Table 10-1
Cowlitz County Solid Waste Revenues and Expenditures (2021–2025)

	2021	2022	2023	2024	2025
Revenues					
Solid Waste Fees	$21,241,270.45	$21,666,095.86	$22,099,417.78	$22,541,406.14	$22,992,234.26
Grant Revenues	$60,000.00	$60,000.00	$60,000.00	$60,000.00	$60,000.00
Other Funds	$204,000.00	$208,080.00	$212,241.60	$216,486.43	$220,816.16
Total Revenues	$21,505,270.45	$21,934,175.86	$22,371,659.38	$22,817,892.57	$23,273,050.42
Personnel	$1,367,854.44	$1,408,890.07	$1,451,156.78	$1,494,691.48	$1,539,532.23
Operating Costs	$15,538,034.83	$15,848,795.53	$16,165,771.44	$16,489,086.87	$16,818,868.61
Capital Expenses	$5,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000	$1,000,000
Other Expenses	$75,000.00	$75,000.00	$75,000.00	$75,000	$75,000

	2021	2022	2023	2024	2025
Total Expenses	$21,980,889.27	$18,332,685.60	$18,691,928.21	$19,058,778.35	$19,433,400.83
Total Balance	-$475,618.82	$3,601,490.26	$3,679,731.16	$3,759,114.22	$3,839,649.58
Solid Waste Reserve Fund	$14,749,302.63	$18,350,792.89	$22,030,524.05	$25,789,638.27	$29,629,287.85

10.3.1.1 Headquarters Landfill

The Headquarters Landfill is an asset of the County General Fund and is leased to the Solid Waste Division. The Division makes an annual lease payment that covers the County's obligation for debt service on the bonds that were issued to acquire the landfill and a residual that remains in the General Fund. The BOCC has established a goal for the total amount of waste that is disposed of at the landfill to ensure that lease obligations and operational expenses are met.

Operation of the Headquarters Landfill involves labor, equipment, facility maintenance, and capital expenses. The Solid Waste Division employs operators, mechanics, and administrative and managerial staff. Operational equipment for the solid waste operation includes dozer compactors, truck tippers owned and operated by Waste Control, water trucks, scales, trucks, and other miscellaneous items. Facilities requiring maintenance include the administrative office, maintenance shop, leachate pond and pipeline, filled waste placement cells, gas collection and flare system, and stormwater treatment bioswale. Capital expenses are related primarily to the construction of new landfill cells and the expansion of the gas and leachate-collection systems.

10.3.1.2 Tennant Way Landfill

The Tennant Way Landfill stopped accepting waste in 2014 and a final landfill cover was constructed, leading in the issuance of a postclosure permit for the facility in 2016. The industrial stormwater permit for the site has been closed, while an air discharge permit remains in place to address emissions from the landfill-gas collection and flare system. Postclosure care requires routine inspection and maintenance of the landfill cover system, operation of the landfill-gas system, and groundwater monitoring. Solid waste staff provide management and perform most of the postclosure activities, and remaining tasks are subcontracted out. Postclosure maintenance expenses for the Tennant Way Landfill are paid through the postclosure fund.

10.3.1.3 Recycling Expenses

The recycling program requires the County to pay for the removal of some recycled material categories. These expenses vary, depending on the market, and may not be offset by the revenue derived from other recycling streams. Recycling program expenses in excess of the revenues are paid by the solid waste program through tip fees.

10.3.1.4 Household Hazardous Waste Expenses

HHW collected by the County from residences and waste collected from conditionally exempt SQGs must be disposed of at hazardous waste facilities at a high cost. The HHW expenses associated with this program are partially reimbursed through the LSWFA program at about 40 percent, and the remainder is paid by the solid waste program through tip fees.

10.3.2 Construction and Capital Acquisition Plan

State regulations require the Plan to include a "six-year construction and capital acquisition program for solid waste handling facilities" and a "plan for financing both capital costs and operational expenditures for the proposed solid waste system" (RCW 70A.205.045).

Table 10-2
Cowlitz County Construction and Capital Acquisition Program (2021–2026)

	2021	2022	2023	2024	2025	2026
Cell Development	$4,000,000	--	--	--	--	$3,000,000
Equipment	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
NOTE: -- = no data available.						

10.3.3 State Grants

Ecology's Solid Waste and Financial Assistance Program currently administers two grant programs that are viable funding sources for the County's solid waste activities:

- Community Litter Cleanup Program—Provides money to local governments to clean up litter and illegal dumps and to educate the public. This source of funding has been used in county by the Department of Corrections.
- LSWFA—Ecology provides funding to help local governments develop and implement their hazardous waste plans and SWMPs. The funding is available on a biannual basis, and the County has successfully participated in the LSWFA program every biennium since the program's inception. The County applies for LSWFA through Ecology's Administration of Grants and Loans wet-based application. Ecology allocates funds for the LSWFA program using a base amount for each county plus a per capita amount. However, these funds are not automatically given to the counties, and qualified projects must go through an application and approval process before receiving funding. Ecology usually does not authorize the total amount of funding requested in the County's grant applications. The projects can include local cities; however, the grant is submitted under the auspices of the County. Counties are also responsible for administering the grants. Ecology currently requires that matching funds equal to 25 percent of the project costs be provided by the grant recipient. Ecology has published grant guidelines that explain specific details of the LSWFA program.

The LSWFA program is funded by money in the Local Toxics Control Account. In the hierarchy of spending from this account, hazardous waste plans and programs under RCW 70A.300 have precedence over solid waste plans and programs under Chapters 70A.205, 70A.224, and 70A.300 of the RCW. An important ranking and approval element is that the activity must help implement an action identified in an Ecology-approved hazardous waste plan or SWMP. Solid waste disposal-oriented activities or programs usually are not grant-eligible, although some solid waste capital expenses may be grant-eligible.

Public Works previously prepared coordinated grant applications with the EHU and the cities of Kelso, Longview, and Woodland. The cities of Castle Rock and Kalama have not participated in the LSWFA program because of the matching fund requirements and the per capita distribution amounts to small grant sums available to small cities.

Table 10-3
Cowlitz County Local Solid Waste Financial Assistance Grant History

Project	2019–2021	2017–2019	2015–2017	2013–2015[a]	2011–2013
HHW Disposal					
Local Match	$49,261	$49,706	$73,515	$85,718	$53,217
State Match	$147,784	$149,119	$294,059	$342,872	$212,867
Total	**$197,045**	**$198,825**	**$294,059**	**$342,972**	**$212,867**
Solid Waste Enforcement					
Local Match	$29,728.50	$34,917.05	$35,192.66	$31,639.27	$54,721.33
State Match	$89,185.50	$104,751.14	$105,577.99	$94,917.82	$164,164.00
Total	$118,914.00	$139,668.19	$140,770.65	$126,557.09	$218,885.33

NOTES:
HHW = household hazardous waste.
[a] Solid Waste Enforcement grant data are available only for the period of January 2014 through April 2015.

10.4 Needs and Opportunities

This section identifies the needs of and opportunities for Public Works in the effective administration and enforcement of the County solid waste system.

10.4.1 Solid Waste Flow Control

In order to maintain the integrity of the County's waste disposal system, flow control should be maintained through interlocal agreements. The County's waste transfer contract with Waste Control provides guaranteed minimum waste volumes in exchange for the most competitive pricing. The County's decision and funding for the acquisition of the Headquarters Landfill were dependent on the waste flows that are guaranteed through the G-permit and interlocal agreements.

10.4.2 Monitor Solid Waste Flow

Managing the significant waste flows at the Headquarters Landfill requires detailed accounting of incoming material types/source, amounts, and customer in order to accurately report finances and use

statistics to the County and the state. The County has installed a scale system at the landfill that includes truck scales, automated card reader, and database software to track the information required to administer the landfill.

Additionally, the basis for payment for the disposal of MSW through the contract with Waste Control is tonnage, which is easily and accurately measured. To ensure that proper and timely payment is made, the Transfer Station is required to have entrance scales and a tracking system to calculate and collect the required tip fee and to generate disposal totals for the basis of payment for Waste Control. The tracking system also records waste quantities by category to assist in planning efforts. The tracking system enables the County or the cities to perform periodic audits to ensure that all money and waste are accounted for.

The scaling systems at the landfill and Transfer Station shall be maintained for accurate recordkeeping and auditing of the contract.

10.4.3 Administer Disposal Contract

Public Works provides staff to administer the contract with Waste Control to ensure that the contract terms are being met and that proper payments are made. The solid waste manager is also required to manage all landfill activities associated with the operation of the Headquarters Landfill and the postclosure care of the Tennant Way Landfill. The County should assess the need for additional solid waste staff to assist the current manager with the administration of the disposal contract and landfill operation (including waste acceptance, closure, and postclosure planning).

10.4.4 Current Program Funding

The EHU needs funding to support minimum staff needed for solid waste enforcement and permitting duties. Providing the EHU with adequate financial resources for solid waste activities will enable training or hiring of enough specialized staff to ensure SWHS enforcement, efficient permit processing, and enforcement activities related to illegal dumping.

10.4.5 Illegal Disposal

Although disposal rates have been stable or have moderately increased over time, illegal disposal continues to be a problem in rural county areas. Cities have frequently reported that rural residents are dumping into the city-operated containers. Large landowners are particularly hard hit, since they are often the recipients of the material, and they must clean up the material or face the prospect of being held responsible for owning an illegal dump site. In addition, as restrictions are placed on the type of solid waste acceptable at solid waste facilities, illegal dump sites increasingly contain problem waste streams, such as construction debris, car bodies, and toxic chemicals. 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 and expensive. Currently, the EHU staff only responds to complaints, and does not actively patrol the County looking for illegal disposal sites. On average, EHU receives just over 100 illegal-disposal complaints per year. Adequate funding is needed to provide permanent resources to meet the present

volume of complaints, patrol known illegal disposal sites, and coordinate appropriate site cleanup if necessary.

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

In addition to the general problem of adequately responding to complaints of illegal disposal, bringing charges against violators is further complicated by the evidence requirements for prosecution based on state law. The current system can consume numerous man-hours for gathering enough evidence, conducting repeated inspections/investigations, and possibly bringing court action. Updates to CCC 15.30 adopted in 2004 improved the enforceability of illegal dumping regulations, but the allocation of EHU solid waste staff is not sufficient to adequately enforce these regulations.

10.4.6 Unregulated Solid Waste Facilities

Five facilities in the County currently operate under solid waste permit exemptions under WAC 173-350: Storedahl (concrete), Lakeside Industries (asphalt), Waste Control (concrete), American Asphalt (concrete and asphalt), and Swanson (wood products). Waste Control may be eligible for permit exemptions for their material recovery operations. The County solid waste ordinance has been rewritten to require that these facilities annually reapply for the exemptions, and the County must make annual inspections of the facilities to ensure that they continue to meet the qualifications for exemption as required by CCC 15.30.200.

10.5 Goals and Actions

Goals	Actions
Manage the solid waste system safely and cost-effectively for the benefit of county residents.	1. Maintain interlocal agreements with cities, requiring use of the County disposal system for their generated MSW. 2. Interlocal agreements with cities should correspond to the period of time over which the Waste Control contract is effective. 3. Maintain the solid waste manager position to oversee the integration of the solid waste system and consistent implementation of this Plan. 4. Maintain EHU staff to properly administer and support solid waste permits and to enforce solid waste codes throughout the County.

Goals	Actions
Responsibly manage the landfill as a public asset and meet operational goals established by the BOCC.	1. Maintain truck scales and waste accounting software in order to provide accurate records documenting sources and amounts of material disposed of. 2. Provide sufficient landfill management and operational staff to carry out operations, market services, and provide waste-profile reviews for nonroutine wastes. 3. Provide postclosure care for the Tennant Way Landfill. 4. Anticipate future needs and maintain consistent funding for the County's solid waste system.
Properly administer the Waste Control contract to ensure that County and contractor obligations are being met.	1. Provide sufficient solid waste staff to administer the contract with Waste Control and to periodically audit the agreement to ensure that terms are being met.
Maintain public safety and ensure compliance with changing state statutes and regulations.	1. The EHU should implement a public education program to communicate the environmental, health, and economic consequences of illegal disposal. 2. EHU staff should regularly review changes to state statutes and regulations and update local code requirements as necessary. 3. Solid Waste staff should regularly review changes to state regulations and attend training to ensure that proper landfill management and administration are provided. 4. The County and cities should collaborate to develop proper procedures for quickly cleaning up abandoned homeless encampments.
Take stronger action to eliminate illegal dumping.	1. Maintain enforcement through patrols and/or remote monitoring at highly impacted areas. 2. Evaluate the need to extend mandatory curbside garbage collection throughout the County.
Responsibly fund the solid waste system.	1. Continue to finance the daily operation of the solid waste management system through disposal fees, grants, and reserve funds. 2. Monitor and pursue state and local grant funding opportunities to the maximum extent possible, specifically for waste reduction and recycling programs. 3. Conduct a review of the County solid waste financial plan, capital needs acquisition, and the County disposal fee to ensure that solid waste programs are paid primarily through direct user fees.

11 IMPLEMENTATION SCHEDULE

11.1 Introduction

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

11.2 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. This subsection discusses the roles and responsibilities of local government in the management of solid waste in Cowlitz County.

Waste Reduction and Recycling

Waste reduction and recycling is a fundamental strategy and top priority for solid waste management in Cowlitz County and is a critical element of the County Plan. Local governments (cities and the County) are responsible for designing and implementing recycling programs that will collectively achieve a statewide recycling rate of 50 percent. Each city in Cowlitz County should implement local waste-reduction and recycling programs as directed by this Plan.

Collection

The cities in Cowlitz County manage the solid waste collection systems, including establishing rates to pay for the service. Cities are responsible for ensuring that their solid waste collection systems, whether public or privately owned, are in compliance with the County Plan.

Solid waste collection throughout the County, including the unincorporated areas, is regulated by the WUTC.

