

# Douglas County Draft Solid Waste and Moderate Risk Waste Management Plan



*November 2017*



**Draft**  
**Douglas County Solid Waste and**  
**Moderate Risk Waste Management Plan**

**November 2017**

**Prepared for:**

**Douglas County**  
**Countywide Solid Waste Program Office**  
**East Wenatchee, Washington**

**Prepared by:**



Project 10073011





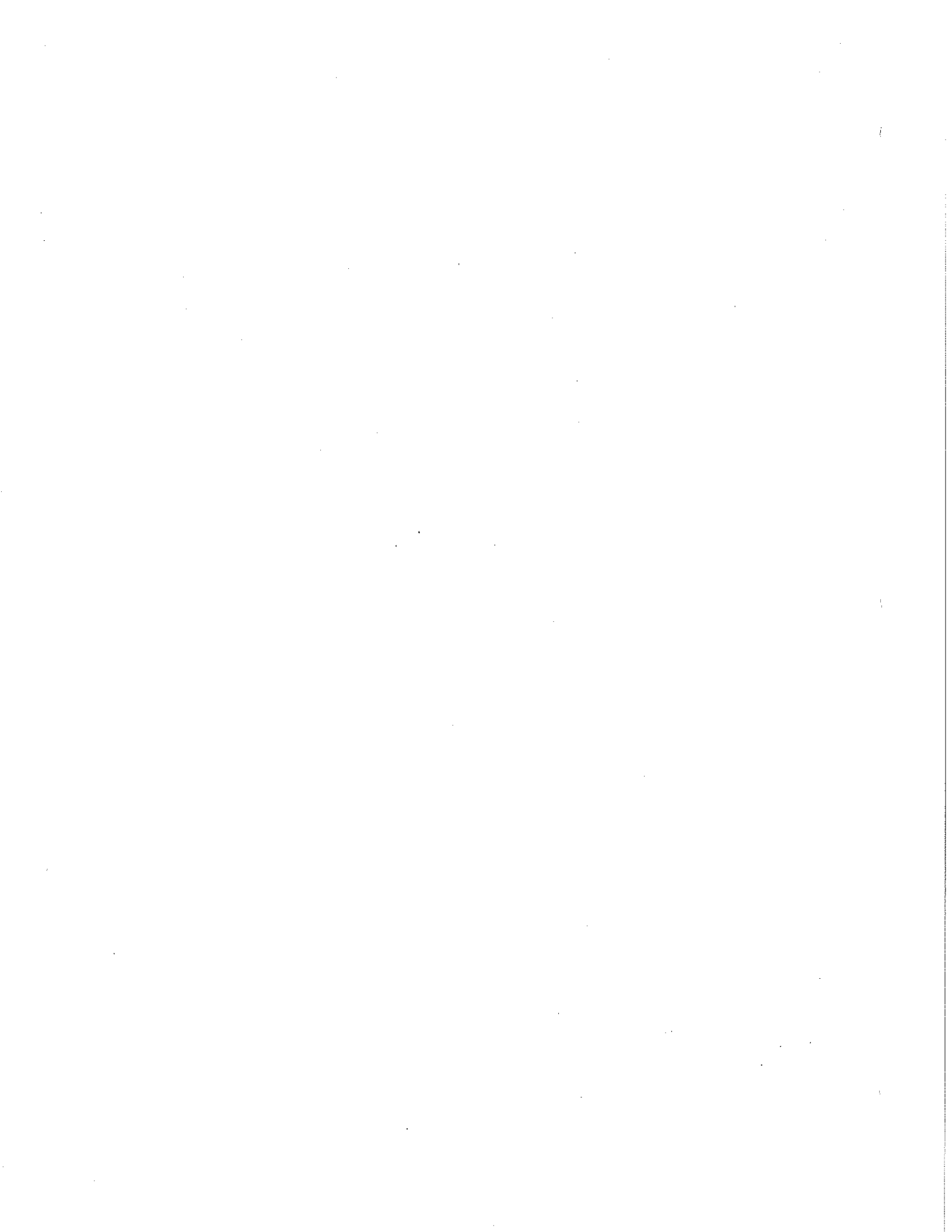
## ACKNOWLEDGMENTS

Countywide Solid Waste Program Office of Douglas County would like to thank the following organizations and individuals for their assistance in the development of this Solid Waste and Moderate Risk Waste Management Plan:

- Solid Waste Advisory Committee Members

Name	Affiliation/Title
Kyle Steinburg	Douglas County
Janet Conklin	City of Bridgeport
Chuck Johnson	City of East Wenatchee
Randy Agnew	City of Rock Island
Tom Snell	Town of Mansfield
Royal DeVaney	Town of Waterville
John Chelminiak	Waste Industry
David Prosch	Public Health and Safety
Eileen Bone	Waste Reduction and Recycling
Jessica Johnson*	Business and Industry
William Carpenter	Agriculture
Vacant	Organics

\* New member as of October 2016 on six month probation period.



# Executive Summary

## Introduction

This Solid Waste and Moderate Risk Waste Management Plan (Plan) recommends strategies to manage solid waste and moderate risk waste generated in Douglas County, Washington, including the cities and towns of Bridgeport, East Wenatchee, Mansfield, Rock Island and Waterville. Solid waste handling includes management, storage, collection, diversion, transportation, treatment, use, processing and final disposal. Recommendations are provided for municipal solid waste, other special wastes, and moderate risk waste.

This Plan was prepared in accordance with RCW 70.95 – Solid Waste Management – Reduction and Recycling under the guidance and direction of the Douglas County Solid Waste Programs Office and the Douglas County Solid Waste Advisory Committee (SWAC), and supersedes all previous Solid Waste and Moderate Risk Waste Management Plans in Douglas County.

An important motivation behind the development of this Plan is the need to establish a coordinated, regional approach to solid waste management within counties that enables decision makers to manage resources most effectively, while assuring adequate protection of the environment and public health.

## Summary of Recommended Strategies and Additional Costs

A summary of recommended strategies and potential additional costs are presented in Table ES.1. Over the next six years, implementation of recommended strategies is estimated to cost approximately \$43,000 in 2017 dollars. This cost estimate reflects only the new services or programs to be implemented by Douglas County. It does not reflect costs associated with existing programs, nor does it reflect the significant costs incurred by private firms, public agencies, or residents who also have roles in managing solid waste in Douglas County.

Table ES.1 Summary of Recommended Strategies and Costs

Recommendation	Six-Year Cost Estimate
<b><i>3.0 Waste Reduction, Recycling and Education</i></b>	
WWR1) Adopt the updated list of designated materials (Table 3.4) and maintain it through periodic review and updates.	No Additional Costs
WWR2) Incorporate and expand the education and promotion program.	\$5,000
WWR3) Provide support for recycling at public events.	No Additional Costs
WWR4) Continue the operations of the Community Recycling Centers and the Douglas County rural drop-off recycling program if feasible and cost effective.	No Additional Costs

Recommendation	Six-Year Cost Estimate
<b>4.0 Solid Waste Collection</b>	
SW1) Review collection contracts to confirm compliance with the Plan.	No Additional Costs
SW2) Douglas County should continue to assess the fee on solid waste collection companies operating in the unincorporated areas.	No Additional Costs
<b>5.0 Waste Transfer and Disposal</b>	
WTD1) No new transfer stations should be constructed by Douglas County during this planning period.	No Additional Costs
WTD2) Douglas County MSW should continue to be disposed at GWRL.	No Additional Costs
WTD3) Douglas County should continue to monitor and track waste importation and exportation to ensure compliance with the Host Agreement and the Universal Pest Protocol Procedures.	No Additional Costs
WTD4) Douglas County and WMW should continue to work cooperatively to ensure that the agreements for the importation of waste to GWRL meet the requirements of the Douglas County Waste Importation Ordinance Number 01-124-ORD-1.	No Additional Costs
WTD5) Douglas County should continue to work with agencies to potentially reduce post closure care at its landfills.	No Additional Costs
<b>6.0 Energy Recovery</b>	
ER1) Douglas County will monitor developments and progress in waste processing and conversion technologies.	No Additional Costs
<b>7.0 Special Wastes</b>	
SW1) Continue to dispose special wastes through a cooperative effort with the Chelan-Douglas Health District, WMW, and Ecology.	No Additional Costs
SW2) Monitor EPA and Washington State guidance regarding pharmaceutical waste and implement changes as needed to comply with statewide medicine take-back program.	No Additional Costs
SW3) Promote proper reuse, recycling and disposal of C&D waste.	\$1,000
SW4) Partner with private organizations such as the Habitat for Humanity of the Greater Wenatchee Area to promote recycling and reuse of C&D wastes and building materials.	No Additional Costs
SW5) Develop an internal plan for handling disaster debris, in coordination with SWPO, WMW, the Chelan-Douglas Health District and Douglas County Department of Emergency Management.	\$25,000
<b>8.0 Moderate Risk Waste</b>	
MRW1) Enhance the public education and outreach program for handling of HHW.	\$5,000



Recommendation	Six-Year Cost Estimate
MRW2) Continue the MRW collection events when grant funding is available.	No Additional Costs
MRW3) Continue the used oil collection program if feasible and cost effective.	No Additional Costs
MRW4) Continue to coordinate the schedule and process for updating the MRW Plan with the solid waste management plan (as is the current practice).	No Additional Costs
<b>9.0 Organics</b>	
O1) Continue compliance with the Douglas County Universal Agricultural Pest Protocol procedure and WAC 16-470 the WSDA Quarantine – Agricultural Pest Regulation.	No Additional Costs
O2) Develop and distribute educational materials regarding the yard debris curbside collection program.	\$2,000
O3) Continue and expand the yard debris collection program as population growth and citizen needs warrant.	No Additional Costs
O4) Reinstate the Christmas Tree Collection and Education Program as funding allows.	\$5,000
<b>10.0 Administration and Enforcement</b>	
AE1) Consider pursuing some of the additional funding strategies listed in Table 10.2 that can be implemented by Douglas County existing staff directly and independently from other alternatives if additional funding sources are necessary to maintain staff and programs.	No Additional Costs
AE2) Provide adequate funding to maintain or increase staff at county and city levels, as needed.	No Additional Costs
AE3) Include the SWAC in the review of new solid waste facility permit requests.	No Additional Costs
<b>TOTAL</b>	<b>\$43,000</b>







# Contents

Introduction.....	1
Summary of Recommended Strategies and Additional Costs.....	1
<b>Chapter 1.0 Background.....</b>	<b>1-1</b>
1.1 Introduction.....	1-1
1.2 Purpose .....	1-1
1.3 Goals and Objectives .....	1-1
1.4 Participants in the Planning Process.....	1-2
1.5 Planning Area .....	1-2
1.6 Planning Authority .....	1-3
1.7 Plan Development Process .....	1-3
1.8 Status of Previous Plans.....	1-4
1.9 Relationship to Other Plans .....	1-4
1.9.1 State Solid and Hazardous Waste Plan – Moving Washington Beyond Waste and Toxics .....	1-4
1.9.2 Douglas County Countywide Comprehensive Plan .....	1-4
1.10 Required Plan Elements.....	1-5
1.11 Regulatory Overview .....	1-6
1.11.1 Solid Waste Handling Standards .....	1-6
1.11.2 Hazardous Waste Management Act .....	1-6
1.12 Summary of Changes in Solid Waste Regulation and Policy Since 2009 .....	1-7
1.12.1 Exemption from Solid Waste Handling Permit Requirements for Anaerobic Digesters .....	1-7
1.12.2 Tire Fee Reinstated.....	1-7
1.12.3 Mercury-Containing Lights Product Stewardship Program.....	1-7
1.12.4 Revenue-Sharing Agreements.....	1-8
1.12.5 County Comprehensive Solid Waste Management Plan .....	1-8
1.12.6 Paper Conservation Program—Paper Recycling Program.....	1-8
1.12.7 Develop and Establish Objectives and Strategies for the Reuse and Recycling of Construction Aggregate and Recycled Concrete Materials .....	1-9
1.12.8 Quarantine – Agricultural Pests .....	1-9
<b>Chapter 2.0 Waste Stream.....</b>	<b>2-1</b>
2.1 Introduction.....	2-1
2.1 Waste Stream and Population Projections.....	2-1
2.1.1 Population and Waste Generation Rates.....	2-1
2.1.2 Recycling Data .....	2-3
2.1.3 Composition of Disposed MSW .....	2-4
<b>Chapter 3.0 Waste Reduction, Recycling, and Education .....</b>	<b>3-1</b>
3.1 Introduction.....	3-1
3.2 Background .....	3-1
3.2.1 State Legislation, Regulations, and Guidelines .....	3-1
3.2.2 Moving Washington Beyond Waste and Toxics Goals .....	3-2
3.2.3 Local Regulations and Guidelines.....	3-2
3.3 Existing Conditions.....	3-3

3.3.1	Waste Reduction and Reuse .....	3-3
3.3.2	Public Education.....	3-3
3.3.3	Urban Area Residential Recycling .....	3-4
3.3.4	Rural Area Residential Recycling.....	3-5
3.3.5	Commercial Recycling.....	3-5
3.3.6	Public Event Recycling.....	3-5
3.3.7	Incentives for Recycling .....	3-5
3.3.8	Monitoring and Evaluation.....	3-6
3.3.9	Community Recycling Centers.....	3-6
3.3.10	Recycling Processing Facilities.....	3-7
3.3.11	Markets.....	3-7
3.3.11.1	Market Overview .....	3-7
3.3.11.2	Designation of Recyclable Materials.....	3-8
3.4	Status of Previous Recommendations .....	3-10
3.5	Needs and Opportunities.....	3-10
3.5.1	Recycling Rates by Material.....	3-10
3.5.2	Urban/Rural Service Equity and Cost .....	3-10
3.5.3	Sham Recycling .....	3-10
3.6	Alternatives.....	3-10
3.6.1	Establish a Waste Diversion Goal.....	3-11
3.6.2	Expand the Public Education Program .....	3-11
3.6.3	Provide Support for Recycling at Public Events.....	3-11
3.7	Recommended Actions .....	3-11
<b>Chapter 4.0</b>	<b>Solid Waste Collection .....</b>	<b>4-1</b>
4.1	Introduction.....	4-1
4.2	Background .....	4-1
4.2.1	Legal Authority .....	4-1
4.2.2	Incorporated Areas.....	4-1
4.2.3	Unincorporated Areas .....	4-1
4.2.3.1	Collection.....	4-2
4.2.3.2	Collection Fee .....	4-2
4.3	Existing Conditions.....	4-2
4.3.1	Waste Collection Programs.....	4-3
4.3.2	Bulky Waste Collection Service .....	4-3
4.3.3	Commercial Collection Service .....	4-4
4.3.4	Disposition of Collected Waste .....	4-4
4.4	Status of Previous Recommendations .....	4-4
4.5	Alternatives.....	4-4
4.6	Recommended Actions .....	4-4
<b>Chapter 5.0</b>	<b>Waste Transfer and Disposal.....</b>	<b>5-1</b>
5.1	Introduction.....	5-1
5.2	Background .....	5-1
5.2.1	Douglas County Solid Waste Importation Ordinance.....	5-1
5.2.2	Voluntary Solid Waste Disposal Host Agreement between Douglas County and Waste Management of Washington, Inc. ....	5-1
5.2.3	Waste Disposal Statistics.....	5-2
5.3	Existing Conditions – Landfills .....	5-3
5.3.1	Greater Wenatchee Regional Landfill .....	5-3
5.3.2	Inert Waste Landfills.....	5-5



5.3.2.1	Pipkin Wells Inert Waste Landfill.....	5-5
5.3.2.2	Pipkin Construction Ward Avenue Inert Waste Landfill .....	5-5
5.3.2.3	Lux Pit Inert Waste Landfill .....	5-5
5.3.2.4	Wenatchee Gun Club Inert Waste Landfill.....	5-5
5.3.3	Closed Landfills .....	5-5
5.4	Existing Conditions – Transfer Stations .....	5-6
5.4.1	Waste Management Wenatchee Transfer Station .....	5-6
5.4.2	Okanogan County Bridgeport Bar Transfer Station .....	5-6
5.5	Waste Import and Export.....	5-7
5.5.1	Waste Import .....	5-7
5.5.2	Waste Export.....	5-8
5.6	Status of Previous Recommendations .....	5-8
5.7	Alternatives.....	5-8
5.7.1	Alternatives.....	5-8
5.8	Recommended Actions .....	5-9
<b>Chapter 6.0</b>	<b>Energy Recovery .....</b>	<b>6-1</b>
6.1	Introduction.....	6-1
6.2	Background .....	6-1
6.3	Existing Conditions.....	6-1
6.4	Status of Previous Recommendations .....	6-2
6.5	Alternatives.....	6-2
6.6	Recommended Actions .....	6-2
<b>Chapter 7.0</b>	<b>Special Wastes .....</b>	<b>7-1</b>
7.1	Introduction.....	7-1
7.2	Background .....	7-1
7.3	Agricultural Waste .....	7-1
7.3.1	Regulations and Guidelines .....	7-1
7.3.2	Current Practice .....	7-2
7.3.3	Planning Issues.....	7-2
7.4	Animal Carcasses .....	7-2
7.4.1	Regulations and Guidelines .....	7-2
7.4.2	Current Practice .....	7-2
7.4.3	Planning Issues.....	7-2
7.5	Appliances.....	7-3
7.5.1	Regulations and Guidelines .....	7-3
7.5.2	Current Practice .....	7-3
7.5.3	Planning Issues.....	7-3
7.6	Asbestos.....	7-4
7.6.1	Regulations and Guidelines .....	7-4
7.6.2	Current Practice .....	7-4
7.6.3	Planning Issues.....	7-4
7.7	Biomedical/Infectious Waste .....	7-4
7.7.1	Regulations and Guidelines .....	7-4
7.7.2	Current Practice .....	7-5
7.7.3	Planning Issues.....	7-5
7.8	Construction and Demolition Debris.....	7-5

7.8.1	Regulations and Guidelines .....	7-5
7.8.2	Current Practice .....	7-7
7.8.3	Planning Issues .....	7-7
7.9	Electronic Waste .....	7-7
7.9.1	Regulations and Guidelines .....	7-7
7.9.2	Current Practice .....	7-7
7.9.3	Planning Issues .....	7-7
7.10	Litter and Illegal Dumping.....	7-7
7.10.1	Regulations and Guidelines .....	7-8
7.10.2	Current Practice .....	7-8
7.10.3	Planning Issues .....	7-9
7.11	Petroleum Contaminated Soils.....	7-9
7.11.1	Regulations and Guidelines .....	7-9
7.11.2	Current Practice .....	7-9
7.11.3	Planning Issues .....	7-9
7.12	Pharmaceuticals.....	7-9
7.12.1	Regulations and Guidelines .....	7-9
7.12.2	Current Practice .....	7-9
7.12.3	Planning Issues .....	7-10
7.13	Street Sweepings/Vactor Waste .....	7-10
7.13.1	Regulations and Guidelines .....	7-10
7.13.2	Current Practice .....	7-10
7.13.3	Planning Issues .....	7-10
7.14	Tires.....	7-11
7.14.1	Regulations and Guidelines .....	7-11
7.14.2	Current Practice .....	7-11
7.14.3	Planning Issues .....	7-11
7.15	Disaster Debris Management.....	7-11
7.15.1	Regulations and Guidelines .....	7-11
7.15.2	Potential Disasters .....	7-12
7.15.3	Current Practice .....	7-13
7.15.4	Planning Issues .....	7-13
7.16	Needs and Opportunities.....	7-14
7.17	Alternatives and Evaluations .....	7-14
7.17.1	General Alternatives.....	7-14
7.17.2	Construction and Demolition Debris Recycling Alternatives.....	7-14
7.17.3	Disaster Debris Management Alternatives.....	7-15
7.17.4	Evaluation of Alternative Strategies .....	7-16
7.18	Recommended Actions .....	7-16
<b>Chapter 8.0</b>	<b>Moderate Risk Waste.....</b>	<b>8-1</b>
8.1	Introduction.....	8-1
8.2	Background .....	8-1
8.2.1	Moderate Risk Waste Collection Events .....	8-1
8.2.2	Used Oil Collection.....	8-1
8.2.3	Definitions.....	8-1
8.2.4	Regulations and Guidance.....	8-3
8.3	Moderate Risk Waste Generation .....	8-5
8.3.1	Hazardous Waste Inventory .....	8-5
8.3.2	Inventory of Moderate Risk Waste Generators.....	8-5



8.4	Existing Conditions.....	8-6
8.4.1	Current Moderate Risk Waste and Oil Programs.....	8-6
8.5	Status of Previous Recommendations .....	8-8
8.6	Alternatives.....	8-8
8.6.1	Public Education.....	8-8
8.6.2	Business Technical Assistance.....	8-9
8.6.3	Household Collection .....	8-9
8.6.4	Used Oil Collection.....	8-9
8.6.5	Business Collection.....	8-9
8.6.6	Compliance and Enforcement.....	8-9
8.6.7	Moderate Risk Waste Plan Preparation.....	8-9
8.7	Recommended Actions .....	8-9
Chapter 9.0	Organics .....	9-1
9.1	Introduction.....	9-1
9.2	Background .....	9-1
9.2.1	State Legislation and Regulations, and Guidelines for Organics.....	9-1
9.2.2	Douglas County Regulations.....	9-1
9.2.3	Washington State Department of Agriculture Regulations.....	9-2
9.3	Existing Program Elements.....	9-2
9.3.1	Curbside Yard Debris Collection Programs .....	9-2
9.3.2	Food Waste .....	9-2
9.3.3	Christmas Tree Collection Program .....	9-4
9.3.4	Other Yard Waste Collection.....	9-4
9.3.5	Stemilt Compost Facility.....	9-4
9.4	Needs and Opportunities.....	9-4
9.5	Alternatives and Evaluations.....	9-4
9.5.1	Organics Education.....	9-4
9.5.2	Yard Debris Curbside Collection Program .....	9-4
9.5.3	Christmas Tree Collection Program .....	9-4
9.6	Recommended Actions .....	9-4
Chapter 10.0	Administration and Enforcement .....	10-1
10.1	Introduction.....	10-1
10.2	Background .....	10-1
10.3	Existing Conditions.....	10-1
10.3.1	Countywide Solid Waste Program Office.....	10-1
10.3.2	Douglas County Solid Waste Advisory Committee .....	10-3
10.3.3	Incorporated Cities .....	10-3
10.3.4	Chelan-Douglas Health District .....	10-3
10.3.5	Washington State Department of Ecology .....	10-4
10.3.6	Washington Utilities and Transportation Commission .....	10-5
10.3.7	United States Environmental Protection Agency .....	10-6
10.4	Status of Previous Recommendations .....	10-6
10.5	Alternatives.....	10-6
10.5.1	Long-Term Funding Needs .....	10-6
10.5.2	Staffing .....	10-7
10.5.3	Permit Review .....	10-7
10.6	Recommended Actions .....	10-7

Chapter 11.0	Implementation Plan .....	11-1
11.1	Introduction.....	11-1
11.2	Recommended Strategies.....	11-1
11.3	Estimated Additional Costs .....	11-4
11.4	Six-Year Implementation Schedule.....	11-6
11.5	Twenty-Year Implementation Program .....	11-9
11.6	State Environmental Policy Act .....	11-9
11.7	Draft Plan Review.....	11-9
11.8	Procedures for Amending the Plan .....	11-9

## Tables

Table 1.1	Douglas County Solid Waste Advisory Committee.....	1-2
Table 2.1	Douglas County Current and Future Population Estimates .....	2-1
Table 2.2	Current Waste Generation Rate (2014) .....	2-2
Table 2.3	Projected Waste Quantities .....	2-3
Table 2.4	Recycled and Diverted Materials (2014).....	2-4
Table 2.5	Douglas County Waste Stream Composition .....	2-6
Table 3.1	Recycling by Jurisdiction by Commodity (in Pounds).....	3-4
Table 3.2	Recycling Sites and Commodities Collected .....	3-4
Table 3.3	Markets for Recyclables Materials .....	3-7
Table 3.4	List of Designated Recyclable Materials.....	3-9
Table 4.1	Solid Waste Collection Data .....	4-3
Table 5.1	Douglas County Solid Waste Disposed (in tons).....	5-3
Table 5.2	Waste Imported into Greater Wenatchee Regional Landfill (in tons) .....	5-7
Table 6.1	Status of Previous Recommendations for Energy Recovery.....	6-2
Table 7.1	Special Wastes .....	7-1
Table 7.2	Potential Disasters and Resultant Debris .....	7-12
Table 8.1	Hazardous Household Substances List.....	8-2
Table 8.2	MRW Collection Event Materials Collected (in Pounds).....	8-6
Table 9.1	Yard Debris Collection Programs.....	9-2
Table 10.1	Douglas County Solid Waste Program Office 2017 Budget .....	10-2
Table 10.2	Potential Funding Methods for Solid Waste Management .....	10-6
Table 11.1	Six-Year Implementation Budget for Additional Costs.....	11-4
Table 11.2	Six-Year Implementation Schedule.....	11-6