Disposal

It is the County's responsibility to ensure that a long-term disposal system is available for MSW. The County Plan is required to describe existing solid waste disposal handling facilities and assess the need for solid waste handling facilities for 20 years into the future (RCW 70A.205.045).

Education and Public Involvement

Comprehensive education is to be conducted throughout the County so that people are informed of the need to reduce, source separate, and recycle solid waste. Development of educational programs is required as part of the local comprehensive plan (RCW 70A.205).

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

Solid Waste Permits

The EHU is responsible for issuing permits for solid waste handling facilities. The EHU reviews applications for a solid waste permit to establish, alter, expand, improve, or continue to use a solid waste handling or disposal facility. The EHU must investigate every application to determine whether an existing or proposed site and facilities meet all applicable laws and regulations; conform to the approved County Plan; and conform to all zoning, shoreline, and other requirements. Applicants must secure all necessary permits before a solid waste permit can be issued. The EHU has sole jurisdiction for issuing and suspending permits in accordance with locally adopted rules and state regulations.

The BOCC must adopt regulations or ordinances governing solid waste handling that are as stringent or that may be more stringent than the MFS, SWHS, and/or the CMSWL. The EHU enforces the SWHS and CMSWL with oversight and technical assistance from Ecology (RCW 70A.205).

Solid Waste Management Planning

The County has responsibility for solid waste planning and management. The County, in cooperation with the cities, is required to prepare a coordinated CSHWMP. The County Plan is to be prepared in accordance with RCW 70A.205, Ecology's Guidelines for the Development of Local Solid Waste Management Plans and Plan Revisions (EPA, 2010), and the Cost Assessment Guidelines published by the WUTC in accordance with RCW 70A.205.045(8).

Implementation

It is the responsibility of the County and the cities to begin implementing programs following the adoption and approval of the 2021 County Plan. The County and the cities are required to adopt regulations or ordinances governing solid waste handling to implement the 2021 County Plan (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 on proposed rules, policies, and ordinances before their adoption. The SWAC is advisory only. The committee makes recommendations to the BOCC, which makes final decisions after considering committee

recommendations and other available information. The County SWAC elects its own chairperson, adopts its own by-laws, and conducts its own meetings in accordance with the Ecology Solid Waste Planning Guidelines.

The County SWAC is also responsible for annually reviewing this Plan and assessing the implementation of the recommendations contained in this Plan. The written summary of the assessments made during this review are provided to the BOCC and to the cities.

11.3 Summary of Goals and Actions

A summary of implementation actions and schedule for the County, cities, private haulers, private businesses, and institutions is provided in the attached Table 11-1. The list is derived from the goals and action subsection of each section contained in this Plan.

11.4 Budget

The Equipment, Land and Facilities (ELF) Fund maintained by the County has a balance that is sufficient to provide the funding for all of the recommendations proposed in this document over the next five-year period, as shown in the ELF Fund balance summary in Attachment B of the WUTC Cost Assessment (Appendix E). Since the fund will continue to increase with revenues from landfill tip fees, these activities are not expected to significantly deplete this resource.

Table 11-1
Implementation Schedule

GOALS	ACTIONS	2021	2022	2023	2024	2025	Future
Education and Community Outreach							
1. Provide a cohesive and comprehensive waste-reduction and education program.	A. The County and the cities should coordinate their efforts whenever possible and work to develop public education and awareness programs aimed at informing and motivating the community to practice waste-reduction techniques.	✓	✓	✓	✓	✓	✓
	B. The cities should continue to expand group presentations and work to implement school curricula.	✓	✓	✓	✓	✓	✓
	C. The County and cities should continue to provide technical assistance to encourage businesses in the county to evaluate their processes and policies that affect waste generation. These actions might include direct mailing, displays, educational materials, and active [illegible]	✓	✓	✓	✓	✓	✓
	D. Make County staff available to respond to questions and requests for education and direction for best practices for operational programs and policy making.	✓	✓	✓	✓	✓	✓
	E. The County and cities should continue to track total waste generation, recycling, and disposal.	✓	✓	✓	✓	✓	✓
2. Promote alternatives for consumers to reduce and reuse household goods.	A. The County and the cities of Longview and Kelso should direct interested users to reuse websites such as: Craigslist (www.craigslist.org) Offerup (www.offerup.com) Buy Nothing Project (www.buynothingproject.org)	✓	✓	✓	✓	✓	✓
3. Provide leadership in areas of waste reduction by adopting best practices.	A. All public agencies in Cowlitz County should continue to provide an example to the community in waste-reduction methods by implementing in-house waste-reduction programs, and should continue to work with local governments to implement waste-minimization programs that include purchasing and waste-reduction practices. Agencies should continue to encourage local industries to do the same.	✓	✓	✓	✓	✓	✓
Residential Recycling							
1. Enhance residential recycling.	A. Maintain curbside collection.	✓	✓	✓	✓	✓	✓
	B. Evaluate the need to increase the collection service area.			✓			✓
	C. Evaluate the need to provide additional drop-off centers.			✓			✓
	D. Promote collection and drop-off for multifamily residential units.	✓	✓	✓	✓	✓	✓
	E. Maintain the current level of service and access to drop-off locations over the six-year planning horizon.	✓	✓	✓	✓	✓	✓
2. Enhance commercial recycling.	A. Evaluate the need to increase the collection service area.			✓			✓
	B. Encourage use of drop-off centers for users outside urban areas.	✓	✓	✓	✓	✓	✓
	C. Provide technical assistance to businesses to develop in-house recycling programs.	✓	✓	✓	✓	✓	✓
	D. Monitor recycling activities and develop a database to track waste generation and recycling.	✓	✓	✓	✓	✓	✓
	E. Maintain in-house recycling programs at public agencies to set a strong working example and look for additional opportunities.	✓	✓	✓	✓	✓	✓
3. Increase awareness of recycling programs.	A. The cities should develop a coordinated education and outreach program.	✓	✓	✓	✓	✓	✓
	B. The cities should engage with schools to promote recycling education and awareness.	✓	✓	✓	✓	✓	✓
	C. Maintain websites for public access to current information.	✓	✓	✓	✓	✓	✓
4. Reduce contamination in the recycling stream.	A. Implement the County's new CROP.	✓	✓	✓			

Table 11-1
Implementation Schedule

GOALS	ACTIONS	2021	2022	2023	2024	2025	Future
Organic Material Management							
1. Comply with new state regulations for reducing food waste (HB 1114-2019-20).	A. Evaluate new regulations as they are established in order to identify priority actions that the County can take.	✓	✓	✓			
	B. Evaluate and pursue opportunities for public funding to implement new regulations.	✓	✓	✓	✓	✓	✓
2. Increase recovery of organic materials.	A. Transfer Station and local wood waste recyclers should continue to provide convenient drop-off facilities to handle yard waste and encourage source separation by the customer by providing lower rates for yard-waste disposal than for refuse disposal.	✓	✓	✓	✓	✓	✓
	B. Public agencies should evaluate their contracting policies, which could be revised to encourage or require contractors to segregate land-clearing waste.		✓				✓
3. Provide more options for disposal and management of organic materials.	A. Fixed drop-off sites—fixed sites can be located at a variety of places, but the best locations are generally at existing disposal sites such as landfills and transfer stations, sites (primarily private facilities) that are already devoted to the handling of similar materials, and recycling drop-off sites. At the fixed site, a separate container would be provided for the deposit of yard waste.		✓				
	B. Household (curbside) collection, urban areas—curbside collection in urban areas can pick up a substantial amount of the yard waste generated by the urban residential sector. Curbside collection is generally not a suitable collection method for commercially generated yard waste.		✓				
	C. Investigate the viability of curbside collection for commercially generated yard waste in Kelso and Longview.		✓				
	D. Provide outreach and information to larger businesses to understand the current County collection programs.	✓	✓	✓	✓	✓	✓
Solid Waste Collection							
1. Increase availability of local collection to more areas in the County.	A. Evaluate the need to extend curbside solid waste collection to incorporated and urbanized areas of the county not currently receiving service.			✓		✓	✓
2. Take stronger action to eliminate illegal dumping.	A. Maintain enforcement through patrols and/or remote monitoring at highly impacted areas.	✓	✓	✓	✓	✓	✓
	B. Evaluate the need to extend mandatory curbside garbage collection throughout the County.			✓			✓
Transfer, Processing, and Disposal							
1. Maximize the value of the landfill to county residents through managed import of waste.	A. Current Cowlitz County solid waste import activities should be permitted to continue.	✓	✓	✓	✓	✓	✓
	B. The County should develop interlocal agreements with other counties, recognizing current solid waste import activities.	✓					✓
	C. The County should continue to evaluate the capacity of the current MSW system to ensure that it will provide adequate disposal for the next 20 years.	✓	✓	✓	✓	✓	✓
Miscellaneous Waste							
1. Maintain existing management procedures for miscellaneous wastes.	A. Encourage farmers and ranchers to continue their current agricultural-waste management.	✓	✓	✓	✓	✓	✓
2. Maintain compliance with landfill permit requirements prohibiting receipt of hazardous waste.	A. Continue to follow the waste-profiling and review procedures that have been developed before accepting potentially contaminated soils and sediments at the landfill.	✓	✓	✓	✓	✓	✓
	B. Consistently provide a public drop-off location for HHW at the transfer station in addition to regular public collection events.	✓	✓	✓	✓	✓	✓
3. Protect landfill workers from inadvertent exposure to biomedical wastes that are handled at the landfill.	A. Continue to consistently implement the Worker Health and Safety program that has been developed for the landfill and provide appropriate personal protective equipment.	✓	✓	✓	✓	✓	✓
4. Protect the public from health hazards that may be associated with homeless encampments.	A. Work with Ecology and the Department of Health to ensure that proper solid waste management procedures are followed during the cleanup of encampments.	✓	✓	✓	✓	✓	✓
	B. Research the ability to track the expenses related to homeless encampment cleanup and disposal.	✓					

Table 11-1
Implementation Schedule

GOALS	ACTIONS	2021	2022	2023	2024	2025	Future
Moderate Risk Waste							
1. Reduce the generation, illegal dumping, and improper disposal of hazardous waste.	A. The County will continue the current level of service, including HHW, SQG, and business education and outreach.	✓	✓	✓	✓	✓	✓
	B. The County, cities, and Waste Control will continue hosting collection events and maintaining permanent collection facilities.	✓	✓	✓	✓	✓	✓
	C. Ensure that businesses and facilities handling MRW comply with environmental laws and regulations. Encourage as much reuse and recycling of MRW as possible.	✓	✓	✓	✓	✓	✓
2. Improve public participation in reducing and properly disposing of HHW.	A. Develop a more comprehensive list of covered electronics to be addressed through the existing product stewardship infrastructure of the E-Cycle Washington Program.		✓				
	B. Provide additional resources for the public to reduce improper disposal of batteries.	✓	✓	✓	✓	✓	✓
Administration and Enforcement							
1. Manage the solid waste system safely and cost-effectively for the benefit of county residents.	A. Maintain interlocal agreements with cities, requiring use of the County disposal system for their generated MSW.	✓	✓	✓	✓	✓	✓
	B. Interlocal agreements with cities should correspond to the period of time over which the Waste Control contract is effective.	✓					✓
	C. Maintain the solid waste manager position to oversee the integration of the solid waste system and consistent implementation of this Plan.	✓	✓	✓	✓	✓	✓
	D. Maintain EHU staff to property administer and support solid waste permits and to enforce solid waste codes throughout the County.	✓	✓	✓	✓	✓	✓
1. Responsibly manage the landfill as a public asset and meet operational goals established by the BOCC.	A. Maintain truck scales and waste accounting software in order to provide accurate records documenting sources and amounts of material disposed of.	✓	✓	✓	✓	✓	✓
	B. Provide sufficient landfill management and operational staff to carry out operations, market services, and provide waste profile reviews for nonroutine wastes.	✓	✓	✓	✓	✓	✓
	C. Provide postclosure care for the Tennant Way Landfill.	✓	✓	✓	✓	✓	✓
	D. Anticipate future needs and maintain consistent funding for the County's solid waste system.	✓	✓	✓	✓	✓	✓
2. Properly administer the Waste Control contract to ensure that County and contractor obligations are being met.	A. Provide sufficient solid waste staff to administer the contract with Waste Control and to periodically audit the agreement to ensure that terms are being met.	✓	✓	✓	✓	✓	✓

NOTES:
BOCC = Board of County Commissioners.
CROP = Contamination Reduction and Outreach Plan.
EHU = Building and Planning Environmental Health Unit.
HHW = household hazardous waste.
MSW = municipal solid waste.
SQG = small-quantity generator.

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.

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APPENDIX A

INTERLOCAL AGREEMENTS AND RESOLUTIONS OF PARTICIPATION AND ADOPTION
INTERLOCAL AGREEMENT FOR MANAGEMENT OF MUNICPAL SOLID WASTE
RESOLUTIONS FOR PARTICIPATION
RESOLUTIONS OF ADOPTION

INTERLOCAL AGREEMENT FOR MANAGEMENT OF MUNICPAL SOLID WASTE

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Agreement COWLITZ COUNTY COMMISSIONERS 0.00
Cowlitz County Washington

INTERLOCAL AGREEMENT FOR MANAGEMENT OF MUNICIPAL SOLID WASTE

WHEREAS, Cowlitz County (the "County") and the signatory City have cooperated in developing and implementing the Cowlitz County Comprehensive Solid Waste Management Plan (the "Comprehensive Solid Waste Management Plan") pursuant to RCW 70.95 and,

WHEREAS, the Comprehensive Solid Waste Management Plan designates Cowlitz County to be responsible for the selection of sites and a method for the disposal of solid waste generated within the County; and,

WHEREAS, the County has selected a vendor to provide certain solid waste handling services, including development of local facilities (the "facilities") for the receipt, recycling, and containerizing for out-of-county disposal of solid waste generated within the cities and within unincorporated areas of the County; and,

WHEREAS, in order to successfully develop and finance the County's Solid Waste Disposal System and provide for cooperative management of solid waste generated in Cowlitz County, it is desirable that all such solid waste, including waste generated in incorporated cities within the County, be disposed of through the County Solid Waste Disposal System and that County be authorized to designate disposal sites for the disposal of certain solid waste (as defined herein) generated within the corporate limits of the City; and,

WHEREAS, the County and City have jointly contributed to a County managed solid waste reserve fund (ELF) that is recognized to be a joint asset of the County and those Cities who have disposed solid waste at Cowlitz county operated facilities; and,

WHEREAS, the County and City are authorized and empowered to enter into this interlocal agreement pursuant to Chapter 39.34 RCW; now therefore,

COWLITZ COUNTY AND THE UNDERSIGNED CITY UNDERSTAND AND AGREE AS FOLLOWS:

1. Definitions. For purposes of this Interlocal Agreement, the following definitions shall apply.

1.1. "Certain solid waste" means solid waste collected within the City, whether by the City, a City contractor, or a private hauler under the authority of a "G" certificate granted by the Washington State Utilities and Transportation Commission under the provisions of Chapter 81.77 RCW, and may include moderate risk waste as defined in RCW 70.105.010.

1.2. "City" means the city located within Cowlitz County executing this Interlocal Agreement.

1.3. "Comprehensive Solid Waste Management Plan" means the Cowlitz County Comprehensive Solid Waste Management Plan adopted and amended by the County pursuant to Chapter 70.95 RCW.

1.4. "County" means Cowlitz County, Washington.

1.5. "Disposal Site" means a facility where any final treatment, utilization, processing, transfer or deposit of certain solid waste originating in the County or the City occurs. For the purpose of this agreement, a waste export transfer station shall be deemed a disposal site.

1.6. "Equipment, Land, and Facilities Fund" (herein "ELF Fund") means certain fund reserves held and managed by the County that have been generated through collection of tipping fees at the County landfill. For purposes of this Agreement, the ELF Fund specifically refers to those reserves remaining in the fund after providing for the following landfill purposes: operation of the County landfill, closure of the County landfill, post closure costs for the "lined" and "unlined" County landfill in existence at the time of this agreement, post closure monitoring expenses, landfill gas utilization system installation and operation, and equipment replacement. Such ELF Fund reserves are estimated to be approximately $10,000,000 on January 1, 2007.

1.7. "Hazardous waste" means those solid wastes designated by 40 CFR Part 261, and regulated as hazardous and /or mixed waste by the United States EPA or designated a dangerous or extremely hazardous waste as defined by Washington State regulations adopted pursuant to Chapter 70.105 RCW or as amended.

1.8. "Interlocal Agreement " means this Interlocal Agreement for Management of Municipal Solid Waste.

1.9. "Recycling" means the extraction of useful materials from the solid waste stream and diverting such materials from the disposal site.

1.10. "Solid Waste" means solid waste as defined by RCW 70.95.030 with the exception of hazardous waste.

1.11. "System" means all facilities for solid waste handling provided by the County, either directly or by contract with a vendor, and all administrative activities related thereto. The term "System" includes all sites designated by the County for the receipt or disposal of solid waste.

2. Responsibility for Solid Waste Disposal. For calendar years 2006 through 2045, the County shall be responsible for the disposal of solid waste generated within unincorporated areas of the County and within the City to the extent provided in the Comprehensive Solid Waste Management Plan and the Agreement executed by the County with Waste Control Recycling, Inc., on or about November 20, 2006.

3. Comprehensive Plan. For the duration of this Interlocal Agreement, the City and County shall adhere to the Comprehensive Solid Waste Management Plan prepared and periodically reviewed and revised by the County pursuant to Chapter 70.95 RCW. For the duration of this Interlocal Agreement, the City authorizes the County to include in the Comprehensive Solid Waste Management Plan provisions acceptable to the City for the management of solid and moderate risk waste generated in the City.

4. Solid Waste Advisory Committee. Pursuant to RCW 70.95.165(3) and RCW 39.34.030(4) and Cowlitz County Code Chapter 15.30, the Solid Waste Advisory Committee (SWAC) shall continue operating for the purpose of rendering advice to Cowlitz County and the Governance Committee created under section 5 of this Agreement regarding general solid and moderate risk waste related issues, service levels, disposal rates, and short and long term planning, and especially the administration and implementation of the Comprehensive Solid Waste Management Plan.

4.1. Regular Members. Regular members shall be appointed by the Board of County Commissioners and shall, as a minimum, represent the cities, the waste management industry, and citizens.

4.2. Ex-Officio Members. The Board of County Commissioners (BOCC) may appoint Ex-Officio Members who will serve at the pleasure of the BOCC. Ex-Officio Members will be non-voting members.

4.3. Auxiliary Members. The regular membership of the Solid Waste Advisory Committee may appoint auxiliary members for a specific time period to serve on the committee in a non-voting capacity, for the purpose of providing specific information, technical advice, and information of a general nature which is pertinent to the committee's activities or any other form of assistance which will aid the committee in carrying out its purposes.

4.4. Meetings. The Chair will call meetings of SWAC as needed. It is anticipated that meetings will be monthly or semi monthly during Solid Waste Management Plan updates and annually during off-planning years.

5. Governance Committee.

5.1. Purpose - The Governance Committee shall review solid waste operations and Comprehensive Solid Waste Management Plan implementation. Any proposed changes or improvements significantly affecting the operation of the solid waste disposal system or which may directly or indirectly significantly impact disposal rates, changes to disposal rates, use of ELF Fund reserves for other than landfill operation and maintenance, or siting of disposal facilities shall be submitted to the Governance Committee to provide an opportunity for adequate review, deliberation, and the formulation of comments and recommendations, prior to any final decision by the Board of Cowlitz County Commissioners. The Board of Cowlitz County Commissioners shall not approve expending or committing ELF Fund reserves for any use other than landfill operation and maintenance unless such expense or commitment is supported by a majority vote of the Governance Committee.

5.2. Regular Members - The Governance Committee shall consist of two (2) County representatives and one (1) representative each from the two largest Cities in the County. Each entity shall designate a member and an alternate for each representative position.

5.3. Meetings - The Governance Committee shall meet annually, or additionally as needed, to review the status of the solid waste disposal system; any recommendations from the Solid Waste Advisory Committee; tipping fee adjustments; use of ELF Fund reserves for other than landfill operation and maintenance; and, any proposed changes or improvements significantly affecting the operation of the solid waste disposal system.

6. City Designation of County System for Solid Waste Disposal. The City by execution of this Agreement designates the County System for the disposal of certain solid waste (as hereinabove defined) generated within the corporate limits of the City, and authorizes the County to designate a disposal site or sites for the disposal of such solid waste. This designation shall also apply to solid waste generated through the City's recycling collection and sorting operations. This designation of the County System shall continue in full force and effect for calendar years 2006 through 2045 or the duration of the County contract with Waste Control Recycling, Inc., whichever occurs first. The designation of the County in this section shall not reduce or otherwise affect the City's control over solid waste collection as permitted by applicable state law.

7. Waste Reduction and Recycling. The City and the County agree to cooperate to achieve the priorities for waste reduction and waste recycling set forth in the

Comprehensive Solid Waste Management Plan. Where appropriate and agreed, the County may provide funding to the Cities to implement such waste reduction and recycling programs, provided such programs have been included in the Comprehensive Solid Waste Management Plan and such funding is recommended by the Governance Committee.

8. Contracts with Vendors / No City Obligation.

8.1. The County has entered into a contract with Waste Control Recycling, Inc. for long-term handling, transfer and disposal of solid waste. The County may at its discretion enter into further contracts with vendors to provide solid waste handling services. The City acknowledges that in entering into such contracts, the County may rely on the City's designation of the County as the entity with responsibility for preparing and revising the Comprehensive Solid Waste Management Plan and for designating solid waste disposal sites under the terms of the Comprehensive Solid Waste Management Plan and this Interlocal Agreement.

8.2. The City shall not be obligated, directly or indirectly, for the collection or delivery of any specified quantity of solid waste to a solid waste disposal site designated by the County. No contract between the County and a vendor shall purport to create any general obligation or special fund or utility obligation of the City.

9. Indemnification.

9.1. Except as provided below, the County shall indemnify and hold harmless, and shall have the right and duty to defend the City, through the County's attorneys, against any and all claims arising out of the County's operations of the System, and the right to settle such claims, recognizing that all costs incurred by the County thereby are System costs which must be satisfied from disposal rates. In providing a defense for the City, the County shall exercise good faith in that defense or settlement so as to protect the City's interests. For purposes of this paragraph, "claims arising out of the County's operations" shall include claims arising out of the ownership, control or maintenance of the System, but shall not include any claims arising out of the City's collection of certain solid waste, the disposal or attempted disposal of hazardous waste, or other activities under the control of the City.

9.2. In the event that the County acts to defend the City against a claim, the City shall cooperate with the County.

9.3. For purposes of this section, reference to the City and to the County shall be deemed to include the officers and employees of any party, acting within the scope of their authority.

10. Duration. This Interlocal Agreement shall continue to be in full force and effect through calendar year 2045 or the duration of the Waste Control Recycling, Inc. contract, whichever occurs first, unless terminated as described in the following paragraph.

11. Amendment, Supplementation or Termination. This Interlocal Agreement shall be reviewed by the parties every 5 years or in conjunction with the SWMP update, whichever occurs first, and may be amended, supplemented or terminated upon the agreement of both the County and all Cities that executed the original Agreement with the same formalities as the original Agreement. Any amendments, supplement or termination shall be in writing and shall be signed by the authorized officers of the County and the Cities at least 30 days in advance of the effective date of such action.

12. ELF Fund Reserves

12.1. It is the intent of the County and Cities to use ELF Fund reserves for solid waste purposes including, but not limited to, future capital improvement projects or rate stabilization.

12.2. When any of the Cities or the County determine that expenditure of the ELF Fund reserves is required for any Solid Waste purpose, excepting only maintenance and operations of the landfill, the County will initiate a meeting of the Governance Committee to review the proposed use of the ELF Fund reserves and the Governance Committee shall make a recommendation to the Board of Commissioner's on such use.

12.3. In the event this Agreement is terminated as stipulated in Section 11 of this Agreement, the Governance Committee shall meet and determine an equitable distribution of the ELF Fund reserves to the parties to this Agreement. Existing indebtedness, accounts payable, and any other liability related to operation and capital expenditures of the solid waste System operated by the County shall be satisfied prior to any distribution of the ELF Fund reserves to the parties.

13. Miscellaneous.

13.1. No waiver by any party of any term or condition of this Interlocal Agreement shall be deemed or construed to constitute a waiver of any other term or condition or at any subsequent breach whether of the same or of a different provision of this Interlocal Agreement.

13.2. This Interlocal Agreement is entered into to protect the public health, safety and welfare of the residents of the City and County and to promote the effective and efficient disposal or handling of solid waste in the City and the County.

THIS INTERLOCAL AGREEMENT has been executed by the parties shown below and is dated as of the ____ day of _____, 2007.

CITY OF LONGVIEW

By: Robert J Gregory
Robert J. Gregory, City Manager

Attest: Ann C Davis
City Clerk

Name Printed: Ann C Davis

Approved as to form:

MK Nittberg-Hoan
Attorney for City of Longview

Name Printed: M.K. Nittberg-Hoan

THIS INTERLOCAL AGREEMENT has been executed by the parties shown below and is dated as of the 3rd day of April, 2007.

CITY OF KELSO

By: _____
Don Gregory, Mayor

Attest: _____
City Clerk

Name Printed: Veryl A. Anderson

Approved as to form:

_____
Attorney for City of Kelso

Name Printed: Paul Brachvogel

THIS INTERLOCAL AGREEMENT has been executed by the parties shown below and is dated as of the 4th day of April, 2007.

CITY OF CASTLE ROCK

By: Barbara L. Larsen
Barbara L. Larsen, Mayor

Attest: Ryana Covington
City Clerk

Name Printed: Ryana Covington

Approved as to form:

Attorney for City of Castle Rock

Name Printed: Tom O'Neill

THIS INTERLOCAL AGREEMENT has been executed by the parties shown below and is dated as of the 6th day of April, 2007.

CITY OF KALAMA

By: _____
Pete Poulsen, Mayor

Attest: _____
City Clerk

Name Printed: Coni McMaster

Approved as to form:

_____
Attorney for City of Kalama

Name Printed: Paul Brachvogel

THIS INTERLOCAL AGREEMENT has been executed by the parties shown below and is dated as of the 19th day of March, 2007.

CITY OF WOODLAND

By: _____
Douglas A. Monge, Mayor

Attest: _____
Mari E. Ripp, Clerk-Treasurer

Name Printed: Mari E. Ripp

Approved as to form:

_____
Paul Brachvogel, City Attorney for City of Woodland

THIS INTERLOCAL AGREEMENT has been executed by the parties shown below and is dated as of the 15th day of May, 2007.

BOARD OF COUNTY COMMISSIONERS
OF COWLITZ COUNTY, WASHINGTON

Kathleen A. Johnson, Chairman

Absent
George Raiter, Commissioner

Axel Swanson, Commissioner

Attest:

Vickie M. Musgrove
Vickie Musgrove, Clerk of the Board

Approved as to form:

Ron Marshall, Deputy Prosecuting Attorney

RESOLUTIONS FOR PARTICIPATION

RESOLUTION NO. 560

A Resolution authorizing Cowlitz County to prepare a Solid Waste Management Plan and Moderate Risk Waste Plan on behalf of the City of Kalama, for inclusion in the Cowlitz County Comprehensive Solid Waste Management Plan.