## Figures

Figure 2-1	2016 Central Washington Waste Composition Study .....	2-5
Figure 5-1	Douglas County Solid Waste Facilities.....	5-4
Figure 9-1	Apple Maggot Quarantine Areas Near Douglas County .....	9-3
Figure 10-1.	Douglas County SWPO Organizational Structure .....	10-2

## Appendices





- Appendix A. SWAC Member Manual
- Appendix B. Interlocal Agreements
- Appendix C. Resolutions of Adoption
- Appendix D. Status of Previous Recommendations
- Appendix E. Minimum Service Levels
- Appendix F. WUTC Service Area Maps
- Appendix G. Solid Waste Importation Ordinance
- Appendix H. Host Agreement
- Appendix I. SEPA Checklist
- Appendix J. WUTC Cost Assessment
- Appendix K. Comment and Response Summary

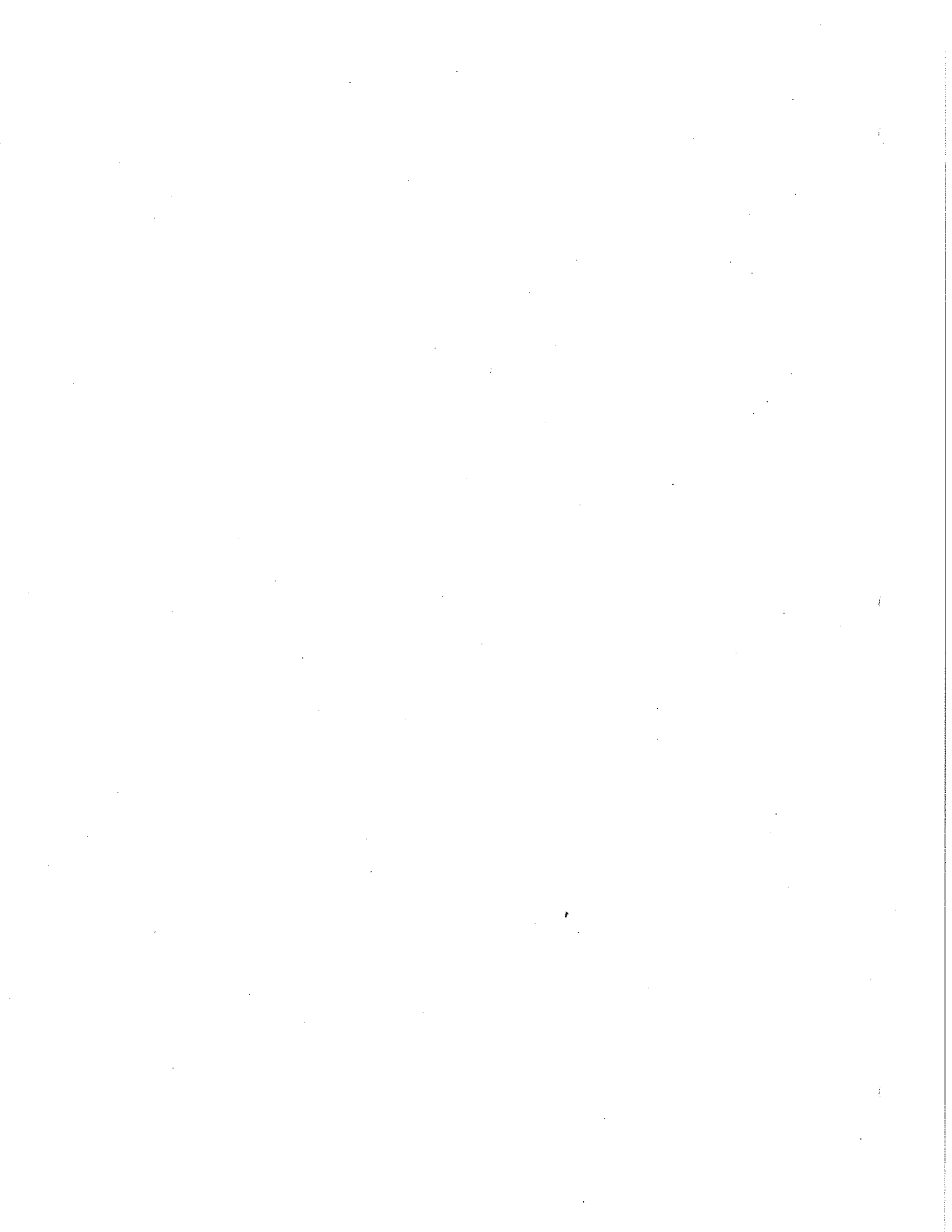
## Acronyms and Abbreviations

2010 Plan	Douglas County Comprehensive Solid Waste Management Plan, October 2010
BSE	Bovine Spongiform Encephalopathy
C&D	Construction and Demolition
CDS	Consolidated Disposal Services, Inc.
CEMP	Emergency Management Plan
CFCs	Chlorofluorocarbons
CPG	Coordinated Prevention Grant
DDMP	Disaster Debris Management Plan
Ecology	Washington State Department of Ecology
e.g.	For Example
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
E-Waste	Electronic Wastes
FEMA	Federal Emergency Management Agency
GMA	Growth Management Act
GWRL	Greater Wenatchee Regional Landfill
H5N1	Highly Pathogenic Asian Avian Influenza A
HDPE	high-density polyethylene
HDR	HDR Engineering, Inc.
HHW	Household Hazardous Waste
LSWFA	Local Solid Waste Financial Assistance
MRW	Moderate Risk Waste
MSW	Municipal Solid Waste
MTCA	Model Toxics Control Act
OFM	Washington State Office of Financial Management
PET	Polyethylene terephthalate
PCS	Petroleum Contaminated Soils
Plan	Solid Waste and Moderate Risk Waste Management Plan
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
SD	Sunrise Disposal, Inc.
SEPA	State Environmental Policy Act
SQG	Small Quantity Generator
SWAC	Solid Waste Advisory Committee
SWPO	Countywide Solid Waste Program Office
TAC	Technical Advisory Committees
TLS	Douglas County Transportation and Land Services Department
TPY	tons per year
UOCF	Used Oil Collection Facilities
WAC	Washington Administrative Code



# Acronyms and Abbreviations

WGA	Waste Generation Areas
WRRLCA	Waste Reduction, Recycling, and Model Litter Control Act
WMW	Waste Management of Washington, Inc.
WSDA	Washington State Department of Agriculture
WUTC	Washington Utilities and Transportation Commission
ZDS	Zippy Disposal Service, Inc.



# Chapter 1.0 Background

## 1.1 Introduction

This Solid Waste and Moderate Risk Waste Management Plan (Plan) recommends strategies to manage solid waste and moderate risk waste (MRW) generated in Douglas County, Washington. Solid waste handling includes management, storage, collection, diversion, transportation, treatment, use, processing, and final disposal. This Plan includes recommendations for municipal solid waste (MSW), MRW, diversion, construction and demolition (C&D) debris, and special wastes.

## 1.2 Purpose

Washington State law assigns primary responsibility for managing MSW and MRW to local governments. Revised Code of Washington (RCW) 70.95 requires local government to maintain current solid waste management plans. RCW 70.105 requires local government to develop plans for managing hazardous waste, which in this Plan is covered in Chapter 8.0 Moderate Risk Waste.

The purpose of this Plan is to develop recommended waste management strategies for the period years 2017 through 2023. The Plan also looks forward to evaluate that sufficient processing and disposal options will be available for at least the next twenty years, or through year 2037.

Local plans must be complete and in good standing to receive grant monies from the Washington State Department of Ecology (Ecology) Local Solid Waste Financial Assistance (LSWFA), formally known as the Coordinated Prevention Grant (CPG) program, which is a funding source for non-disposal related programs and activities.

## 1.3 Goals and Objectives

The mission statement for this Plan is as follows:

*The overall goal of Douglas County and the participating jurisdictions is to provide citizens with efficient, reliable, and affordable solid waste collection, handling, recycling and disposal services in order to improve the quality of life while protecting and preserving human health, environmental quality and natural resources.*

For each element of the Plan, goals were developed. An assessment of existing conditions relative to each element was made and then an identification of needs and opportunities followed. An evaluation of the alternatives was then performed and recommendations for specific programs, policies or actions were selected and adopted.

In summary, the goals for the Plan are as follows:

- Provide convenient and reliable services for managing solid waste materials.

- Promote the use of innovative and economical waste handling methods.
- Emphasize waste reduction as a fundamental management strategy.
- Encourage recovery of marketable resources from solid waste.
- Encourage public/private partnerships for waste reduction and recycling programs.
- Increase public awareness on solid waste issues and provide citizens with information and education to implement recommended waste management practices.
- Reduce the environmental impacts to climate, air, water and land that are associated with waste generation, transportation, handling, recycling and disposal.
- Comply with federal, state and local solid waste and MRW regulations.
- Recognize and support local conditions associated with the management of solid waste and MRW.

## 1.4 Participants in the Planning Process

This document was developed with the guidance of the Douglas County Solid Waste Advisory Committee (SWAC) whose participation is gratefully acknowledged. Refer to the Douglas County SWAC Member Manual in Appendix A on the matter of establishing the bylaws, terms and Technical Advisory Committee roles and responsibilities. Committee members and their affiliation are shown in Table 1.1.

**Table 1.1 Douglas County Solid Waste Advisory Committee**

Name	Affiliation/Title
Kyle Steinburg	Douglas County
Janet Conklin	City of Bridgeport
Chuck Johnson	City of East Wenatchee
Randy Agnew	City of Rock Island
Tom Snell	Town of Mansfield
Royal DeVaney	Town of Waterville
John Chelminiak	Waste Industry
David Prosch	Public Health and Safety
Eileen Bone	Waste Reduction and Recycling
Jessica Johnson*	Business and Industry
William Carpenter	Agriculture
Vacant	Organics

\* New member as of October 2016 on six month probation period.

## 1.5 Planning Area

The planning area includes the incorporated and unincorporated areas of Douglas County. This includes the cities and towns of Bridgeport, East Wenatchee, Mansfield, Rock Island, and



Waterville. For the purposes of this Plan, the Town of Coulee Dam is under the jurisdiction of Grant County, Washington.

## 1.6 Planning Authority

This Plan is intended to satisfy the participating jurisdictions' responsibilities for maintaining a current solid waste management plan in accordance with RCW 70.95, and to provide a local hazardous waste management plan in accordance with RCW 70.105.

Cities and counties share the responsibility for developing and maintaining a local solid waste management plan. RCW 70.95.080 provides cities with three alternatives for satisfying their planning responsibilities:

- Prepare and deliver to the county auditor a city solid waste management plan for integration into the county solid waste plan;
- Enter into an agreement with the county to prepare a joint city-county plan; or
- Authorize the county to prepare a plan for the city for inclusion in the county plan.

The incorporated communities of Bridgeport, East Wenatchee, Mansfield, Rock Island and Waterville signed interlocal agreements with Douglas County regarding solid waste management. The agreements authorize Douglas County to prepare a countywide solid waste management plan that includes each of these cities and towns. Executed Solid Waste Interlocal Agreements can be found in Appendix B.

Participating cities and towns have both the opportunity and responsibility to participate in Plan development, review and comment on the draft Plan, and to adopt the final Plan. Resolutions of adoption for this Plan can be found in Appendix C.