WHEREAS, RCW 70.95.080 requires the City of Kalama to engage in the preparation of a cooperative, coordinated, Comprehensive Solid Waste Management Plan; and

WHEREAS, RCW 70.105.220 requires local government or combination of contiguous local governments to prepare a local hazardous waste plan for management of moderate risk waste; and

WHEREAS, Resolution No. 511 of the City of Kalama, passed February 6, 2008, adopted the 2007 Cowlitz County Comprehensive Solid Waste Management Plan, as an update of the 1993 Solid Waste Management Plan; and Resolution No. 281 of the City of Kalama, passed March 20, 1991, adopted the last update of the Moderate Risk Hazardous Waste Plan; and

WHEREAS, RCW Chapter 70.95 requires that said Solid Waste Management Plan be periodically updated; and RCW 70.105.220 (6) allows for amendment to the 1991 Moderate Risk Hazardous Waste Management Plan; and

WHEREAS, it is in the best interest of the City of Kalama to authorize Cowlitz County to prepare such plan(s) for management of the City's solid and moderate risk waste, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington;

NOW, THEREFORE, BE IT RESOLVED by the Kalama City Council that said City Council hereby authorizes Cowlitz County, Washington; to prepare a plan for said City's solid waste and moderate risk waste management, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington.

Adopted by the Council of the City of Kalama and signed by the Mayor at a regular meeting of said Council held on the 16th day of March, 2011.

MAYOR

ATTEST:

City Clerk

RESOLUTION NO. 1980

A Resolution authorizing Cowlitz County to prepare a Solid Waste Management Plan and Moderate Risk Waste Plan on behalf of the City of Longview, for inclusion in the Cowlitz County Comprehensive Solid Waste Management Plan.

WHEREAS, RCW 70.95.080 requires the City of Longview to engage in the preparation of a cooperative, coordinated, Comprehensive Solid Waste Management Plan; and

WHEREAS, RCW 70.105.220 requires local government or combination of contiguous local governments to prepare a local hazardous waste plan for management of moderate risk waste; and

WHEREAS, Resolution No. 1874 of the City of Longview, passed January 10, 2008, adopted the 2007 Cowlitz County Comprehensive Solid Waste Management Plan, as an update of the 1993 Solid Waste Management Plan; and Resolution No. 1457 of the City of Longview, passed March 1, 1991, adopted the last update of the Moderate Risk Hazardous Waste Plan; and

WHEREAS, RCW Chapter 70.95 requires that said Solid Waste Management Plan be periodically updated; and RCW 70.105.220 (6) allows for amendment to the 1991 Moderate Risk Hazardous Waste Management Plan; and

WHEREAS, it is in the best interest of the City of Longview to authorize Cowlitz County to prepare such plan(s) for management of the City's solid and moderate risk waste, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington;

NOW, THEREFORE, BE IT RESOLVED by the Longview City Council that said City Council hereby authorizes Cowlitz County, Washington; to prepare a plan for said City's solid waste and moderate risk waste management, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington.

Adopted by the Council of the City of Longview and signed by the Mayor at a regular meeting of said Council held on the 24 day of Feb., 2011.

MAYOR

ATTEST:

City Clerk

RESOLUTION NO. 2011-04

A Resolution authorizing Cowlitz County to prepare a Solid Waste Management Plan and Moderate Risk Waste Plan on behalf of the City of Castle Rock, for inclusion in the Cowlitz County Comprehensive Solid Waste Management Plan.

WHEREAS, RCW 70.95.080 requires the City of Castle Rock to engage in the preparation of a cooperative, coordinated, Comprehensive Solid Waste Management Plan; and

WHEREAS, RCW 70.105.220 requires local government or combination of contiguous local governments to prepare a local hazardous waste plan for management of moderate risk waste; and

WHEREAS, Resolution No. 2008-01 of the City of Castle Rock, passed January 28, 2008, adopted the 2007 Cowlitz County Comprehensive Solid Waste Management Plan, as an update of the 1993 Solid Waste Management Plan; and Resolution No. 91-01 of the City of Castle Rock, passed March 25, 1991, adopted the last update of the Moderate Risk Hazardous Waste Plan; and

WHEREAS, RCW Chapter 70.95 requires that said Solid Waste Management Plan be periodically updated; and RCW 70.105.220 (6) allows for amendment to the 1991 Moderate Risk Hazardous Waste Management Plan

WHEREAS, it is in the best interest of the City of Castle Rock to authorize Cowlitz County to prepare such plan(s) for management of the City's solid and moderate risk waste, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington;

NOW, THEREFORE, BE IT RESOLVED by the Castle Rock City Council that said City Council hereby authorizes Cowlitz County, Washington; to prepare a plan for said City's solid waste and moderate risk waste management, subject to review and final approval by the City Council, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington.

Adopted by the Council of the City of Castle Rock and signed by the Mayor at a regular meeting of said Council held on the 14th day of March, 2011.

Mayor Paul Helenberg

ATTEST:

Clerk-Treasurer

APPROVED AS TO FORM:

City Attorney

RESOLUTION NO. 11-1041

A RESOLUTION AUTHORIZING COWLITZ COUNTY TO PREPARE A SOLID WASTE MANAGEMENT PLAN AND MODERATE RISK WASTE PLAN ON BEHALF OF THE CITY OF KELSO, FOR INCLUSION IN THE COWLITZ COUNTY COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN.

WHEREAS, RCW 70.95.080 requires the City of Kelso to engage in the preparation of a cooperative, coordinated, Comprehensive Solid Waste Management Plan; and

WHEREAS, RCW 70.105.220 requires local government or combination of contiguous local governments to prepare a local hazardous waste plan for management of moderate risk waste; and

WHEREAS, Resolution No. 08-965 of the City of Kelso, passed February 19, 2008, adopted the 2007 Cowlitz County Comprehensive Solid Waste Management Plan, as an update of the 1993 Solid Waste Management Plan; and Resolution No. 621 of the City of Kelso, passed March 19, 1991, adopted the last update of the Moderate Risk Hazardous Waste Plan; and

WHEREAS, RCW Chapter 70.95 requires that said Solid Waste Management Plan be periodically updated; and RCW 70.105.220 (6) allows for amendment to the 1991 Moderate Risk Hazardous Waste Management Plan; and

WHEREAS, it is in the best interest of the City of Kelso to authorize Cowlitz County to prepare such plan(s) for management of the City's solid and moderate risk waste, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington;

NOW, THEREFORE, BE IT RESOLVED by the Kelso City Council that said City Council hereby authorizes Cowlitz County, Washington; to prepare a plan for said City's solid waste and moderate risk waste management, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington.

ADOPTED by the Council of the City of Kelso and **SIGNED** by the Mayor at a regular meeting of said Council held on the 1st day of March, 2011.

MAYOR

ATTEST/AUTHENTICATION:

CITY CLERK

APPROVED AS TO FORM:

CITY ATTORNEY

CITY OF WOODLAND, WASHINGTON

RESOLUTION NO. 597

A Resolution authorizing Cowlitz County to prepare a Solid Waste Management Plan and Moderate Risk Waste Plan on behalf of the City of Woodland, for inclusion in the Cowlitz County Comprehensive Solid Waste Management Plan.

WHEREAS, RCW 70.95.080 requires the City of Woodland to engage in the preparation of a cooperative, coordinated, Comprehensive Solid Waste Management Plan; and

WHEREAS, RCW 70.105.220 requires local government or combination of contiguous local governments to prepare a local hazardous waste plan for management of moderate risk waste; and

WHEREAS, Resolution No. 556 of the City of Woodland, passed December 12, 2007, adopted the 2007 Cowlitz County Comprehensive Solid Waste Management Plan, as an update of the 1993 Solid Waste Management Plan; and Resolution No. 317 of the City of Woodland, passed March 18, 1991, adopted the last update of the Moderate Risk Hazardous Waste Plan; and

WHEREAS, RCW Chapter 70.95 requires that said Solid Waste Management Plan be periodically updated; and RCW 70.105.220 (6) allows for amendment to the 1991 Moderate Risk Hazardous Waste Management Plan; and

WHEREAS, it is in the best interest of the City of Woodland to authorize Cowlitz County to prepare such plan(s) for management of the City's solid and moderate risk waste, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington;

NOW, THEREFORE, BE IT RESOLVED by the Woodland City Council that said City Council hereby authorizes Cowlitz County, Washington; to prepare a plan for said City's solid waste and moderate risk waste management, for inclusion in the Comprehensive Solid Waste Management Plan of Cowlitz County, Washington.

ADOPTED in an open public meeting this 22nd day of February, 2011

CITY OF WOODLAND, WA

Approved:

Charles E. Blum, Mayor

ATTEST:

Mari E. Ripp, Clerk/Treasurer

APPROVED AS TO FORM:

William Eling, City Attorney

RESOLUTIONS OF ADOPTION

The Resolutions of Adoption to be included following approval of the Comprehensive Solid and Hazardous Waste Management Plan by the Cowlitz County Board of County Commissioners and the cities of Castle Rock, Kalama, Kelso, Longview, and Woodland

APPENDIX B

CONTAMINATION REDUCTION AND OUTREACH PLAN

RECYCLING CONTAMINATION REDUCTION AND OUTREACH PLAN

COWLITZ COUNTY, WASHINGTON

Prepared for
COWLITZ COUNTY
DEPARTMENT OF PUBLIC WORKS
June 24, 2021
Project No. 9041.07.03

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

MAUL
FOSTER
ALONGI

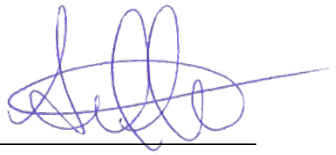
CONTAMINATION REDUCTION AND OUTREACH PLAN

COWLITZ COUNTY, WASHINGTON

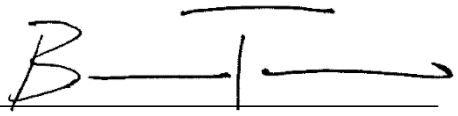
The material and plan in this report were prepared under the supervision and direction of the undersigned.

MAUL FOSTER & ALONGI, INC.

Erik Bakkom, PE
Principal Engineer



Seth Otto, AICP, LEED AP
Senior Planner



Brian Tino, PE
Project Engineer

CONTENTS

ACRONYMS AND ABBREVIATIONS

BMP	best management practice
the County	Cowlitz County
CROP	Contamination Reduction and Outreach Plan
Ecology	Washington State Department of Ecology
MRF	material recovery facility
the Plan	Cowlitz County Comprehensive Solid and Hazardous Waste Management Plan
RCW	Revised Code of Washington
SWAC	Solid Waste Advisory Committee
TRP	The Recycling Partnership

1 INTRODUCTION

This Contamination Reduction and Outreach Plan (CROP) is an appendix to the Cowlitz County Comprehensive Solid and Hazardous Waste Management Plan (the Plan) and addresses RCW 70A.205.045(10), which requires counties with a population of more than 25,000 to include a CROP in their plan by July 1, 2021. This CROP is a customized version of the state template, which includes the following required elements:

- A list of action steps to reduce contamination in existing recycling programs for single-family and multifamily residences, commercial locations, and drop box collection sites
- A list of key contaminants
- Discussion of problem contaminants and impacts on collection
- Analysis of costs and other impacts to the recycling system from contamination
- Implementation schedule and details on conducting outreach

The goal of this CROP is to reduce the amount of contamination in the materials collected in Cowlitz County's (the County) 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.

1.1 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 to 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. China's policy has significantly impacted Waste Control's ability to market materials that they collect in the county. As a result of these changes, current recycling opportunities in the county focus on metals and paper. Waste Control also accepts electronics, auto hulks, wood, and concrete at their recycling facility.

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.

1.2 Inventory of Current Recycling Collection Services and Programs

A detailed description of the County recycling system is provided in Chapter 4 of the Plan. This CROP includes the most relevant data from the Plan and identifies needs and opportunities for the County to collect additional data. The following action steps are recommended by the Washington State Department of Ecology (Ecology) for completing a baseline inventory of current recycling collection services and programs in the county:

- A list of designated recyclables
- Collection services and programs (including collection methods, types of materials accepted for recycling, contracts and interlocal agreements for collection and material processing, and minimum-service-level or other ordinances)
- Number of tons collected for recycling and customers for each type of program
- Types of materials accepted for recycling and customers for each type of program

The information collected by the County as part of the baseline inventory is provided below.

1.2.1 List of Designated Recyclables

As part of the Plan update, the County coordinated with the Solid Waste Advisory Committee (SWAC) and Waste Control to update the list of acceptable recyclable materials. The following recyclable materials are currently designated for inclusion in the curbside recycling program and are collected from single-family and multifamily customers:

- Tin-coated steel cans
- Aluminum cans
- Newspaper
- Mixed paper
- Cardboard
- Paper food containers
- Plastic containers, including beverage bottles, jugs, jars, and dairy tubs

This list may be revised based on additional recycling stream inventories conducted by the County, market conditions, or new recycling technologies.

1.2.2 Collection Services and Programs

Table 1 provides an overview of the recycling services and programs offered to county residents. The County will identify differences or inconsistencies across contracts and agreements for recycling programs, and in the information provided to residents and businesses about what to recycle and how

it should be prepared for collection. The County will use these data to identify opportunities for more consistent and aligned programs as well as to inform its decision regarding what specific contamination-reduction strategies to implement.

Table 1
Cowlitz County Recycling Services and Programs

Recycling Program	Geographic Location
Single-Family Curbside Pickup (Waste Control)	• Longview • Woodland
Multifamily Curbside Pickup (Waste Control)	• Longview • Woodland
Recycling Drop-Off Center	• Longview (Waste Control Transfer Station) • Willow Grove • Toutle • Kalama • Woodland • Rose Valley • Kelso (three locations) • Castle Rock • Lexington • Columbia Heights
Commercial and Industrial Recycling	• North Pacific Paper Company (NORPAC) Recycling Facility • WestRock Longview Pulp and Paper Mill • Waste Control Industrial Recycling Program (WestRock, Weyerhaeuser, Nippon Dynawave, NORPAC)

Table 2 provides a summary of the recycling drop-off centers throughout the county and the materials that are accepted at each facility.

Table 2
Cowlitz County Recycling Drop-Off Centers

Municipality	Location	Accepted Recyclables
Castle Rock	Castle Rock Recycling Center Wastewater Treatment Plant 215 Michner St.	Mixed paper, PET,* HDPE,* aluminum, tin, cardboard, glass
	Wilcox & Flegel 110 Allen Avenue	Oil, antifreeze
Toutle	Toutle Recycling Center Toutle Drop Box Facility 200 S. Toutle Road	Mixed paper, aluminum, tin, glass, HDPE,* PET,* oil, and antifreeze
Kalama	Kalama Recycling Center City Shop 6315 Old Pacific Hwy S. 360-673-3706	Mixed paper, PET,* HDPE,* aluminum, tin, oil, antifreeze
Kelso	Kelso Drop Center Super 8 Motel 250 Kelso Drive	Mixed paper, PET,* HDPE,* aluminum, tin, glass, oil, antifreeze, cardboard
	Kelso Drop Center Huntington Junior High Red Path Street	Mixed paper, PET,* HDPE,* aluminum, tin, cardboard
	Kelso Drop Center Quick Stop—behind store 807 S. Pacific Avenue	Glass, mixed paper, PET,* HDPE,* aluminum, tin, oil, antifreeze, cardboard
Longview	Single- and multifamily residential curbside pickup	Tin-coated steel cans, aluminum cans, newspaper, mixed paper, cardboard, paper food containers, PET*, HDPE*
	Waste Control Transfer Station 1150 Third Ave—Longview 360-425-4302 7 days/week 7:30 am–5:30 pm	Mixed paper, PET,* cardboard, HDPE,* glass, aluminum, ferrous (iron), nonferrous, tin, antifreeze, auto batteries, oil, glass
	Swanson Bark 240 Tennant Way 360-414-9663	Green waste, wood product residuals, uncontaminated soils
	Goodwill Industries Donation Center 710 14th Ave—Longview 360-425-6929 Mon–Fri: 8 am–4:30 pm; Sat: 9 am–5 pm; Sun: 12–4:30 pm	Reusable items
	Lakeside Industries 500 Tennant Way—Longview 360-425-9155	Asphalt
Lexington	Fire District 2 Fire Station West Side Highway	Cardboard, tin, aluminum, HDPE,* PET,* mixed paper

Municipality	Location	Accepted Recyclables
Unincorporated Cowlitz County	Columbia Heights Baptist Church 6136 Columbia Heights Road	Mixed paper, PET,* HDPE,* aluminum, tin
	Rose Valley Road	Glass, mixed paper, PET,* HDPE,* OCC, aluminum, tin
Lions Club	Multiple locations	Mixed paper
Boy Scouts of America	Multiple locations	Mixed paper
Countywide	Thrift stores Multiple locations	Reusable items
	Multiple locations	Car battery recycling

NOTES:
HDPE = high-density polyethylene.
OCC = old corrugated containers.
PET = polyethylene terephthalate.
*Plastics are not collected as of the date of the Plan draft issuance.
Additional sites, in the outlying areas of the county, are currently under consideration for inclusion.

1.2.3 Service Contract

The County contracts with Waste Control to provide long-term solid waste handling services, including processing, recycling, transfer, transportation, and disposal of solid waste in the county. Solid waste from the municipalities of Longview, Kelso, Castle Rock, Kalama, and Woodland, as well as other solid waste disposed of in the County's solid waste management system, will be handled under the terms of that contract. Waste Control retains the right to recycle and take ownership of recyclable material collected curbside, delivered to the transfer station, the Toutle drop box facility, and the rural recycling drop-off centers.

Through waste disposal interlocal agreements with the cities, Waste Control provides curbside pickup of commingled recyclable materials in Longview and Woodland, using automated recycling trucks. Waste Control also maintains three drop-off recycling centers in Kelso and one each in Castle Rock, Lexington, and Columbia Heights.

There is no specified minimum level of service in the county; however, the drop-off centers were strategically located to provide reasonable access to all county residents in the outlying areas, while making use of suitable existing sites. The County has not received complaints or inquiries for additional drop-off centers and plans to maintain these existing locations.

1.2.4 Number of Tons of Recyclables Collected

In 2018, the most recent year data were available, the County collected 94,300 tons of recycling. The following table provides a summary of total tons of recycling collected since 2011, the year of the last Plan update.

Table 3
2018 Cowlitz County Tons Recycled

Year	Total Recycling (Tons/Year)
2011	172,572
2012	119,149
2013	88,489
2014	95,379
2015	82,460
2016	91,734
2017	91,700
2018	94,300

1.3 Cowlitz County Recycling Contamination Study

In addition to the baseline inventory discussed above, the City of Longview has tracked the recycling contamination rate from its curbside pickup program since 2005 (see Table 4 below). The data show a promising trend of decreasing contamination rates in recent years.

Table 4
Longview Recycling Contamination Study

Year	Contamination Rate (%)
2005	40.6
2006	44.6
2007	41.3
2008	43.0
2009	39.5
2010	29.7
2011	27.1
2012	24.6
2013	22.4
2014	23.8
2015	20.6
2016	19.1
2017	20.5
2018	20.3
2019	18.0
2020	20.0
NOTE: 2019 and 2020 Contamination rates are estimated based on previous year trends.	

1.3.1 Contamination Studies Conducted throughout Washington

The County referenced contamination studies performed by the following counties to supplement the gaps in local contamination data.

1.3.1.1 The Recycling Partnership (2019)

In 2019, The Recycling Partnership (TRP) conducted a State of Curbside 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.

1.3.1.2 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.

1.3.1.3 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 to be sorted and weighed. 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.

1.3.1.4 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.

1.4 Develop Scope of Work with Stakeholders

The County will work with key stakeholders to develop a scope of work for this CROP, addressing the specific challenges and opportunities associated with local recycling contamination, as well as

identifying costs and other impacts to the recycling system. To begin this scoping process, the information learned from the baseline inventory (discussed above in Section 1.2) will be shared with the SWAC and relevant stakeholders, including, but not limited to:

- Elected officials and key staff from other local governments, including potential regional partners in the same MRF shed
- Garbage and recycling collection companies and their front-line staff
- Organizations representing homeowners, tenants, and multifamily and business interests
- MRF and transfer station operators
- End markets for recovered materials
- The County's Ecology regional planner and grant manager
- Nongovernmental organizations and community groups
- Regional, statewide, and national organizations that can provide technical assistance and/or financial support

1.5 Recycling Program Priority

Together with the key stakeholders identified above, the County will identify what recycling collection program(s) to focus on first. This decision could be driven by factors such as current knowledge of contamination levels and their estimated impact on costs and material quality, the number of customers, and the total quantity of material collected.

1.6 Gather Additional Recycling Contamination Data

Starting with the highest-priority programs, the County will establish baseline levels and types of recycling contamination. In discussion with stakeholders and building on the information in the state CROP and Ecology's Resource Library and on the work completed in collecting baseline data, the County will identify and develop ways to track specific contaminants. For example, tracking 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 Waste Control MRF and rejected materials to be disposed of
- Tracking contamination using an 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

1.7 List of Key Contaminants

Based on the data the County intends to collect and on its collaboration with key stakeholders, the County will identify the most problematic and costly contaminants, starting with the highest-priority programs. Although the types and impacts of contamination don't 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 greatest costs associated with managing a contaminant recycling stream at MRFs nationally come from the following and represent 80 percent of total contamination-related costs:

- Forty percent for disposal of residuals
- Twenty-six percent in value lost from contaminated recyclables
- Fourteen percent in labor to remove contamination from sorting equipment, etc.

1.8 Contamination-Reduction Education and Outreach

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:

- Moving toward uniformity in cart and container colors (e.g., blue for recycling, gray or black for garbage, and green for organics)
- Visual, easy-to-understand signage using photos and universal pictures and symbols
- Cart-tagging and cart rejection
- 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

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 anticontamination programs.

1.9 Anticontamination Strategies Evaluation

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 CROP implementation.

1.10 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 Plan 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 Plan revisions, including the required five-year revision process.

This work includes involving key stakeholders in reviewing, and if necessary, updating related elements in the Plan 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:

- A 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.

1.11 Implementation Schedule

An initial three-year implementation schedule for all steps in this CROP is included in Table 5 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.

Table 5
Cowlitz County CROP Implementation Schedule

Actions	Responsible Party	2021	2022	2023
1. Develop the scope of work with stakeholders.	County and Cities	✓		
2. Recycling program prioritization.	County and Cities	✓		
3. Gather additional recycling contamination data.	County and Cities		✓	
4. Identify key contaminants and their associated costs and impacts.	County and Cities		✓	
5. Develop and implement education and outreach strategies to reduce contamination.	Cities			✓
6. Evaluate the effectiveness of anticontamination strategies and set next steps.	County and Cities			✓
7. Explore contamination-reduction strategies beyond education and outreach.	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 C

COWLITZ COUNTY SOLID WASTE ADVISORY COMMITTEE BY-LAWS

COWLITZ COUNTY SOLID WASTE ADVISORY COMMITTEE

BY-LAWS

1. Statement of Purpose

The Cowlitz County Solid Waste Advisory Committee (SWAC) has been appointed by the Board of County Commissioners (BOCC) in accordance with Chapter 70A.205 (165) RCW. The statute requires the SWAC to "assist" in the development of solid waste handling programs and policies concerning solid waste handling and disposal, and review and comment on proposed rules, policies or ordinances prior to their adoption . . ." The scope and charge of the Cowlitz County Solid Waste Advisory Committee shall be:

a. to advise, actively assist and participate in the update or revision of the county or regional Solid Waste Management Plan;
b. to assist Cowlitz County in the development of programs and policies concerning solid waste handling and disposal, and;
c. to review and comment on proposed solid waste management rules, fees, policies and/or ordinances prior to their adoption.

2. Composition

A. **Members** – The SWAC shall be composed of nine (9) members, each having one vote, representing a balance of interest among the following groups: citizens, public interest groups, business, the waste management industry and local government.
B. **Ex-Officio Members** – The BOCC may appoint non-voting ex-officio members to the SWAC, who will serve at the BOCC's pleasure.
C. **Appointment** – Members shall be appointed by the Board of County Commissioners.
D. **Terms** – Members shall serve a term of two (2) years commencing from the March 15, 1988 appointment date. Members may be reappointed to serve consecutive terms. Reappointment shall be subject to confirmation by the Board of County Commissioners.
E. **Chair** – The initial Chairperson shall be appointed for a two (2) year term by the Board of County Commissioners. Subsequent chairpersons shall be elected by the Committee sitting in regular, open public meetings. The Chair will preside over committee meetings and coordinate development of the agenda with staff representatives of Cowlitz County Public Works Department. The Chair will sign all correspondence originated by the Committee on behalf thereof.
F. **Vice Chair** – A majority of the Committee shall elect one of its members as Vice Chair. The term of the Vice Chair shall be for two (2) years. The Vice Chair will preside over Committee meetings in the absence of the Chair.

G. **Secretary** – The County Solid Waste Superintendent or designate shall act as secretary to the Committee.

H. **Attendance** – A Committee member who accrues three (3) consecutive, unexcused absences from regular meetings may be removed from the Committee by the BOCC with the concurrence of two-thirds majority of the members.

I. **Substitution** – An appointed member may have a person, representing the absent member's interest, attend meetings and vote in the member's place for two meetings per year. Additional substitution may be requested and approved, if justification exists, by the BOCC.

3. **Meetings**

A. **Regular Meetings** – Meetings of the SWAC shall be called when necessary by the Chair. It is anticipated that meetings will be held monthly during active review of Solid Waste Management Plan Updates and at a minimum not less than semi-annually during off-planning years. At least ten (10) days prior notice shall be given.

B. **Minutes/Agendas** – Minutes of all meetings shall be kept by the Secretary and distributed to the members within three (3) weeks after a meeting. Agendas shall be prepared by staff with input and verbal approval by the Chair and distributed to the members at least seven (7) days in advance of any regularly scheduled meeting.

C. **Public Access** – All regular meetings of the Committee shall be held in a place that is open and easily accessible to the public. Provision shall be made for public comment at each meeting. Approved meeting minutes shall be available to the public on request. The committee is subject to, and will conform with, the provisions of RCW 42.30, the State Open Meeting Act.

D. **Quorum** – A quorum is required to be present before an official, regular meeting of the Committee can take place. A simple majority of the voting members of the Committee shall constitute a quorum.

E. **Conduct of Meetings** –

1. Call to Order.
2. Roll call and determination of quorum.
3. Introduction of guests.
4. Reading, correction, and approval of previous minutes.
5. Old business.
6. New business.
7. Public forum: five (5) minute limit at the pleasure of the Chair, extension at the pleasure of the SWAC members in attendance.
8. Announcements:
    a. Agenda for next meeting.
    b. Time, place of next meeting.
    c. Other announcements.

4. **Recommendations**

The SWAC shall advise and make recommendation to the Board of County Commissioners on matters within their scope and charge as provided for in SWAC By-Laws. Written reports, recommendations and correspondence submitted to the Board of County Commissioners shall be forwarded on behalf of a majority of the members over the signature of the Chair. Minority reports, if any, shall be attached to, and forwarded with such reports, recommendations or correspondence without comment by the Chair.

5. **Waiver of the Rules**

Any of the above rules or procedures may be waived by a majority vote of the quorum provided further that the reason therefore be included in each motion for waiver.

6. **Amendments**

Any of these By-Laws may be amended or repealed, and new By-Laws may be adopted, by two-thirds majority vote of the quorum and approval by the BOCC. Prior notice of thirty (30) days shall be given to the SWAC before undertaking amendatory action.

ADOPTED July 20, 1988.