## 1.7 Plan Development Process

The Plan was developed over a period of approximately five months. The process began in May 2017 with the contract execution for HDR Engineering, Inc. (HDR), as the firm that would assist with starting the update process. In August 2017, Douglas County decided HDR would continue the planning process. Technical research, analysis, and recommendations were prepared by HDR and discussed with Douglas County staff, the Chelan-Douglas County Health District, the SWAC, stakeholders, interested members of the public, and interest groups. This participatory, interactive process was undertaken in order to prepare and build support for the Plan.

The public participation process was largely focused on the SWAC. The Board of County Commissioners appointed SWAC members. Members are selected to represent a balance of interests including citizens, public interest groups, business, the waste management industry, local elected public officials, and the agricultural industry. The SWAC provides guidance to the Douglas County Countywide Solid Waste Program Office (SWPO) in the development of programs and policies concerning solid waste handling and disposal. The SWAC reviews and comments on rules, policies, resolutions, and ordinances before they are proposed for adoption.

Technical Advisory Committees (TAC) have been created to review and research solid waste and hazardous waste issues referred to them by the SWAC specific to agriculture, business and industry, organics, public health and safety, and waste reduction and recycling. Each TAC

consists of varying members, one being the specific SWAC representative who is appointed to serve as the TAC Chair and others with specific expertise relating to the TAC they are appointed too. TACs carry out review of assigned issues and make recommendations back to the SWAC. SWAC meetings are open to the public and meeting notices are published beforehand. For additional information on the SWAC and TACs please refer to Appendix A.

The Plan is anticipated to be adopted by each participating city or town and by the Board of County Commissioners in meetings open to the public.

## **1.8 Status of Previous Plans**

This Plan supersedes previous solid waste and MRW management plans including the *2010 Douglas County Comprehensive Solid Waste Management Plan* (2010 Plan). The status of the 2010 Plan recommendations can be found in Appendix D.

## **1.9 Relationship to Other Plans**

This section provides information on how this Plan is related to other State and Local documents.

### **1.9.1 State Solid and Hazardous Waste Plan – Moving Washington Beyond Waste and Toxics**

Ecology released a waste and toxics reduction plan in June 2015. Moving Washington Beyond Waste and Toxics focuses on reducing waste and toxics by adopting a sustainable materials management approach, which is also used by the United States Environmental Protection Agency (EPA). This approach looks at the full life cycle of materials from the design and manufacturing, through use, to disposal or recycling. The EPA believes a sustainable materials management approach can help identify more sustainable ways to produce products that are less impactful to the environment.

Moving Washington Beyond Waste and Toxics' vision is as follows: "We can transition to a society where waste is viewed as inefficient, and where most wastes and toxic substances have been eliminated. This will contribute to economic, social and environmental vitality."

Moving Washington Beyond Waste and Toxics was used in the development of this plan as a general guidance document. Chapters 3.0, 7.0, and 8.0 in this Plan include Ecology goals applicable to Douglas County.

### **1.9.2 Douglas County Countywide Comprehensive Plan**

The Douglas County Countywide Comprehensive Plan was updated in 2015 and provides development policy framework in compliance with the Washington State Growth Management Act (GMA). The Douglas County Countywide Comprehensive Plan includes the following policies and goals that may affect solid waste management and these were considered during development of this Plan:

- The GMA Regional Council (a group made up of one elected official from each city and town in Douglas County and the three county commissioners) decided to address the issue of siting essential public facilities in a countywide coordinated approach. The Douglas County Countywide Comprehensive Plan established goals, policies and siting

criteria that are to be considered when siting an essential public facility. Each community then decides what process to use to apply the criteria when/if there is an application for locating an essential public facility within their jurisdiction. The comprehensive plans for Bridgeport, East Wenatchee, Rock Island, Mansfield, and Waterville refer to the Douglas County Countywide Comprehensive Plan as the guiding document for goals, policies, and siting criteria.

- Utility facilities with the least impact to the public health, safety, and the environment are encouraged.
- Development to take into account the timely and concurrent provision of adequate and efficient utility systems.
- Provide utilities at service levels that are appropriate for the specific land uses and areas, thereby avoiding excess capacities that may encourage growth beyond the desired densities of an area.
- Promote multi-jurisdictional cooperation between cities, Douglas County, special purpose purveyors and other private utilities for utility planning and implementation.
- Utility planning activities should include an ongoing analysis of the overall system physical condition.
- The cost of onsite utility improvements or site preparation for developments will be the responsibility of the development benefiting from the improvement.
- Promote the continued use, maintenance, development and revitalization of existing utilities whenever possible.

## 1.10 Required Plan Elements

This Plan is intended to meet or exceed applicable requirements set by Washington State. RCW 70.95.090 establishes requirements for local solid waste management plans. Local plans are required to include the following elements:

- An inventory and description of solid waste handling facilities including any deficiencies in meeting current needs;
- The projected 20-year needs for solid waste handling facilities;
- A program for the development of solid waste handling facilities that meets applicable laws and regulations, takes into account the comprehensive land use plans of participating jurisdictions, contains a six-year construction and capital acquisition program and a plan for financing both capital costs and operational expenditures;
- A program for surveillance and control (to avoid or mitigate the negative impacts of improper waste handling);
- An inventory and description of solid waste collection operations and needs within each jurisdiction, including state collection certificate holders and municipal operations;
- A comprehensive waste reduction and recycling element;
- An assessment of the Plan's impact on the costs of solid waste collection; and
- A review of potential areas that meet state criteria for land disposal facilities.

RCW 70.105.220 establishes the required elements for local hazardous waste management plans identified below:

- A plan or program to manage MRW including an assessment of the quantities, types, generators, and fate of MRW in the jurisdiction;
- A plan or program to provide for ongoing public involvement and education including the potential hazards to human health and the environment resulting from improper use and disposal of the waste;
- An inventory of existing generators of hazardous waste and facilities managing hazardous waste within the jurisdiction;
- A description of the public involvement process used in developing the plan; and
- A description of the eligible zones designation in accordance with RCW 70.105.225.

## 1.11 Regulatory Overview

The statutes and regulations that govern solid waste handling are briefly summarized below.

### 1.11.1 Solid Waste Handling Standards

A rule governing solid waste facilities and handling practices, Washington Administrative Code (WAC) 173-350, also known as *Solid Waste Handling Standards*, went into effect in 2003. This rule replaced WAC 173-304. WAC 173-350 sets out standards of operation and permitting requirements for solid waste handling facilities for recycling, intermediate handling (i.e., transfer), composting, MRW, and tires (unless exempted by definition or due to beneficial use). The rule regulates landfill disposal of a new category of wastes called “inert” wastes. In 2013, Ecology began the development of a rule update proposal to WAC 173-350. As of October 2017, Ecology is evaluating comments received on the proposed rule update.

WAC 173-350 also places importance on local solid waste management plans (such as this document) by requiring solid waste handling facilities (whether exempt or requiring a permit) to conform to local solid waste plans. WAC 173-350 also states a facility’s exemption for handling only recyclable materials is contingent on meeting the definition of a recyclable material as designated in a local solid waste management plan.

Landfill disposal of solid waste is regulated under a separate rule, WAC 173-351, *Criteria for Municipal Solid Waste Landfills*. This rule was last revised in October 2015. The Chelan-Douglas Health District has issued an active permit to Waste Management of Washington, Inc. (WMW) for operations of a Municipal Solid Waste Landfill near East Wenatchee. See Chapter 5.0 Waste Transfer and Disposal for additional information.

### 1.11.2 Hazardous Waste Management Act

In 1982, Ecology adopted rules that combined the state and federal regulation of hazardous wastes. These rules, as amended several times in the ensuing years, are contained in WAC 173-303 and are the main body of regulations for hazardous wastes in this State. In 1983, the State Legislature adopted a hierarchy of hazardous waste management methods in RCW 70.105.150. In descending order of priority for management, the hierarchy is waste reduction; waste recycling; physical, chemical, and biological treatment; incineration; solidification/stabilization treatment; and landfill.

Amendments to RCW 70.105 in 1985 and 1986 defined MRW and required that local governments (counties) develop plans for the proper management of MRW. As stated in RCW 70.105.007(3), the legislature's intent was "to promote cooperation between state and local governments by assigning responsibilities for planning for hazardous waste to the state and planning for MRW to local government." In 1987, the legislature appropriated funds for grants to counties to assist in their planning efforts and clarified the schedule.

The legislature enacted the Used Oil Recycling Act, RCW 70.95I in 1991. This statute requires local governments to manage used oil in conjunction with their MRW programs and to submit annual reports to Ecology. Local governments were required to adopt used oil recycling amendments to their MRW management plans by July 1, 1993.

New *Solid Waste Handling Standards* (WAC 173-350) were developed by Ecology and became effective February 10, 2003. These standards address MRW facilities (including construction, record keeping and reports).

The *Dangerous Waste Regulations* (WAC 173-303) have been amended several times to address new issues and to incorporate new provisions of state and federal regulations.

## **1.12 Summary of Changes in Solid Waste Regulation and Policy Since 2009**

Several new rules have been adopted since the previous Plan was developed. Important new rules and regulations for consideration in the Plan development are shown below (not in order of priority).

### **1.12.1 Exemption from Solid Waste Handling Permit Requirements for Anaerobic Digesters**

Effective July 1, 2009, a new Washington State law (RCW 70.95.330) allows certain anaerobic digesters an exemption from obtaining a solid waste handling permit provided they meet specified criteria.

### **1.12.2 Tire Fee Reinstated**

In 2009, RCW 70.95 was amended to reinstate the tire fee and to remove the sunset (expiration) date for the fee. The original tire fee, which expired in 1994, was used to clean up tire dumps, fund a special study of tires, and conduct other activities. The new fee is also intended to clean up unauthorized tire dumps and to help prevent future accumulations of tires.

### **1.12.3 Mercury-Containing Lights Product Stewardship Program**

WAC 173-910 requires establishment of a product stewardship program for mercury-containing lights throughout Washington State by January 1, 2013. Producers of mercury-containing lights sold for residential use must finance and participate in the product stewardship program by doing the following:

- Funding its producer share cost of the standard plan and program operated by the department-contracted stewardship organization or operating, either individually or jointly, an independent plan and program approved by Ecology.

- Pay administrative and operational costs associated with the standard program or the independent program in which they participate, except for the collection costs associated with curbside and mail-back collection programs. For curbside and mail-back programs, a stewardship organization must finance the costs of transporting and processing mercury-containing lights from the point of accumulation. For collection locations, including household hazardous waste (HHW) facilities, charities, retailers, government recycling sites, or other suitable locations, a stewardship organization must finance the costs of collection, transportation, and processing of mercury-containing lights collected at the collection locations.
- Submit market share data to Ecology to determine market share in the event more than one approved product stewardship plan is operating.
- Meet its financial obligations to the plan, which includes Ecology's annual fee.
- Comply with producers' requirements.
- Participate in a fully implemented plan.
- Take actions required to correct violations.

Refer to Chapter 8.0 Moderate Risk Waste for additional information.

#### **1.12.4 Revenue-Sharing Agreements**

An update to RCW 81.77.185 allows waste collection companies to retain up to fifty percent of the revenue paid to the companies for selling material if the companies submit a plan to the Washington Utilities and Transportation Commission (WUTC) that is certified by the appropriate local government authority as being consistent with the local government solid waste plan and that demonstrates how the revenues will be used to increase recycling. The remaining revenue shall be passed to residential customers.

#### **1.12.5 County Comprehensive Solid Waste Management Plan**

In 2010, RCW 70.95.080 was updated to indicate that when updating a solid waste management plan, after June 10, 2010, each local comprehensive plan must, at a minimum, consider methods that will be used to address the following:

- C&D waste for recycling or reuse;
- Organic material including yard debris, food waste, and food contaminated paper products for composting or anaerobic digestion;
- Metals, glass, and plastics for recycling; and
- Waste reduction strategies.

#### **1.12.6 Paper Conservation Program—Paper Recycling Program**

A new state regulation, RCW 70.95.725, requires that by July 1, 2010, each state agency shall develop and implement the following:

- A paper conservation program. Each state agency shall endeavor to conserve paper by at least thirty percent of their current paper use.
- A paper recycling program to encourage recycling of all paper products with the goal of recycling one hundred percent of all copy and printing paper in all buildings with twenty-five employees or more.



### **1.12.7 Develop and Establish Objectives and Strategies for the Reuse and Recycling of Construction Aggregate and Recycled Concrete Materials**

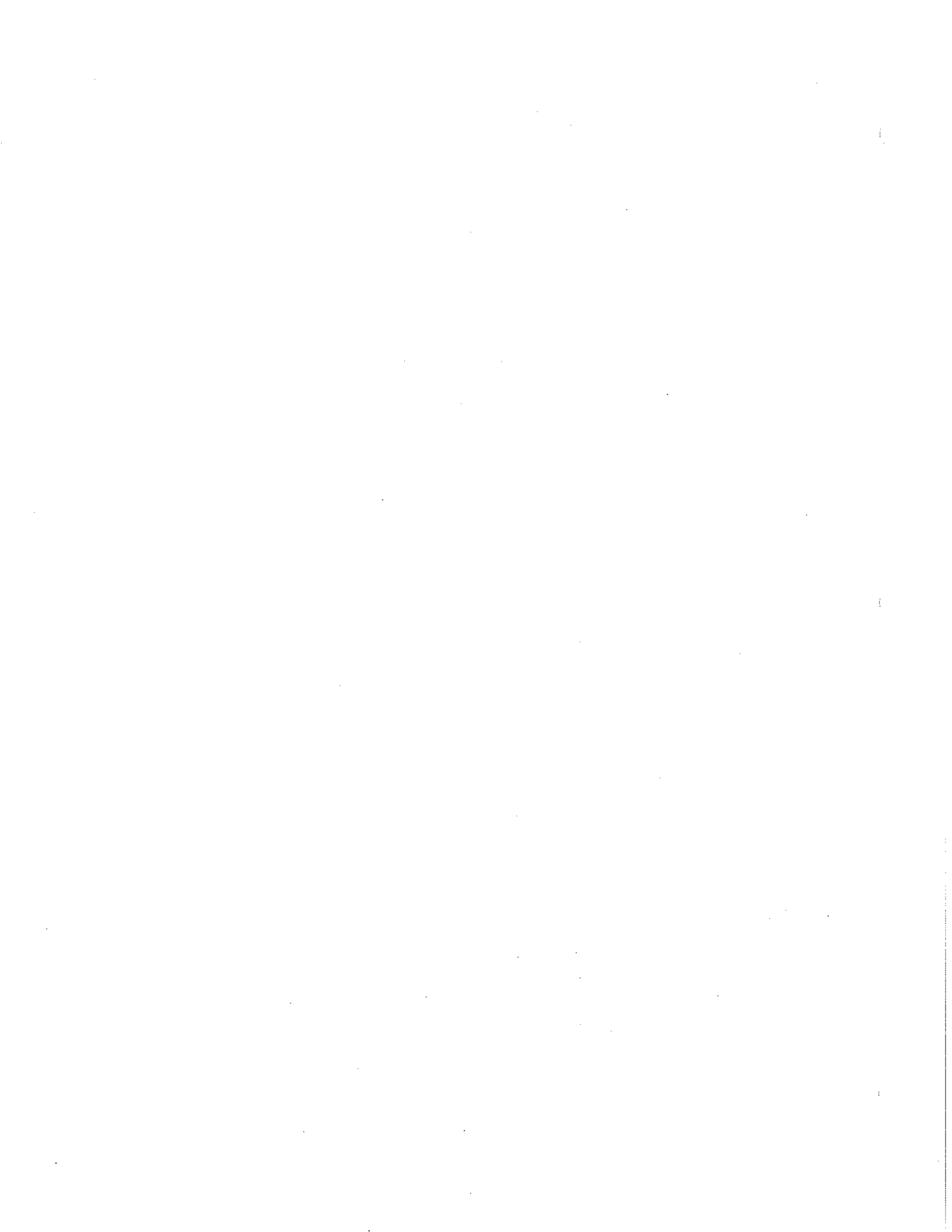
Effective January 1, 2016, RCW 70.95.805 requires that local governmental entities with a population of one hundred thousand residents or more must, as part of their contracting process, request and accept bids that include the use of construction aggregate and recycled concrete materials for each transportation, roadway, street, highway, or other transportation infrastructure project. Prior to awarding a contract for a transportation, roadway, street, highway, or other transportation infrastructure project, the local governmental entity must compare the lowest responsible bid proposing to use construction aggregate and recycled concrete materials with the lowest responsible bid not proposing to use construction aggregate and recycled concrete materials, and award the contract to the bidder proposing to use the highest percentage of construction aggregate and recycled concrete materials if that bid is the same as, or less than, a bidder not proposing to use construction aggregate and recycled concrete materials or proposing to use a lower percentage of construction aggregate and recycled concrete materials.

### **1.12.8 Quarantine – Agricultural Pests**

Effective January 1, 2017, the Washington State Department of Agriculture (WSDA) amended WAC 16-470 by adding MSW, yard debris, organic feedstocks, organic materials, and agricultural wastes to the list of commodities regulated under the apple maggot quarantine. Special permits are required for the following:

- Transportation and disposition of MSW from an area under quarantine for disposal at a solid waste landfill or disposal facility in the apple maggot and plum curculio pest-free area.
- Transportation and disposition of yard debris, organic feedstocks, organic materials, and agricultural wastes from the area under quarantine for disposal at a solid waste landfill or treatment at a composting facility in the apple maggot and plum curculio pest-free area.

Refer to Chapter 9.0 Organics for additional information regarding how these rules affect solid waste in Douglas County.





# Chapter 2.0 Waste Stream

## 2.1 Introduction

This chapter provides information on population and waste generation rates. This data is used in various ways in the following chapters, such as assessing the need for or determining the impact of a proposed new program.

## 2.1 Waste Stream and Population Projections

This section presents information regarding past and present information and future projections regarding waste generated in Douglas County.

### 2.1.1 Population and Waste Generation Rates

#### Population

Current population levels and future population growth are important factors to consider for solid waste management plans. People create solid waste and in general, the more people there are (now and in the future), the more waste is created.

Table 2.1 provides current and future estimates of the population in Douglas County. This table uses population figures produced by the Washington State Office of Financial Management (OFM), which OFM based on Census 2010 results and adjustments made through 2016. For future population projections, the OFM actually produces three different sets of forecasts for population growth: a low, medium, and high series. The medium series figures are used in this Plan.

**Table 2.1 Douglas County Current and Future Population Estimates**

Area	2010 <sup>1</sup>	2013 <sup>1</sup>	2016 <sup>1</sup>	2020 <sup>2</sup>	2025 <sup>2</sup>	2030 <sup>2</sup>	2035 <sup>2</sup>
Douglas County, Total	38,244	39,095	40,538	43,435	46,477	49,398	52,080
Unincorporated Areas	20,399	21,060	22,095	23,889	25,562	27,169	28,644
Incorporated Areas	17,845	18,035	18,440	19,546	20,915	22,229	23,436
Cities: <sup>3</sup>							
Bridgeport	2,409	2,425	2,480	2,541	2,719	2,890	3,047
East Wenatchee	13,190	13,350	13,500	14,466	15,478	16,449	17,342
Mansfield	320	325	330	389	418	445	469
Rock Island <sup>4</sup>	788	790	965	977	1,046	1,111	1,172
Waterville <sup>5</sup>	1,138	1,145	1,165	1,173	1,254	1,334	1,406

1. Data for these years are from the OFM's "April 1, 2016 Population of Cities, Towns, and Counties, 2010-2016," <http://www.ofm.wa.gov/pop/april1/default.asp>. (OFM 2016).
2. Total population data for the years 2020 through 2035 is from the OFM's "Projections of the Total Resident Population for the GMA, Medium Series: 2010 to 2040 by five year intervals," <http://www.ofm.wa.gov/pop/gma/projections12/projections12.asp>. Population figures by area and city for the years 2020 through 2035 assume the same breakdown as 2016.
3. Town of Coulee Dam excluded from population figures. Through an Interlocal Agreement, the Town of Coulee Dam sends MSW to Okanogan County Landfill for disposal.

4. For planning purposes, Rock Island is projecting a population increase based on recent subdivision activity. Population estimates will be updated as adjustments occur.
5. Waterville's population is not currently anticipated to increase much more than the current population based on limits to utility systems. For planning purposes, the population increase is included since the people are anticipated to live within Douglas County.

According to the OFM, April 2016 Population Changes and Rank Report, Douglas County is the twenty-sixth most populated county in Washington State and incurred a 5.96% growth in population from April 2010 to April 2016.

### Waste Generation Rates

Washington State defines solid waste as “all putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials” (WAC 173-350-100).

This Plan focuses primarily on MSW, consisting of those wastes generated by residential and commercial sources intended to be handled by Douglas County's solid waste disposal system. Wastes generated by industrial and agricultural sources are generally included to the extent that these are similar to what is disposed through Douglas County's system and they do not require special handling. Special wastes handled separately by these sources are only addressed briefly in this Plan.

Table 2.2 shows the 2014 solid waste disposed of in Douglas County or taken to other facilities. This table also shows the amount of materials recycled or diverted through various drop-off and collection programs in Douglas County as well as the amounts of C&D debris and other special wastes disposed of in Douglas County or taken to other facilities in 2014. These materials are accounted for in developing a waste generation rate because tonnages may shift from one facility to another in the future due to new programs, changes in rates, or other factors.

**Table 2.2 Current Waste Generation Rate (2014)**

Facility and Waste Stream	Annual Amount <sup>1</sup>
MSW Disposed Tonnages:	
Greater Wenatchee Regional Landfill	20,796 Tons
Okanogan Central Landfill	6,393 Tons
Recycling Tonnages	4,067 Tons
Total	31,256 Tons
Materials to Other Landfills/Facilities <sup>2</sup>	33,422 Tons
Additional Diverted Materials	8,010 Tons
Grand Total, All Solid Waste	72,688 Tons
Population (2014 Estimate)	39,804 Persons
Waste Generation Rate, per person per year	3,652.30 Pounds
Waste Generation Rate, per person per day	10.01 Pounds

Notes:

1. MSW and Recycling tonnages are 2014 figures from Ecology tonnage records.
2. Reduced by 47,953 tons due to soil for final cover reported incorrectly to Ecology as disposed.



In Table 2.3, waste quantities have been projected using the most current (2014) available per capita generation rate multiplied by population forecasts for Douglas County. The current generation rate was calculated by combining the tons disposed in 2014 with the tons recycled, diverted, or sent to special landfills in 2014 and then dividing by the population in 2014. By applying the current per capita rate to future years, the projected figures for 2015 through 2035 assume no change in waste generation or disposal practices, or in the percentage of material recycled and reduced. This approach also assumes no change in the amount of waste migrating to out-of-county facilities and other factors (such as the ratio of annual tourists and migrant workers to the general county population).

**Table 2.3 Projected Waste Quantities**

Year	Total Population	Waste Generated TPY <sup>2</sup>	Waste Generation Rate	Amount Recycled TPY <sup>3</sup>	Amount Diverted TPY <sup>3</sup>	MSW Disposed TPY <sup>3</sup>
<i>Actual Amounts:<sup>1</sup></i>						
2014	39,804	72,715	10.01	4,067 (6%)	8,010 (11%)	60,611 (83%)
<i>Projected Amounts:<sup>1</sup></i>						
2016	40,538	74,056	10.01	4,443	8,146	61,467
2020	43,435	79,348	10.01	4,761	8,728	65,859
2025	46,477	84,905	10.01	5,094	9,340	70,471
2030	49,398	90,242	10.01	5,415	9,927	74,900
2035	52,080	95,141	10.01	5,708	10,466	78,967

Notes:

1. Figures, except the year, population and generation rate, are shown as tons per year (TPY). The waste generation rate is shown as pounds per person per day. Population figures are from Table 2.1.
2. Projected waste generation figures for 2015 through 2035 are based on the estimated waste generation rate for 2014 (10.01 pounds per person per day) and population forecasts.
3. The projected amounts of recycling, other diversion, disposed MSW and other wastes assume the same percentage of the total waste generated as in Table 2.2.

**2.1.2 Recycling Data**

The most recent recycling survey conducted by Ecology suggests that 13.0% of Douglas County’s MSW was recycled or composted (see Table 2.4). This figure is generally called a *recycling rate*, although it sometimes includes composting and some reuse as well.