APPENDIX D

SEPA CHECKLIST

SEPA Checklist
WAC 197-11-960

A. BACKGROUND

1. **Name of proposed project, if applicable**
   Cowlitz County Comprehensive Solid and Hazardous Waste Management Plan (the Plan)

2. **Name of applicant**
   Cowlitz County Department of Public Works

3. **Address and phone number of applicant and contact person**
   Cowlitz County Department of Public Works
   Ron Williams, Solid Waste Manager
   1600 13th Ave South
   Kelso, WA 98626
   (360) 274-6492

4. **Date checklist prepared**
   April 1, 2020

5. **Agency requesting checklist**
   Cowlitz County Department of Building and Planning

6. **Proposed timing or schedule (including phasing, if applicable)**
   Proposed implementation of the Cowlitz County SWMP will begin upon adoption and proceed through plan revision in 2021. The SWMP recommends various solid waste management programs to be developed and implemented over the next five 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 Plan will be reviewed five years after its implementation and updated if necessary, as required by state law

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 local governments to develop a local Solid Waste Management Plan. Cowlitz County or a local government agency with jurisdiction will conduct appropriate environmental assessment of each element of the selected program prior to implementation in compliance with State Environmental Policy Act requirements. Specific sites associated with the Plan operate in accordance with permits that include protection of the environment as a condition for 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 Plan, each local jurisdiction will need to approve and adopt the Plan. These jurisdictions include the Washington State Department of Ecology; Cowlitz County Board of Commissioners; Washington Utilities and Transportation Commission; and the cities of Longview, Kelso, Kalama, Castle Rock, and Woodland

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 Cowlitz County Plan defines objectives and proposes alternatives for the management and disposal of municipal solid waste (MSW) and moderate risk waste (MRW) produced by households and commercial and industrial generators. The Plan discusses all aspects of solid waste management in the county and incorporated areas, including waste reduction, recycling, composting, collection, transfer, waste disposal, MRW management, regulation, and administration. Specific recommendations are made for all of the above elements; however, in most cases these recommendations represent program or policy refinements

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 Plan will include all incorporated and unincorporated areas in Cowlitz County, Washington. Certain plan recommendations are for specific areas or sites in the county.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other
Future solid waste facilities or programs will be required to evaluate site conditions as part of SEPA documentation.

b. What is the steepest slope on the site (approximate percent slope)?
Does not apply

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland
Does not apply

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe
Future solid waste facilities or programs will be required to evaluate soils as part of SEPA documentation

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill
Does not apply

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe
Does not apply

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)
Does not apply

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any
Does not apply

2. **Air**

    a. **What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and 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 of the recommendations made by the Plan. Future solid waste facilities or programs will be required to evaluate air emissions as part of SEPA documentation

    b. **Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe**
    Does not apply

    c. **Proposed measures to reduce or control emissions or other impacts to air, if any**
    Does not apply

3. **Water**

    a. **Surface**

        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

        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

        4. **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known**
        Does not apply

5. **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan**
   Does not apply

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

b. Ground

1. **Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known**
   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

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any
Does not apply

4. Plants

a. Check or circle 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**
☐ **Wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other**
☐ **Water plants: water lily, eelgrass, milfoil, other**
☐ **Other types of vegetation**
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 or 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.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site: birds: hawk, heron, eagle, songbirds, other: mammals: deer, bear, elk, beaver, other: fish: bass, salmon, trout, herring, shellfish, other:
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 or 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.

6. **Energy and Natural Resources**

   a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**
   Various facilities and programs proposed in the Plan will require small amounts of electric power and petroleum-based fuels for transportation and facility or equipment operation.

   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 Cowlitz County SWMP emphasizes waste reduction and recycling, which results in the conservation of energy and natural resources. The Plan also recommends the evaluation of the potential for utilizing landfill gas for energy.

7. **Environmental Health**

   a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**
   No environmental health risks are anticipated as a result of new or additional programs proposed by the Cowlitz County Plan. Potential environmental health hazards specific to existing facilities have been addressed through approved facility operation plans or health and safety plans.

      1. **Describe special emergency services that might be required.**
      Additional emergency services are not required by any of the Plan recommendations.

      2. **Proposed measures to reduce or control environmental health hazards, if any:**
      There are no net increases in risk caused by the Plan recommendations. Existing site-specific emergency procedures are addressed in 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)?**
   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

a. What is the current use of the site and adjacent properties?
Future solid waste facilities or programs will be required to evaluate land use as part of SEPA documentation.

b. Has the site been used for agriculture? If so, describe.
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 an "environmentally sensitive" area? 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.

9. Housing

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

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**
Future solid waste facilities or programs will be required to evaluate aesthetics as part of SEPA documentation.

b. **What views in the immediate vicinity would be altered or obstructed?**
Does not apply.

c. **Proposed measures to reduce or control aesthetic impacts, if any:**
Does not apply.

11. Light and Glare

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**
Future solid waste facilities or programs will be required to evaluate light and glare as part of SEPA documentation.

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

a. **What designated and informal recreational opportunities are in the immediate vicinity?**
Future solid waste facilities or programs will be required to evaluate recreation as part of SEPA documentation

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. Historical and Cultural Preservation

a. **Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.**
Future solid waste facilities or programs will be required to evaluate historic and cultural preservation as part of SEPA documentation.

b. **Generally, describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**
Does not apply.

c. **Proposed measures to reduce or control impacts, if any:**
Does not apply.

14. Transportation

a. **Identify public streets and highways serving the site and describe proposed access to the existing street system. Show on site plans, if any.**
Future solid waste facilities or programs will be required to evaluate transportation as part of SEPA documentation.

b. **Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**
Does not apply

c. **How many parking spaces would the completed project have? How many would the project eliminate?**
Does not apply.

d. **Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**
Does not apply

e. **Will the project 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? If known, indicate when peak volumes would occur.**
Does not apply.

g. **Proposed measures to reduce or control transportation impacts, if any:**
Does not apply.

15. Public Services

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**
Future solid waste facilities or programs will be required to evaluate public services as part of SEPA documentation.

b. **Proposed measures to reduce or control direct impacts on public services, if any.**
Does not apply.

16. Utilities

a. **Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.**
Future solid waste facilities or programs will be required to evaluate utilities as part of SEPA documentation.

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

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Date Submitted: _____

D. SUPPLEMENTAL SHEET FOR NONPROJECT 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 Plan 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. By providing for secure disposal of solid wastes, the Plan 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 Plan's recommendations.

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

   Proposed measures to avoid or reduce such increases are:
   The management of MSW within the county, rather than shipping all waste out of county, reduces the potential increased discharges to water; emissions to air; production, storage, or release of toxic or hazardous substances, or production of noise to the greatest extent possible.

2. **How would the proposal be likely to affect plants, animals, fish, or marine life?**
   Implementation of the proposed Plan 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 are expected to remain low. Dumping in uninhabited areas not only contributes to 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 Plan'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.

Proposed measures to protect or conserve energy and natural resources are:
Capturing and processing of recyclable materials into new products reduces the demand on natural resources and conserves energy, while also preserving landfill volume for wastes for which there are no current uses.

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 Plan 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. The disposal of out-of-county MSW will use existing transportation corridors.

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 Plan 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?**

   The collection of recyclable materials separate from solid waste increases the amount of transportation required, since recyclable materials must be hauled separately from waste materials.

   Proposed measures to reduce or respond to such demand(s) are:

   Increased transportation demands may be unavoidable; however, they may be partially offset by savings in energy and materials through the reuse of recycled materials such as paper, glass, aluminum, and steel. Increased recycling and source reduction also conserve space in landfills, thus delaying the need for developing new facilities.

7. **Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.**

   The Plan was prepared in response to a State requirement for the proper management of solid waste, and it complies with all applicable local, state, and federal laws and requirements regarding environmental protection.

APPENDIX E

WUTC COST ASSESSMENT

COST ASSESSMENT QUESTIONNAIRE

General Information

Plan prepared for the County of:	Cowlitz
Plan prepared for the City of:	N/A
Prepared by:	Cowlitz County Department of Public Works, Ron Williams
Contact telephone	(360) 274-6492
Contact email:	Williams.Ron@co.cowlitz.wa.us
Date	March 8, 2021

Years

Throughout this document:

Year 1 (Base Year) shall refer to :	2021
Year 2 shall refer to:	2022
Year 3 shall refer to:	2023
Year 4 shall refer to:	2024
Year 5 shall refer to:	2025
Year 6 shall refer to:	2026

Each year shall refer to (check one):

☒	Calendar year	January 1 – December 31
☐	Fiscal year	Such as July 1 – June 30

1. Demographics

1.1. Population

1.1.1. Provide the total population of your County (excluding cities choosing to develop their own SWMP) for the base year and each of the following five years.

Table 1.1.1.a.

Year 1	109,780
Year 2	110,470
Year 3	111,107
Year 4	111,702
Year 5	112,267
Year 6	112,733

1.2. References and Assumptions

1. U.S. Census Bureau, 2020 Population Estimates
2. 2021 - 2026 Population Data: OFM Growth Management Act Population Projections for Counties, 2010-2040 Population Estimates, utilizing medium growth estimate

2. Waste Stream Generation

Provide the information below related to solid waste and recycling. Disposal refers to those tons disposed of at a landfill, incinerator, transfer station, or any other form of disposal you may be using. If other, please identify.

2.1. Tonnage of Solid Waste Disposed

2.1.1. Provide the total tonnage of solid waste disposed of in the base year and each of the following five years.

Table 2.1.1.a.

Year 1	139,122
Year 2	141,396

Year 3	143,634
Year 4	145,847
Year 5	148,051
Year 6	150,152

2.2. Tonnage of Recyclable Materials with a Market[7]

2.2.1. Provide the tonnage of recyclable materials recycled in the base year and each of the following five years.

Table 2.2.1.a.

Year 1	94,986
Year 2	95,583
Year 3	96,134
Year 4	96,649
Year 5	97,138
Year 6	97,541

2.3. Tonnage of Recyclable Materials without a Market

2.3.1. Provide the tonnage of recyclable materials disposed of in the base year and each of the following five years.

Table 2.2.1.a.

Year 1	N/A
Year 2	
Year 3	
Year 4	

[7] RCW 90.95.090(7)(c)

Year 5

Year 6

2.4. References and Assumptions

1. Table Total tonnage of solid waste disposed calculated using base year measured disposal per capita, medium growth rate of solid waste disposal of 1% and OFM population forecast
2. Total tonnage of recyclable materials recycled calculated using measured recycling rate per capita in the base year, medium growth rate of recycling per capita of 0% and OFM population forecast
3. Waste Control does not currently track the total tonnage of recyclable materials without a market but has been asked to do so.

3. Collection Programs

3.1. Regulated Solid Waste Collection Programs

Provide information for each UTC-regulated solid waste collection company operating in your jurisdiction for the base year and each of the following five years.

Table 3.1.a.

UTC-Regulated Hauler Name Waste Control Recycling, Inc.

G-Certificate # G-101

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Residential						
# of customers	12,953	13,004	13,055	13,106	13,157	13,208
Tonnage collected	98,777	100,391	101,980	103,580	105,180	106,780
Commercial						
# of customers	591	593	595	597	599	601
Tonnage collected	40,345	41,005	41,654	42,309	42,964	43,619

Table 3.1.b.

UTC-Regulated Hauler Name Waste Connections of Washington, Inc.

G-Certificate # G-253

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Residential						
# of customers	3,084	3,384	3,684	3,984	4,284	4,584
Tonnage collected	330	385	440	495	550	605
Commercial						
# of customers	420	470	520	570	620	670
Tonnage collected	67	87	107	127	147	167

Table 3.1.c.

UTC-Regulated Hauler Name Jeffery K. Cummins d/b/a Community Waste & Recycling

G-Certificate # G-219

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Residential						
# of customers	291	293	295	297	299	301
Tonnage collected	276	278	280	282	284	286
Commercial						
# of customers	10	10	10	10	10	10
Tonnage collected	90	90	90	90	90	90

3.2. Cost & Funding for Solid Waste Programs

Provide information for solid waste programs that have been implemented and/or proposed. Include costs and proposed funding mechanism. If these programs are discussed in the SWMP, provide the page number in the draft plan on which it is discussed.

Table 3.2.a.

Implemented			
Program	**Cost**	**Funding**	**Page #**

Household Hazardous Waste	$259,077	Ecology Grant and Tip Fees	Page 71

Table 3.2.b.

Proposed

Program	Cost	Funding	Page #
N/A			

3.3. References and Assumptions

1. Number of customer growth calculated using average OFM intermediate population forecast (0.39%) applied to number of customers recorded during the base year.
2. Waste Control solid waste collected is calculated using medium solid waste disposal growth forecast (1.0%) and percentage of residential and commercial customers provided by Waste Control.
3. Household Hazardous Waste cost provided by County.

4. Waste Reduction (Recycling and Organics)

4.1. Recycling

4.1.1. Regulated Recycling Collection Programs[8]

Provide information for each UTC-regulated recycling company operating in your jurisdiction for the base year and each of the following five years.

[8] RCW 70.95.090(7)(c)

Table 4.1.1.a.

UTC-Regulated Hauler Name Waste Control Recycling, Inc.

G-Certificate # G-101

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Residential						
# of customers	10	10	10	10	10	10
Tonnage collected	37,994	38,233	38,454	38,679	38,904	39,129
Commercial						
# of customers	10	10	10	10	10	10
Tonnage collected	56,992	57,350	57,681	58,026	58,371	58,716

Table 4.1.1.b.

UTC-Regulated Hauler Name N/A

G-Certificate #

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Residential						
# of customers						
Tonnage collected						
Commercial						
# of customers						
Tonnage collected						

Table 4.1.1.c.

UTC-Regulated Hauler Name N/A

G-Certificate #

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Residential						
# of customers						
Tonnage collected						
Commercial						
# of customers						
Tonnage collected						

4.1.2. Recyclable Materials

Provide a list of recyclable materials to be collected in accordance with the SWMP. For each item, indicate if there is an active market and if the revenues exceed the cost of processing.

Table 4.1.2.a.