Ecology also defines a *diversion rate*, which includes several additional materials shown in Table 2.4 that are not included in the stricter recycling rate. These diverted materials include specific materials such as agricultural organics and tires, which are still being put to a beneficial use but simply do not count as recycling as defined by Washington State. Diverted materials also include wastes delivered to C&D landfills and special wastes sent to other facilities. Including these other wastes equates to an overall diversion rate of 17.0% of the total tons generated.

**Table 2.4 Recycled and Diverted Materials (2014)**

Materials	Annual Tons	% of Total Tons of MSW Disposed	% of Total Tons Generated
<b>Recycled</b>			
Aluminum Cans	1.19	.1%	-
Cardboard	1,047.51	4.0%	1.4%
Electronics	43.93	.1%	.1%
Fluorescent Light Bulbs	.10	.1%	-
Grease, Other Rendering	31.47	.1%	.1%
HDPE Plastics	1.24	.1%	-
LDPE Plastics	3.23	.1%	-
Metals/White Goods	1,063.37	4.2%	1.5%
Mixed Waste Paper	62.57	.1%	.1%
Food Waste	11.06	.1%	-
Tires	24.00	.1%	.1%
Tin Cans	1.71	.1%	-
Used Motor Oil	236.17	.2%	.1%
Vehicle Batteries	85.18	.1%	.1%
Wood	1,381.72	5.3%	1.9%
Yard Debris	72.23	.1%	.1%
Tons Recycled/Composted	4,066.68	15.0%	5.5%
Tons MSW Disposed	27,189.00	-	-
Total Tons of MSW	31,255.68	-	-
Recycling Rate	13.0%	-	-
<b>Diverted</b>			
Asphalt/Concrete	7,261.43	12.0%	10.0%
Antifreeze	11.42	.01%	.01%
Batteries – Commercial/Industrial	.02	.01%	.01%
Oil Filters	7.16	.01%	.01%
Used Oil	45.70	.02%	.02%
Other Organics	680.90	1.4%	.95%
Tires (Energy Recovery, Baled, and Reuse)	3.28	.01%	.01%
Other	.06	.01%	.01%
Tons Diverted	8,009.97	13.2%	11.02%
Tons Diverted or Recycled/Composted	12,076.65	19.9%	16.6%
Tons Disposed	60,611	-	-
Total Tons Generated	72,687.65	-	-
Overall Diversion Rate	17.0%	-	-

Notes: Data for recycled and diverted materials, and for the amount of "other wastes," are from the 2014 annual survey conducted by Ecology.

### 2.1.3 Composition of Disposed MSW

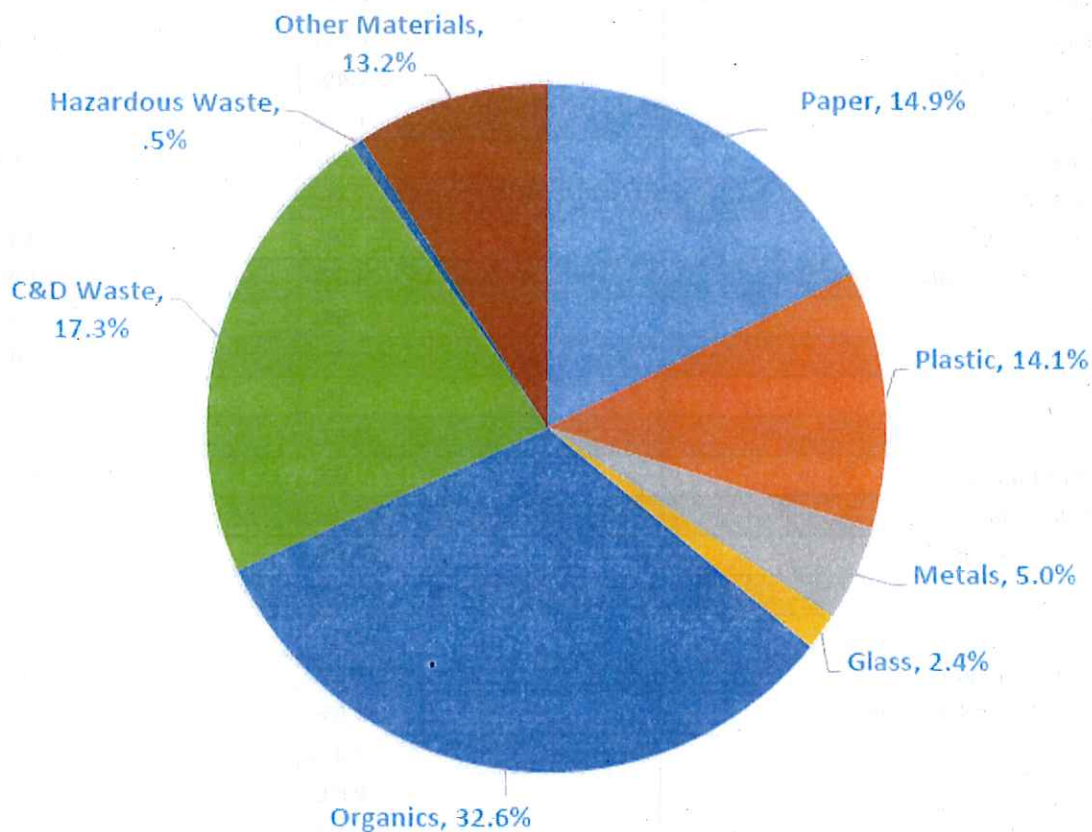
Ecology commissioned Cascadia Consulting Group (Cascadia) to conduct a four-season MSW characterization study during 2015-2016. The study characterizes the disposed MSW stream in



Washington State in support of the state Solid and Hazardous Waste Plan and incorporates a packaging versus product analysis, detailed composition results for six Waste Generation Areas (WGA), and a supplementary analysis, which combines the statewide results with existing county waste composition studies.

Before any discussions of data collection began, Ecology first selected ten counties in which to collect and sort waste samples. These ten counties represent Washington’s six WGA: Central, East, Northwest, Puget Sound, Southwest, and West. Douglas County is in the Central WGA. The six WGAs combine similar regions and take into account the geographic, demographic, and economic variation found throughout the state. Figure 2-1 presents an overview of the 2016 Central Washington Waste Composition Study by material type disposed and percentage of the waste stream.

**Figure 2-1 2016 Central Washington Waste Composition Study**



Waste composition can be expected to change in the future due to changes in consumption patterns, packaging, disposal habits, tourism and other factors. These changes are difficult to predict in the long term. Furthermore, implementation of this Plan is expected to affect waste composition in Douglas County by changing purchasing and disposal habits. Utilizing the compositional analysis derived for the Central WGA, Table 2.5 illustrates composition of the total measured Douglas County waste stream.

**Table 2.5 Douglas County Waste Stream Composition**

Materials	Waste Stream	
	Percent by Weight	Tons of Material
<b>Paper</b>	<b>14.9%</b>	<b>9,031</b>
Cardboard	3.9%	2,364
Newspaper	.5%	303
Other Recyclable Paper	6.4%	3,879
Compostable Paper	3.5%	2,122
Non-Recoverable Paper	.6%	363
<b>Plastic</b>	<b>14.1%</b>	<b>8,546</b>
PET Bottles	2.5%	1,515
HDPE Bottles	1.4%	848
Other Recyclable Plastic	6.0%	3,637
Recyclable Film	4.2%	2,546
<b>Glass</b>	<b>2.4%</b>	<b>1,455</b>
Clear Containers	1.1%	661
Brown Containers	.6%	370
Green Containers	.4%	242
Non-Recyclable Glass	.3%	182
<b>Metals</b>	<b>4.3%</b>	<b>2,606</b>
Aluminum Cans	.5%	303
Tin Cans	.8%	485
Other Ferrous	.1%	60
Other Non-Ferrous	2.0%	1,212
Computers, Electronics	.6%	364
Non-Recyclable Metal	.3%	182
<b>Organics</b>	<b>32.6%</b>	<b>19,760</b>
Food Waste	18.4%	11,152
Yard Debris	10.9%	6,608
Non-Recoverable Organics	3.3%	2,000
<b>Other Materials</b>	<b>13.8%</b>	<b>8,364</b>
Carpeting	1.4%	849
Textiles	2.5%	1,515
Mattresses	.6%	364
Tires, Rubber Products	1.0%	605
Recoverable Hazardous./Special Wastes	.5%	303
Other Hazardous./Special Wastes	.0%	-
Other Non-Recoverable Materials	7.8%	4,728
<b>Construction Debris</b>	<b>17.9%</b>	<b>10,849</b>
Clean Wood	6.3%	3,818
Recoverable C&D	7.0%	4,243
Non-Recoverable C&D	4.6%	2,788
<b>Total Tons Disposed (in tons)</b>		<b>60,611</b>



# Chapter 3.0 Waste Reduction, Recycling, and Education

## 3.1 Introduction

This chapter discusses existing waste reduction, recycling and education programs, identifies relevant planning issues to meet local and state goals, and develops and evaluates alternative strategies for future implementation.

## 3.2 Background

This section describes the applicable Washington State laws and rules regarding waste reduction and recycling programs.

### 3.2.1 State Legislation, Regulations, and Guidelines

Chapter 3.0 provides an update of methods to divert waste away from landfill disposal and to comply with Washington State requirements regarding waste reduction and recycling opportunities and programs. The State's requirements are based on the "Waste Not Washington Act" (ESHB 1671), which declared that waste reduction and recycling must become a fundamental strategy for solid waste management in Washington State. This law is reflected in various sections of the RCW and WAC. RCW 70.95 includes the following goals (among others) and requires that solid waste management plans demonstrate how these goals will be met:

- Washington State is to achieve a statewide recycling rate of 50%.
- Source separation of waste (at a minimum, separation into recyclable and non-recyclable fractions) must be a fundamental strategy of solid waste management.
- Steps should be taken to make recycling at least as affordable and convenient to the ratepayer as disposal of mixed solid waste.
- Other applicable Washington State requirements are as follows:
  - Develop clear criteria for designating areas as urban or rural for the purpose of providing solid waste and recycling services (RCW 70.95.092).
  - Collect recyclables from homes and apartments in urban areas (RCW 70.95.097(7)(b)(i)).
  - Monitor the collection of source-separated waste from non-residential sources when there is sufficient density to economically sustain a commercial collection program (RCW 70.95.090).

RCW 70.95.092 also requires that counties develop clear criteria for designating areas as urban or rural for the purpose of providing solid waste and recycling services. RCW 70.95.090(7)(b)(i) requires recyclables to be collected from homes and apartments in urban areas (with some exceptions), whereas drop-off centers and other methods can be used in rural areas.

RCW 70.95.090 requires a monitoring program for collection of source-separated waste from non-residential sources when there is sufficient density to economically sustain a commercial

collection program. Douglas County achieves this by working cooperatively with Ecology and using the data Ecology collects through the annual Washington State Recycling Survey.

In addition, public education is an important element for solid waste management systems. Douglas County residents and businesses need to be informed as to the proper and available methods for waste reduction, disposal and recycling. The programs described in this chapter encourage residents and businesses to take the extra steps to recycle or compost appropriate waste streams, or to avoid generating waste in the first place.

### **3.2.2 Moving Washington Beyond Waste and Toxics Goals**

Ecology released an updated waste and toxics reduction plan in September 2015, Moving Washington Beyond Waste and Toxics, which focuses on a sustainable materials management approach for waste prevention. Moving Washington Beyond Waste and Toxics Plan provides the following goals pertaining to recycling programs in Douglas County:

- Waste and recycling collection systems will be better used and more efficient. More collection and recycling locations and options will exist statewide for currently recycled materials and products as well as those not yet being recycled. (GOAL SWM 7)
  - Evaluate the “hub and spoke” recycling model for rural areas, starting with traditional curbside materials.
  - Examine models and opportunities to increase efficiencies of collection services, which will encourage more recycling and safe disposal.
- Underserved communities and areas with environmental justice concerns will have increased recycling collection services. This includes multifamily, limited English proficiency, minority populations, rural areas, public spaces, and commercial entities. (GOAL SWM 8)
  - Support efforts to provide recycling and waste reduction materials in Spanish and other languages via sharing resources, grants, and other avenues.
  - Study and promote options to increase recycling services in areas that are underserved, and for multi-family and commercial entities. Support local efforts and share resources.

### **3.2.3 Local Regulations and Guidelines**

Bridgeport, East Wenatchee, Rock Island, Mansfield and Waterville have adopted local ordinances that establish minimum service levels for the collection of designated recyclables through source separation recycling programs and have designated urban boundary areas in which the minimum level of service is to be provided.

In addition, Douglas County adopted Ordinance Number 04-07 which established a minimum level of service for the collection of designated recyclables through source separation recycling programs, designates the rural boundary for Douglas County in which the minimum service level is provided and establishes a voluntary, weekly curbside collection option for residents. Residents wishing to take this optional weekly collection service must pay an additional collection service fee to their appropriate certified hauler.

The minimum level of service ordinances can be found in Appendix E.

### 3.3 Existing Conditions

This section provides background information regarding waste reduction, recycling and education and discusses Douglas County's existing programs.

#### 3.3.1 Waste Reduction and Reuse

Waste reduction is the highest priority for solid waste management according to RCW 70.95 and is preferred over recycling and composting because the social, environmental, and economic costs are typically lower for avoiding the creation of waste.

Waste collection fees can be used to encourage waste reduction (and recycling) through “pay as you throw” rates in which single-family households are charged according to the amount of garbage they discard. Businesses and multifamily properties are generally already charged according to the amount of garbage disposed.

Onsite composting can reduce the amount of yard debris disposed of as garbage or composted commercially.

Other opportunities for reuse and waste reduction that are available in Douglas County include yard sales, material donations and reuse, local government public surplus sales and websites such as Craigslist, which may be used to buy and sell second-hand goods locally.

#### 3.3.2 Public Education

Public education and outreach programs supporting waste reduction and reuse, recycling, and organics management activities have been ongoing in Douglas County, which serves as an informational clearinghouse for solid waste activity in the regional area. Douglas County has several educational programs aimed at youth, the general public, and local businesses.

Information about solid waste management is provided on the website

[www.douglascountywa.net/departments/solid-waste](http://www.douglascountywa.net/departments/solid-waste). Additional education efforts in Douglas County include the following:

- Speakers are offered to local civic organizations and service clubs to share information about Douglas County's solid waste management and present information about the solid waste programs.
- Solid waste videos are made available to schools to educate students about waste reduction and recycling.
- Mailings and advertisements are developed by Douglas County to alert residents about upcoming solid waste education and outreach activities, such as recycling opportunities and HHW collection events.
- Douglas County develops promotional materials educating residents about waste reduction and separating hazardous materials.
- Douglas County provides information to residents about waste oil collection centers, the Community Recycling Centers in Bridgeport, Mansfield, Rock Island and Waterville, the drop off recycling trailer locations, and free disposal opportunities.

### 3.3.3 Urban Area Residential Recycling

Currently, curbside residential recycling collection services are available in the urban growth areas of Douglas County and in East Wenatchee and Rock Island. Table 3.1 provides an overview of recycling by jurisdiction by commodity per year. Table 3.2 provides a list of currently available drop-off recycling sites in Douglas County.

**Table 3.1 Recycling by Jurisdiction by Commodity (in Pounds)**

Site	2016 Cardboard	2016 Mixed Paper	2016 Tin	2016 Aluminum	2016 PET <sup>4</sup> #1	2016 HDPE <sup>5</sup> #2	2016 Glass	2016 Totals	2015 Totals	2014 Totals
Bridgeport <sup>1</sup>	12,692	24,102	0	249	605	0	0	37,648	37,186	31,916
Mansfield <sup>1</sup>	17,052	12,203	0	0	263	0	0	29,518	30,859	29,682
Rock Island <sup>1</sup>	19,037	14,758	735	494	2,324	654	0	38,002	57,114	57,875
Waterville <sup>1</sup>	73,652	60,288	1,684	1,112	1,980	1,191	0	139,907	137,611	155,204
Douglas County <sup>2</sup>	37,923	36,089	0	626	2,153	599	0	77,390	46,304	25,514
East Wenatchee <sup>3</sup>	309,948	810,250	41,008	17,757	48,645	16,025	259,584	1,503,217	1,125,918	1,514,855
Recycling Totals	470,304	957,690	43,427	20,238	55,970	18,469	259,584	1,825,682	1,434,922	1,815,046

1. Community Recycling Center
2. Douglas County Recycling Trailers
3. East Wenatchee Curbside Recycling
4. Polyethylene terephthalate (PET)
5. High-density polyethylene (HDPE)

**Table 3.2 Recycling Sites and Commodities Collected**

Recycler	Hours of Operation <sup>3</sup>	Paper Plastic, Metal	Fluorescent Tubes	Waste Oil	Appliances	Electronics <sup>2</sup>
Bridgeport Community Recycling Center	Call Ahead	X	X		X	
Mansfield Community Recycling Center	Call Ahead	X	X		X	
Rock Island Community Recycling Center	Call Ahead	X	X		X	
Waterville Community Recycling Center	Call Ahead	X	X		X	
E-Z Auto Rock Island	Call Ahead				X	
Greater Wenatchee Recycling	Call Ahead				X	
Wenatchee Valley Salvage & Recycling	Call Ahead				X	
Rock Island Maintenance Shop	Call Ahead			X		
Waterville Maintenance Shop	Call Ahead			X		
Goodwill East Wenatchee	Call Ahead					X
Stan's Merry Mart	Call Ahead		X			





Recycler	Hours of Operation <sup>3</sup>	Paper Plastic, Metal	Fluorescent Tubes	Waste Oil	Appliances	Electronics <sup>2</sup>
<b>Unincorporated Douglas County Sites</b>						
Orondo School Road	7:00 to 7:00 (Monday—Thursday)	X				
Douglas Co. Public Services Building	Monday—Sunday	X				
Pangborn Memorial Airport (Jet Center)	Monday—Sunday	X				
Pangborn Memorial Airport (Past Fed-Ex)	Monday—Sunday	X				
Rock Island Marine RV Park	Monday—Sunday	X				

1. Includes newspaper, phonebooks, magazines, corrugated cardboard, mixed paper, steel cans, tin cans, aluminum cans, brass, copper, scrap metal, PET #1 and HDPE #2.
2. Includes computer monitors, computers, televisions and other electronic equipment.
3. Hours of operation are provided on the SWPO Website at [www.douglascountywa.net/departments/solid-waste](http://www.douglascountywa.net/departments/solid-waste).

### 3.3.4 Rural Area Residential Recycling

Currently, curbside recycling service is only available in the urban growth area in the unincorporated areas of Douglas County. Rural residents rely on the Community Recycling Centers in Bridgeport, Mansfield, Rock Island and Waterville as well as the recycling collection trailer locations in unincorporated areas of Douglas County. Additional information regarding these services is provided in Section 3.3. Table 3.1 provides an overview of recycling by jurisdiction by commodity. See Table 3.2 for currently available drop-off recycling sites in Douglas County.

### 3.3.5 Commercial Recycling

Commercial-sector recycling is available through the private haulers in Douglas County.

### 3.3.6 Public Event Recycling

RCW 70.93.093 requires public event recycling in communities where there is an established curbside service and where recycling service is available to businesses. A recycling program is provided at every official gathering and at every sports facility by vendors who sell beverages in single-use aluminum, glass, or plastic bottles or cans. A recycling program includes provision of receptacles or reverse vending machines, and provisions to transport and recycle the collected materials. Facility managers or event coordinators may choose to work with vendors to coordinate the recycling program. The recycling receptacles or reverse vending machines must be clearly marked, and must be provided for the aluminum, glass, or plastic bottles or cans that contain the beverages sold by the vendor.

### 3.3.7 Incentives for Recycling

As previously discussed, Douglas County provides recycling trailers at multiple locations in addition to the Community Recycling Centers located in Bridgeport, Mansfield, Rock Island and Waterville (refer to Table 3.2) as an incentive to recycle. Only the following materials are accepted for no fee at the Community Recycling Centers:

- Source-separated Newspaper;
- Phonebooks;
- Magazines/Catalogs;
- Corrugated Cardboard;
- Mixed Residential Paper;
- Steel/Tin Cans;
- Aluminum Cans;
- Clean Aluminum;
- Clean Brass;
- Clean Copper;
- Clean Scrap Metal;
- Residential Sharps;
- Ni-Cad Batteries;
- Metal Appliances;
- Auto Batteries;
- PET #1 – Soft drink bottles, Sport drink – Clear, plastic beverage containers; and
- HDPE #2 – Milk jugs, Juice jugs – Clear or opaque plastic beverage containers.

Recycling can enable residents and businesses to reduce their garbage service volumes, lower the garbage bill, and for some recyclable materials, such as aluminum or copper, get paid if taken to a private recycling facility.

### **3.3.8 Monitoring and Evaluation**

Douglas County gathers information from Ecology on recycled quantities and an estimate of its countywide recycling rate. Annual figures for recycled tonnages are reported on a voluntary basis by both public- and private-sector entities.

### **3.3.9 Community Recycling Centers**

Bridgeport, Mansfield, Rock Island and Waterville own and operate Community Recycling Centers. Residents of these municipalities and the surrounding areas may drop off designated recyclables year-round. The Community Recycling Centers are staffed by volunteers. Drop-off bins are labeled for which designated recyclables are to be placed in the bins. Collected recyclables are sorted, processed and stored until a sufficient quantity is available for transportation to market. Table 3.2 identifies drop-off recycling sites currently located in Douglas County.

Douglas County has an established rural drop-off recycling program utilizing collection trailers. These sites are serviced by the Solid Waste Programs Office and collected recyclables are processed at the Douglas County Processing and Recycling Center. Collected recyclables are sorted, processed and stored until a sufficient quantity is available for transportation to market. The designated recyclables collected at the drop-off sites are determined by their current market value. Table 3.2 identifies drop-off recycling sites currently located in Douglas County.



### 3.3.10 Recycling Processing Facilities

There are currently no recycling processing facilities located in Douglas County. Recyclable materials are collected and transported to markets generally within the Pacific Northwest.

### 3.3.11 Markets

Washington State regulations (RCW 70.95.090.7.c) require “a description of markets for recyclables,” which is provided below. This description is intended to be only a brief report of current conditions, and note that market conditions for recyclables can change drastically and rapidly.

#### 3.3.11.1 Market Overview

In general, paper, #1 and #2 bottles, and metals are processed domestically in the Pacific Northwest while mixed plastics are sent to overseas markets. Markets for recyclable materials are currently weak. Reasons for market weakness include the drop in the price of oil since 2014, which makes it cheaper to purchase virgin plastic rather than use recycled materials; a strong United States dollar, which makes exports less price competitive; and reduced demand from foreign purchasers, in large part due to a global economic slowdown, as well as China enforcing stricter requirements for imported materials.

In February 2013 China implemented an aggressive inspection effort aimed at curtailing the amount of contaminated recyclables and waste mixed with recyclable materials. Sorting materials properly and cleaning to new Chinese standards may raise the cost of recycling. By the end of 2017, new regulations known as “China National Sword 2017” will take effect. China has announced it will no longer allow the importation of low-grade plastics and unsorted paper. The regulations aim to increase quality of recyclable commodities entering China by restricting the amount of contamination permitted in imported recyclables. As the Chinese implement these new regulations, Washington residents may see changes in what is allowed in recycling bins, or other changes to local recycling programs.

An important factor for marketing recyclable materials collected in Douglas County is the cost of transporting them to end-markets, some of which are outside of Washington State. Recyclers in Eastern Washington are farther from most markets than recyclers along the Interstate 5 corridor, reducing market access and creating a transportation cost barrier. The current low market value of many recyclables limits materials that can be cost-effectively moved to markets.

Primary markets for specific materials and comments on factors that affect them are presented in Table 3.3.

**Table 3.2 Markets for Recyclables Materials**

Material	Primary Market(s)	Comments
<i>Paper</i>		
Cardboard	Regional paper markets, paper mills and export	The markets for cardboard (used in packaging) have recently been improving and may be stabilizing.
Mixed Waste Paper and Newspaper	Regional paper markets, paper mills and export	The markets are fluctuating due to supply and demand from overseas markets and processors.