Recyclable Material	Active Market	Revenues > Processing Costs
Non Ferrous Metal	☒ Yes ☐ No	☒ Yes ☐ No
Ferrous Metal	☒ Yes ☐ No	☒ Yes ☐ No
Concrete	☒ Yes ☐ No	☒ Yes ☐ No
Electronics	☒ Yes ☐ No	☒ Yes ☐ No
Curbside Mix	☒ Yes ☐ No	☐ Yes ☒ No
Cores	☒ Yes ☐ No	☐ Yes ☒ No
High Bright News	☒ Yes ☐ No	☒ Yes ☐ No
Hard White	☒ Yes ☐ No	☒ Yes ☐ No
Unprinted Poly	☒ Yes ☐ No	☒ Yes ☐ No
OCC	☒ Yes ☐ No	☒ Yes ☐ No
White News Blank	☒ Yes ☐ No	☒ Yes ☐ No
Hog Fuel	☒ Yes ☐ No	☒ Yes ☐ No

4.1.3. Costs & Funding for Recycling

Provide information for recycling programs that have been implemented and/or proposed. Include costs and proposed funding mechanism. If these programs are discussed in the SWMP, provide the page number in the draft plan on which it is discussed.

Table 4.1.3.a.

Implemented

Program	Cost	Funding	Page #
Longview curbside collection	$767,006	Rate funded	Page 37
Drop-off Centers	$65,907	County funded	Page 38

Table 4.1.3.b.

Proposed

Program	Cost	Funding	Page #
N/A			

4.2. Other Waste Reduction Programs (Organics, such as Yard Waste and Food Waste)

4.2.1. Regulated Organics Collection Programs

Provide information for each UTC-regulated company collecting organics operating in your jurisdiction for the base year and each of the following five years.

Table 4.2.1.a.

UTC-Regulated Hauler Name N/A

G-Certificate #

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Residential						
# of customers						
Tonnage collected						
Commercial						
# of customers						
Tonnage collected						

Table 4.2.1.b.

UTC-Regulated Hauler Name N/A

G-Certificate #

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Residential						
# of customers						
Tonnage collected						
Commercial						
# of customers						
Tonnage collected						

4.2.2. Costs & Funding for Organics Collection Programs

Provide information for programs for collecting organics that have been implemented and/or proposed. Include costs and proposed funding mechanism. If these programs are discussed in the SWMP, provide the page number in the draft plan on which it is discussed.

Table 4.2.2.a.

Implemented

Program	Cost	Funding	Page #
N/A			

Table 4.2.2.b.

Proposed

Program	Cost	Funding	Page #
N/A			

4.3. References and Assumptions

1. Recycling data provided by Waste Control and calculated using intermediate OFM population forecast and projected recycling projection.

5. Disposal

5.1. Energy Recovery & Incineration (ER&I) Disposal Programs

5.1.1. ER&I Facilities:

Table 5.1.1.a.

	Facility	Facility
Name	N/A	
Location		
Owner		
Operator		

5.1.2. Amount Landfilled

For each facility, provide the estimated amount of ash or materials that cannot be processed for the base year and each of the following five years.

Table 5.1.2.a.

Facility	N/A	
Year 1		
Year 2		
Year 3		
Year 4		
Year 5		
Year 6		

5.1.3. Costs & Funding for ER&I Programs

Provide information for ER&I programs that have been implemented and/or proposed. Include costs and proposed funding mechanism. If these programs are discussed in the SWMP, provide the page number in the draft plan on which it is discussed.

Table 5.1.3.a.

Implemented			
Program	**Cost**	**Funding**	**Page #**
N/A			

Table 5.1.3.b.

Proposed			
Program	**Cost**	**Funding**	**Page #**
N/A			

5.1.4. Ash Disposal Expense

Provide the expected costs ash disposal.

Table 5.1.4.a.

	Amount of Ash	Cost
Year 1	N/A	
Year 2		
Year 3		
Year 4		
Year 5		
Year 6		

5.2. Land Disposal Program

5.2.1. Land Disposal Facilities

Provide the following information for each land disposal facility in your jurisdiction that receives garbage or refuse generated in the county.

Table 5.2.1.a.

	Facility	Facility
Name	Headquarters Landfill	Toutle Drop Box
Location	Castle Rock, WA	200 S. Toutle Rd, Toutle, WA
Owner	Cowlitz County	Cowlitz County
Operator	Cowlitz County	Cowlitz County

5.2.2. Regulated Disposal

Provide the tonnage disposed of at each facility by UTC-regulated haulers.

Table 5.2.2.a.

Facility	Headquarters Landfill	Toutle Drop Box
Year 1	70,450.71	N/A
Year 2	70,801.21	N/A
Year 3	71,151.71	N/A
Year 4	71,502.21	N/A
Year 5	71,852.71	N/A
Year 6	72,203.21	N/A

5.2.3. Non-Regulated Disposal

Provide the tonnage disposed of at each facility by other (non-regulated) haulers and other contributors.

Table 5.2.3.a.

Facility	Headquarters Landfill	Toutle Drop Box

Year 1	713,474.59	1,251.60
Year 2	716,997.9	1,257.80
Year 3	720,521.21	1,264.00
Year 4	724,044.52	1,270.20
Year 5	727,567.83	1,276.40
Year 6	731,091.14	1,282.60

5.2.4. Costs & Funding for Land Disposal Programs

Provide information for land disposal programs that have been implemented and/or proposed. Include costs and proposed funding mechanism. If these programs are discussed in the SWMP, provide the page number in the draft plan on which it is discussed.

Table 5.2.4.a.

Implemented

Program	Cost	Funding	Page #
N/A			

Table 5.2.4.b.

Proposed

Program	Cost	Funding	Page #
N/A			

5.3. References and Assumptions

1. Non-regulated hauler data reflects tonnage disposed of by self-haulers to the Landfill.
2. Values are based on OFM estimate of intermediate population growth (0.5% per year) and a corresponding increase in tonnage disposed of at each facility.

6. Administration Program

6.1. Costs & Funding for Administration Programs

Provide information for administration programs that have been implemented and/or proposed. Include costs and proposed funding mechanism. If these programs are discussed in the SWMP, provide the page number in the draft plan on which it is discussed.

Table 6.1.a.

Implemented

Program	Cost	Funding	Page #
N/A			

Table 6.1.b.

Proposed

Program	Cost	Funding	Page #
N/A			

6.2. References and Assumptions

Cost and funding information provided by County

7. Other Programs

7.1. Programs

For each program in effect or planned that does not readily fall into one of the previously described categories please fill in the following table.

Table 7.1.a.

Program	Solid Waste Management Plan Update		
Page #			
Owner/Operator	Cowlitz County		
UTC Regulations	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Anticipated Yearly Costs	$33,775		

7.1.1. UTC Regulation Involvement

If UTC regulation is involved, please explain the extent of involvement.

7.2. Costs & Assumptions of Other Programs

Provide information for other programs that have been implemented and/or proposed. Include costs and proposed funding mechanism. If these programs are discussed in the SWMP, provide the page number in the draft plan on which it is discussed.

Table 7.2.a.

Implemented			
Program	**Cost**	**Funding**	**Page #**
N/A			

Table 7.2.b.

Proposed

Program	Cost	Funding	Page #
N/A			

7.3. References and Assumptions

Costs provided by Cowlitz County

8. Funding Mechanisms

This section relates specifically to the funding mechanisms currently in use and the ones that will be implemented to incorporate the recommended programs in the draft plan. Because the way a program is funded directly relates to the costs a resident or commercial customer will have to pay, this section is crucial to the cost assessment process. Please fill in each of the following tables.

8.1. Facility Inventory

Table 8.1.a.

Facility Inventory

Facility Name	Type of Facility	Tip Fee per Ton	Transfer Cost	Transfer Station Location	Final Disposal Location	Total Tons Disposed	Total Revenue Generated (Tip Fee x Tons)
Headquarters Landfill	Landfill	$20.60	$0.00	Waste Control	Headquarters Landfill	578,482.23	$11,914,423.79
Toutle Drop Box	Drop Box	$73.00	$66.13	Waste Control	Headquarters Landfill	1,407.16	$102,718.82
Waste Control	Transfer Station	$57.04	$27.87	Waste Control	Headquarters Landfill	145,053.52	$8,274,537.76

8.2. Tip Fee Component

Table 8.2.a.

Tip Fee Components							
Tip Fee by Facility	**Surcharge**	**City Tax**	**County Tax**	**Transportation Cost**	**Operational Cost**	**Administration Cost**	**Closure Costs**
Headquarters Landfill	NA	NA	NA	NA	$22.35	NA	$2.41
Toutle Drop Box	NA	NA	NA	$45.97	$26.87	NA	NA
Waste Control Transfer Station	NA	NA	NA	$7.71	$26.87	NA	NA

8.3. Tip Fee Forecast

Table 8.3.a.

Tip Fee Forecast

Tip Fee per Ton by Facility	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Headquarters Landfill	$20.60	$21.01	$21.43	$21.86	$22.30	$22.74
Toutle Drop Box	$73.00	$74.46	$75.95	$77.47	$79.02	$80.60
Waste Control Transfer Station	$57.04	$58.18	$59.34	$60.53	$61.74	$62.98

8.4. References and Assumptions

Please provide any support for the information you have provided. An annual budget or similar document would be helpful.

1. 2020 Cowlitz County Financial Assurance
2. 2020 Cowlitz County Solid Waste Budget

8.5. Surplus Funds

Provide information about any surplus or saved funds that may support your operations.

Currently, the $57.04/ton tip fee is broken into a portion to pay for required services with the surplus going to a fund to pay for future capital and program expenses. The required services amount to $56.93/ton, and include solid waste administration, landfill operation, and landfill closure/post-closure fund contributions. The remaining $0.11/ton is funded through accumulated reserves. Additionally, the fund is used to subsidize the tipping fee at the Waste Control Transfer Station. Using this fund, Cowlitz County anticipates a tipped fee increase in 2022.

At the Toutle Drop Box facility, the County subsidizes a portion of the actual transportation costs. Use of the facility is based on a price per container instead of a price per weight. The MSW received at the Drop Box facility is not weighed until it reaches the landfill for disposal. The transportation subsidy, which amounts to approximately $22.19/ton. The disposal of the material at the Transfer Station is recorded at $55.82/ton, which is then distributed as discussed above.

APPENDIX F

HAZARDOUS WASTE GENERATORS LIST, REMEDIAL ACTION SITES, HAZARDOUS WASTE TRANSPORTATION, STORAGE, DISPOSAL, AND RECYCLING COMPANIES LIST

Small-Quantity Generators
Cowlitz County, Washington

RCRA Site ID	Name	City
WAD027344084	Bud Clary Chevrolet Inc	Longview
WAD050961762	Behrends Body Shop Inc.	Kelso
WAD980981153	Cowlitz County PUD No. 1	Longview
WAD981763790	Lamiglas Inc	Woodland
WAD988467197	Cowlitz Clean Sweep Inc	Longview
WAD988471645	PacifiCorp Ariel	Ariel
WAD988495115	G. Loomis, Inc	Woodland
WAD988520631	JH Kelly LLC	Longview
WAH000003087	BNSF Railway Company Longview	Longview
WAH000008854	Penske Truck Leasing Co LP	Kelso
WAH000018929	PacifiCorp Amboy	Amboy
WAH000021375	USFWS ABERNATHY FISH TECHNOLOGY CENTER	Longview
WAH000030860	Interfor U.S. Inc	Longview
WAH000037934	Miller Paint Company Inc Longview	Longview
WAH000039253	Owens-Brockway Glass Container Inc	Kalama
WAH000040030	Rite Aid #5287	Kelso
WAH000040056	Rite Aid #5288	Longview
WAH000042579	Eagle US 2 LLC	Longview
WAH000045060	Safeway Store 1762	Woodland
WAH000045222	Safeway Store and Fuel 2637	Kelso
WAH000045391	Safeway Store 91	Longview
WAH000045899	Safeway Store 1078	Longview
WAH000051526	North Pacific Paper Co LLC Longview	Longview
WAH000052214	CF Rail Services LLC Longview	Longview
WAH000056640	Petco 1213	Longview
WAH000057240	Kemira Water Solutions Inc Kalama Terminal	Kalama
WAH000057280	R D Olson MFG Inc	Kelso
WAR000001149	Olympic Pipe Line Co Castle Rock Station	Castle Rock

NOTES:

PUD = public utility district.

RCRA = Resource Conservation and Recovery Act.

USFWS = U.S. Fish and Wildlife Service.

RCRA = Resource Conservation and Recovery Act

Medium-Quantity Generators
Cowlitz County, Washington

RCRA Site ID	Name	City
WAD010745917	INTERNATIONAL PAPER LONGVIEW	Longview
WAD061486858	Port of Longview	Longview
WAD112678909	Steel Painters Inc	Kelso
WAD988476545	USNR Woodland Division	Woodland
WAD988483293	Lower Columbia College	Longview
WAD988496808	UPS Kelso	Kelso
WAH000013839	Steel Painters Inc	Longview
WAH000017665	Advanced Comfort Products Inc	Longview
WAH000024248	Home Depot 4725	Longview
WAH000036767	Lifeport Inc Heritage St	Woodland
WAH000036778	Lifeport Inc Howard Way	Woodland
WAH000037289	Walmart Supercenter 2469	Longview
WAH000037865	Walmart Supercenter 3742	Woodland
WAH000050679	Lowes Home Centers LLC 1887	Longview
WAH000056940	I-5 North on-ramp at Exit 27	Kalama
WAR000008185	Walmart Supercenter #5853	Longview

NOTES:

RCRA = Resource Conservation and Recovery Act.

Large-Quantity Generators
Cowlitz County, Washington

RCRA Site ID	Name	City
WAD009041443	Longview Fibre Paper & Packaging Longview	Longview
WAD009041450	Nippon Dynawave Packaging Longview	Longview
WAD042482984	Stowe Woodward Co	Kelso
WAD057068561	Millennium Bulk Terminals Longview LLC	Longview
WAD092899574	Emerald Kalama Chemical LLC	Kalama
WAD982653313	Arch Wood Protection Inc	Kalama
WAD982654881	Solvay Chemicals Inc	Longview
WAD988472452	ALS Group USA Corp dba ALS Environmental	Kelso
WAH000000455	Steelscape Inc	Kalama
WAH000013300	Hayes Cabinets Inc	Woodland
WAH000027968	Target Store 0628	Kelso
WAH000034471	PSE MINT FARM GENERATION Facility	Longview
WAH000036260	NORTHWOOD CABINETS INC	Woodland
WAH000047339	NOR TECH FABRICATION	Kelso
WAR000001362	Portco Packaging	Woodland

NOTES:

RCRA = Resource Conservation and Recovery Act.

Conditionally Exempt Quantity Generators
Cowlitz County, Washington

RCRA Site ID	Name	City
WA7891406343	US DOE BPA Longview Substati	Longview
WAD047082060	Chemtrade Performance Chemicals US LLC	Kalama
WAD087462503	Fuel Processors Inc	Woodland
WAD980986012	Oil Re Refining Co Woodland	Woodland
WAD981772221	KELSO SCHOOL DIST 458	Kelso
WAD988481032	Columbia River Carbonates Woodland	Woodland
WAD988515151	Cowlitz County Headquarters Landfill	Castle Rock
WAH000014944	CCS	Longview
WAH000015750	Brusco Tug & Barge Inc 14th Ave	Longview
WAH000019026	WSDOT Cowlitz River Bridge SR 432	Kelso
WAH000022628	Jammies Environmental Inc	Longview
WAH000029272	Stellar J Corporation	Woodland
WAH000039203	Anderson Environmental Contracting LLC	Kelso
WAH000040240	BNSF Railway Co Longview Junction	Kelso
WAH000040858	ExxonMobil Oil Corp 46123	Longview
WAH000043000	Bay Valve Service Longview	Longview
WAH000048366	Pacific Tech Construction Inc	Kelso
WAH000050460	Genoa a QoL Healthcare Co LLC Longview	Longview
WAH000056195	JONES STEVEDORING CO Longview	Longview
WAR000009928	WA AGR Cowlitz 1	Longview

NOTES:

RCRA = Resource Conservation and Recovery Act.

US DOE BPA = U.S. Department of Energy, Bonneville Power Administration.

WA AGR = Washington Department of Agriculture.

WSDOT = Washington State Department of Transportation.

Remedial Action Sites
Cowlitz County, Washington

Cleanup Site Name	FS ID	Site Cleanup Status	Rank	City
OLYMPIC PIPELINE COMPANY LLC	1092	Awaiting Cleanup	1 - Highest Assessed Risk	Castle Rock
WEYERHAEUSER HQ CAMP	1106	Awaiting Cleanup	3 - Moderate Risk	Castle Rock
Abby Sparks Property	33056	Cleanup Started		Castle Rock
Ditch and Residence by 9811 Barnes Dr	47201	Awaiting Cleanup		Castle Rock
CASTLE ROCK CHEVRON	85478855	Cleanup Started	5 - Lowest Assessed Risk	Castle Rock
WEYERHAEUSER TIMBERLANDS	62431315	Awaiting Cleanup	3 - Moderate Risk	Cougar
EMERALD KALAMA CHEMICAL LLC	1082	Cleanup Started	1 - Highest Assessed Risk	Kalama
Skinner Residential Property	59642	Awaiting Cleanup		Kalama
Diesel Spill WSDOT ROW I-5 Exit 27	61037	Awaiting Cleanup		Kalama
KALAMA PORT OF COLUMBIA FIBRE	1597458	Cleanup Started	3 - Moderate Risk	Kalama
CALGON CORP	5163175	Cleanup Started		Kalama
OLD KALAMA LANDFILL	6799307	Awaiting Cleanup	3 - Moderate Risk	Kalama
Chemtrade Performance Chemicals US LLC	24634187	Cleanup Started		Kalama
REBEL TRUCK STOP	88257919	Awaiting Cleanup		Kalama
Good Day Market	89995291	Awaiting Cleanup		Kalama
UNOCAL BULK PLANT 0321	1094	Cleanup Started	1 - Highest Assessed Risk	Kelso
CLIFF KOPPE METALS	1102	Awaiting Cleanup	2 - Moderate-High Risk	Kelso
BECKMAN PROPERTY	16666	Awaiting Cleanup		Kelso
Oringer Residential HOT	34322	Cleanup Started		Kelso
Kelso American Legion	95350	Awaiting Cleanup		Kelso
BNSF RR 2003 TRAIN COLLISION	430456	Awaiting Cleanup	1 - Highest Assessed Risk	Kelso
BECKER RESIDENCE	1272630	Cleanup Started		Kelso
COWLITZ COUNTY KELSO SHOP	1733394	Cleanup Started		Kelso
WALLACE ROCK PRODUCTS INC	3964890	Awaiting Cleanup	1 - Highest Assessed Risk	Kelso
Zahl Property	4501326	Cleanup Started		Kelso
PACIFIC PRIDE 3	7491444	Cleanup Started	5 - Lowest Assessed Risk	Kelso
THE ARCHDIOCESE HOUSING AUTHORITY	9643998	Cleanup Started	1 - Highest Assessed Risk	Kelso
QUALITY CARRIERS INC	28773839	Cleanup Started	3 - Moderate Risk	Kelso
ARCO 4093	31787227	Cleanup Started		Kelso
TALLEY'S PACIFIC AVENUE MARKET	34996343	Cleanup Started	3 - Moderate Risk	Kelso
TROY PROPERTY	53212796	Cleanup Started	2 - Moderate-High Risk	Kelso
UNOCAL KELSO	53424674	Cleanup Started	2 - Moderate-High Risk	Kelso
QUICK STOP MARKET	72548699	Awaiting Cleanup		Kelso
BNSF KELSO SPILL	78328965	Cleanup Started		Kelso
WILCOX & FLEGEL OIL CO	83572551	Cleanup Started	2 - Moderate-High Risk	Kelso
DOT KELSO MAINTENANCE SITE	95369134	Cleanup Started	3 - Moderate Risk	Kelso
Weyerhaeuser Co Longview	27	Cleanup Started	1 - Highest Assessed Risk	Longview
WEYERHAEUSER CO HG CHLOR ALK	28	Cleanup Started	1 - Highest Assessed Risk	Longview
Reynolds Metals Aluminum Smelter	29	Cleanup Started	5 - Lowest Assessed Risk	Longview
INTERNATIONAL PAPER LONGVIEW	1080	Cleanup Started	1 - Highest Assessed Risk	Longview
OSTRANDER PROPERTY	1084	Awaiting Cleanup	4 - Low-Moderate Risk	Longview
Schill Brothers Asphalt & Paving	1085	Awaiting Cleanup	1 - Highest Assessed Risk	Longview
GARDNER FOREST PRODUCTS	1091	Awaiting Cleanup	4 - Low-Moderate Risk	Longview
ARATEX	1095	Cleanup Started	2 - Moderate-High Risk	Longview
United Rentals NW Inc Longview	1100	Awaiting Cleanup		Longview
MCCORD BROS NISSAN DODGE	1105	Awaiting Cleanup	3 - Moderate Risk	Longview
MCCALL TRUCKING	1110	Awaiting Cleanup		Longview
NORGE LAUNDRY & CLEANING VILLAGE	6101	Cleanup Started		Longview
JJ Wood Energy	9170	Cleanup Started		Longview

Remedial Action Sites
Cowlitz County, Washington

Columbia blvd 1100 Blcok	20930	Awaiting Cleanup		Longview
Columbia Theater for the Performing Arts	28651	Cleanup Started		Longview
Bud Clary Subaru	34656	Cleanup Started		Longview
Nichols Blvd Residential HOT	92865	Awaiting Cleanup		Longview
Longview Tire Sales, Inc. North	98458	Awaiting Cleanup		Longview
KOLLN PROPERTY	393401	Awaiting Cleanup		Longview
TRIANGLE MALL SHOPPING CENTER	1009076	Awaiting Cleanup		Longview
COWLITZ COUNTY PUBLIC WORKS	2858988	Cleanup Started		Longview
CLARY PROPERTY	4637080	Awaiting Cleanup		Longview
SHELL STATION OREGON WAY	4962876	Cleanup Started	2 - Moderate-High Risk	Longview
TRANSMISSION TRADING CO	5068990	Awaiting Cleanup	1 - Highest Assessed Risk	Longview
LONGVIEW AUTO WRECKING	5808650	Awaiting Cleanup	1 - Highest Assessed Risk	Longview
REPROGRAPHICS	5878482	Cleanup Started	3 - Moderate Risk	Longview
BAKER'S CORNER STORE	6266563	Cleanup Started		Longview
WALGREENS STORE 9812	9279514	Cleanup Started		Longview
CABLE HOLDCO EXCHANGE IV LLC PROPERTY	9754735	Cleanup Started		Longview
E R KELLY ESTATE	11589213	Cleanup Started	2 - Moderate-High Risk	Longview
WESTSIDE SHOPPER	13728771	Cleanup Started	2 - Moderate-High Risk	Longview
WEYCO LONGVIEW COLUMBIA RIVER PLANT	27558147	Cleanup Started		Longview
HALTON COMPANY	29977842	Cleanup Started	2 - Moderate-High Risk	Longview
S & S MART LAUNDROMAT	38549943	Awaiting Cleanup		Longview
ARCO 05300 AMHAZ INC	41995646	Cleanup Started		Longview
PORT OF LONGVIEW TPH	42978181	Cleanup Started	2 - Moderate-High Risk	Longview
MINT VALLEY GOLF COURSE	43554938	Cleanup Started		Longview
TIME SAVER MART	46664878	Awaiting Cleanup	3 - Moderate Risk	Longview
BONNEVILLE POWER ADMIN	51229354	Cleanup Started	1 - Highest Assessed Risk	Longview
NG PROPERTY	53662275	Cleanup Started	1 - Highest Assessed Risk	Longview
WEST COAST OIL (OREGON WAY)	54248966	Cleanup Started	2 - Moderate-High Risk	Longview
Longview Daily News	58471951	Cleanup Started		Longview
Mallard Investment Industrial Property	61121912	Cleanup Started		Longview
TROY CLEANERS	61661799	Awaiting Cleanup		Longview
WEYERHAEUSER PLYWOOD MILL INTAKE	61943495	Cleanup Started		Longview
MONTICELLO GARAGE	63671677	Cleanup Started	2 - Moderate-High Risk	Longview
PARADISE TRAVEL	63736687	Cleanup Started		Longview
LONGVIEW TIRE SALES INC	69286382	Awaiting Cleanup		Longview
Motion Autos	71976875	Awaiting Cleanup		Longview
THE CLEAN MACHINE	73925141	Cleanup Started	2 - Moderate-High Risk	Longview
SUBURBAN PROPANE	74214235	Cleanup Started	2 - Moderate-High Risk	Longview
Puget Sound Truck Lines Longview	74481279	Cleanup Started		Longview
U HAUL 702-71	75756414	Cleanup Started	2 - Moderate-High Risk	Longview
LONESTAR	81384185	Cleanup Started		Longview
Longview Goodwill Ind	85882241	Cleanup Started		Longview
CHEVRON USA LONGVIEW	91448935	Cleanup Started	1 - Highest Assessed Risk	Longview
MILLER'S MARKET	91861675	Cleanup Started	1 - Highest Assessed Risk	Longview
Ocean Beach Chevron	94989386	Cleanup Started		Longview
Ross Simmons Lumber Co	98859747	Cleanup Started		Longview
ROSE STIRLING HONDA	99173413	Cleanup Started	2 - Moderate-High Risk	Longview
QUICK STOP 4	99315634	Cleanup Started		Longview
PARKS MAINTENANCE DEPARTMENT	99775267	Cleanup Started	3 - Moderate Risk	Longview
COWLITZ COUNTY FIRE DISTRICT 4	9328	Awaiting Cleanup		Ryderwood
WILDWOOD CORP RYDERWOOD PROPERTY	57785258	Cleanup Started	3 - Moderate Risk	Ryderwood

Remedial Action Sites
Cowlitz County, Washington

AUTOMOTIVE SHOP	10522	Cleanup Started		Toutle
DREWS GROCERY & SERVICE	8358215	Cleanup Started	2 - Moderate-High Risk	Toutle
KID VALLEY STORE	14672927	Cleanup Started	5 - Lowest Assessed Risk	Toutle
Fuel Processors Inc	810	Cleanup Started	3 - Moderate Risk	Woodland
Doyle Residential Shooting Range	83576	Awaiting Cleanup		Woodland
DION CLARK PROPERTY	2070515	Awaiting Cleanup	1 - Highest Assessed Risk	Woodland
ASTRO 745 - Minit Mart	16676141	Cleanup Started	3 - Moderate Risk	Woodland
CHEVRON 60098829	62794162	Cleanup Started	2 - Moderate-High Risk	Woodland
NANCY A MILLER	68885692	Cleanup Started		Woodland
SARGENT PROPERTY	89888235	Awaiting Cleanup		Woodland

Treatment, Storage, Disposal, and Recycling Facilities
Cowlitz County, Washington

TSDR ID	TSDR Name
ARD069748192	CLEAN HARBORS, El Dorado, AR
AZD081705402	HERITAGE ENVIRONMENTAL SRVCS LLC
NED981723513	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
ORD089452353	CHEMICAL WASTE MANAGEMENT OF THE NW
ORD981766124	SAFETY KLEEN SYSTEMS INC 7-148
WAD981769110	EMERALD SERVICES INC.
WAD988467197	COWLITZ CLEAN SWEEP, INC.
WAD988492187	COWLITZ COUNTY LANDFILL
WAH000053184	INGENIUM GROUP LLC - TRANSFER FACILITY
WAR000006569	PSE - SOUTH COUNTY COMPLEX