Material	Primary Market(s)	Comments
<b>Plastics</b>		
Bottles #1 through #7	Regional markets in Western Washington, Oregon, and export	The markets for PET and HDPE bottles are currently weak (#1 and #2), and even weaker for bottles #3 through #7.
Other Plastics	Primarily export	Markets are volatile and sometimes unreliable.
<b>Metals</b>		
Aluminum	Regional markets in Western Washington and Oregon; can manufacturing in St. Louis	Aluminum prices were up in 2016.
Tin cans, appliances, and ferrous and non-ferrous scrap	Regional markets in Western Washington and Oregon	Steel has fluctuated heavily, and the market is currently weak.
<b>Glass</b>		
Clear Glass	Regional markets in Western Washington and Oregon	Prices are poor for clear glass but are better than brown and green glass.
Brown and Green Glass	Regional markets in Western Washington and Oregon	Prices for brown and green glass are low or negative (i.e., the glass is recycled for a charge).
<b>Organics</b>		
Wood	Hog fuel, mulch (clean wood only)	Hog Fuel prices are fluctuating.
Yard Debris	Daily cover, compost	Yard Debris is currently composted for a fee.

### 3.3.11.2 Designation of Recyclable Materials

Table 3.4 shows the list of “designated recyclable materials,” required by WAC 173-350, which should be used for guidance as to the materials to be recycled. This list is based on existing conditions (collection programs and markets), so future markets and technologies may warrant changes in this list. Because market conditions for recyclables can change rapidly, the list of designated materials is accompanied by a description of the process for its revision, if needed, before the next major Plan update.

This list is not intended to create a requirement that recycling programs in Douglas County collect every designated material. Instead, the intent is that if materials become feasible for recycling, Douglas County will review the feasibility of collection in respect to markets, ease of collection, size of waste stream, special events or removal of collection limitations and consider programs for collection so that residents and businesses have an opportunity to recycle the designated materials listed through at least one program.





**Table 3.3 List of Designated Recyclable Materials**

Priority Level	Material
Routine Collection: Materials feasible to be collected by curbside collection and/or drop-off programs throughout Douglas County.	<ul style="list-style-type: none"> <li>• Aluminum</li> <li>• Cardboard</li> <li>• High Grade Paper</li> <li>• Mixed Paper</li> <li>• Newspaper</li> <li>• Plastics, #1 and #2</li> <li>• Clear Glass Bottles and Jars</li> </ul>
Limited Collection: Materials that can be recycled but that have collection or marketing limitations in Douglas County.	<ul style="list-style-type: none"> <li>• Electronics covered by E-Cycle Washington</li> <li>• Mercury-Containing Lights covered by LightRecycle Washington</li> <li>• Textiles</li> <li>• Ferrous Metals (including appliances)</li> <li>• Non-Ferrous Metals</li> <li>• Tires</li> <li>• Vehicle Batteries</li> <li>• Yard Waste/Food Waste</li> <li>• Wood Waste</li> <li>• Cell Phones</li> <li>• Ink Cartridges</li> <li>• Motor Oil</li> <li>• Antifreeze</li> </ul>
Potentially Recyclable: Hard to recycle materials that could be recycled if markets are available.	<ul style="list-style-type: none"> <li>• Latex Paint</li> <li>• Plastics, #3 through #7</li> <li>• Plastic Containers (Non-Bottle)</li> <li>• Plastic Film</li> <li>• Poly-Coated Paper</li> <li>• Food Waste</li> <li>• C&amp;D debris</li> </ul>

The following conditions are grounds for additions or deletions to the list of designated materials:

- The market price for an existing material becomes so low that it is no longer feasible to collect, process, or transport it to markets.
- Local markets or brokers expand their list of acceptable items based on new uses for materials or technologies that increase demand.
- New local or regional processing or demand for a particular material develops.
- No market can be found for an existing recyclable material, causing the material to be stockpiled with no apparent solution in the near future.
- The potential for increased amounts of diversion.
- Legislative mandate.
- Other conditions not anticipated at this time.

Proposed changes to the list of designated materials should be submitted to the SWAC for review. Unless there are objections from the SWAC, the Countywide Solid Waste Program

Director, can make minor changes in the list. These will be adopted depending on the schedule of SWAC meetings without formally amending the Plan. Should the SWAC conclude the proposed change is a “major change” (what constitutes a “major change” is expected to be self-evident at the time, although criteria such as opposition by the SWAC or difficulty in achieving consensus for adoption could be used as indicators of a “major change”), then an amendment to the Plan would be necessary (a process that could take 120 days or longer to complete). In either case, Ecology should be notified of changes made to the list of designated materials or of the initiation of an amendment process.

### **3.4 Status of Previous Recommendations**

The status of the recommendations made by the 2010 Plan can be found in Appendix D.

### **3.5 Needs and Opportunities**

#### **3.5.1 Recycling Rates by Material**

Overall, Douglas County’s waste diversion rate is estimated to be 17 percent. In 2014, a total of 12,077 tons was reported as recycled, composted, or otherwise diverted. Refer to Chapter 2.0 Waste Stream for data sources and detailed information. Recovery rates in Douglas County appear to be highest for cardboard, metals, wood, yard debris, asphalt/concrete and textiles.

#### **3.5.2 Urban/Rural Service Equity and Cost**

As Douglas County establishes recycling goals and service levels for the next five to seven years, questions of equity and cost arise when considering what type of service to provide in urban versus rural communities. Issues to consider included the following:

- Addressing how to provide equity between urban and rural residents in terms of opportunities for and convenience of recycling.
- Providing rural residents with adequate service at a reasonable cost.
- Planning for whether these service levels will need to be adjusted in the future.

#### **3.5.3 Sham Recycling**

Some facilities may claim they are recycling a material without actually doing so. Others haul mixed garbage they claim constitutes recyclable materials to avoid flow control policies in areas with high transfer station or landfill tip fees. These practices can both be considered “sham recycling.” Though Washington State’s 2005 “Sham Recycling Bill” and the Recyclable Materials Transporter and Facility Requirements (WAC 173-345) limit this practice by requiring recycling haulers to register with Washington State and prohibiting delivery of recyclable materials to transfer stations and landfills, sham recycling may still occur. To date, no sham recycling has been documented in Douglas County.

### **3.6 Alternatives**

Existing service gaps and other issues connected to the waste reduction, recycling and education component of solid waste management are discussed below.

### **3.6.1 Establish a Waste Diversion Goal**

Douglas County and signatory cities could set specific performance targets for waste reduction, recycling, and composting programs. Setting diversion goals provides a benchmark for measuring future performance.

### **3.6.2 Expand the Public Education Program**

Douglas County should continue to take the lead in establishing, expanding and incorporating public education and promotion of waste management programs to ensure that citizens are aware of opportunities and programs available when managing waste. Efforts to inform residents and businesses about recycling and waste reduction options need to be conducted on an ongoing basis and coordinated with the participating municipalities, schools, businesses and waste collection companies.

### **3.6.3 Provide Support for Recycling at Public Events**

Washington State law requires public events to provide recycling containers in communities where there is an established curbside service and where recycling service is available to businesses (RCW 70.93.093). To support this requirement, Douglas County could operate a program that provides a trailer or bins and other support for these events when curbside recycling becomes available. This program would be a low-cost public service with high visibility that provides a positive benefit for those involved. Signatory cities could partner with Douglas County to support and increase promotion of this program.

## **3.7 Recommended Actions**

The following recommendations are being made for waste reduction, recycling and education programs:

- WWR1) Adopt the updated list of designated materials (Table 3.4) and maintain it through periodic review and updates.
- WWR2) Incorporate and expand the education and promotion program.
- WWR3) Provide support for recycling at public events.
- WWR4) Continue the operations of the Community Recycling Centers and the Douglas County rural drop-off recycling program if feasible and cost effective.



# Chapter 4.0 Solid Waste Collection

## 4.1 Introduction

This chapter discusses existing MSW collection services in Douglas County and the participating cities and towns, identifies relevant planning issues, and develops alternative collection strategies.

## 4.2 Background

This section provides information regarding legal authority as well as information on incorporated and unincorporated areas within Douglas County.

### 4.2.1 Legal Authority

Ecology, WUTC, Douglas County, cities and towns, share the legal authority for solid waste collection within Douglas County.

RCW 70.95.020 assigns primary responsibility for solid waste handling (management) to local government. Private industry's role in waste management is reflected in the legislative language: "It is the intent of the legislature that local governments are encouraged to use the expertise of private industry and to contract with the same to the fullest extent possible to carry out solid waste recovery and recycling programs" (RCW 70.95.020).

For information regarding establishment of collection and disposal districts as allowed by Chapter 36.58A RCW, refer to Chapter 10.0 Administration and Enforcement.

Refer to Chapter 7.0 Special Wastes – Section 7.8 Construction and Demolition Debris for information on the "Sham Recycling Bill" and the Recyclable Materials Transporter and Facility Requirements (WAC 173-355).

### 4.2.2 Incorporated Areas

Cities and towns have three alternatives for collecting solid waste within their boundaries:

1. Municipal collection: collect waste using municipal employees.
2. Contract collection: the municipality conducts a competitive procurement process and selects a private company to provide collection services.
3. Permitted Solid Waste Carriers: if a city does not wish to be involved in managing garbage collection within its boundaries, a WUTC certified hauler for the area can provide those services. The city may pass an ordinance requiring that certain services be provided. A city may also require a permitted hauler to secure a license from the city. Bridgeport, East Wenatchee, Mansfield, Rock Island and Waterville contract for collection within their municipality limits. Section 4.3 provides additional information on solid waste collection.

### 4.2.3 Unincorporated Areas

This section covers collection of MSW in unincorporated areas of Douglas County.

#### **4.2.3.1 Collection**

Waste collection companies are included as a regulated transportation industry. As such, the WUTC grants exclusive rights to specific haulers, referred to as “Solid Waste Carriers”, in unincorporated areas. RCW 81.77.030 allows the WUTC to supervise and regulate waste collection companies by:

1. Fixing and altering its rates, charges, classifications, rules and regulations;
2. Regulating the accounts, service, and safety of operations;
3. Requiring the filing of annual and other reports and data;
4. Supervising and regulating such persons or companies in all other matters affecting the relationship between them and the public which they serve;
5. Requiring compliance with local solid waste management plans and related implementation ordinances; and
6. Requiring certificate holders under RCW 81.77 use rate structures and billing systems consistent with the solid waste management priorities set forth under RCW 70.95.010 and the minimum levels of solid waste collection and recycling services pursuant to local comprehensive solid waste management plans.

WAC 580-70 implements RCW 81.77 by establishing standards for public safety; fair practices; just and reasonable charges; nondiscriminatory application of rates; adequate and dependable service; consumer protection; and compliance with statutes, rules and commission orders.

At the time of publishing this Plan, three companies have solid waste authority to operate in unincorporated Douglas County:

- Sunrise Disposal, Inc. (SD), G-201
- WMW, G-237
- Zippy Disposal Service, Inc. (ZDS), G-121

The service area maps are included as Appendix F.

#### **4.2.3.2 Collection Fee**

Douglas County assesses a fee on the collection services of solid waste collection companies operating in the unincorporated areas in accordance with Ordinance C.E. 94-104. The revenues from the solid waste collection fee are used to fund the planning, administration, implementation and enforcement of solid and MRW programs for the benefit of Douglas County. The fee assessed to the collection companies is based on the previous year’s volume of waste (in pounds) collected and currently assessed at the rate of \$0.00652 cents per pound at the time of publishing this Plan.

### **4.3 Existing Conditions**

Residential curbside waste collection is not mandatory in the unincorporated areas or rural areas of Douglas County but is mandatory within the limits of the cities and towns and within the urban growth area. In both incorporated and unincorporated Douglas County, waste is collected by the certificated haulers and delivered to the GWRL at 191 Webb Road. Additional



information about the haulers' service areas can be found at the WUTC's website:  
<http://www.utc.wa.gov/regulatedIndustries/transportation/solidWaste/Pages/default.aspx>.

### 4.3.1 Waste Collection Programs

The following solid waste collection companies operate within the jurisdictions and unincorporated areas of Douglas County:

- SD, G-201
- WMW, G-237
- ZDS, G-121
- Consolidated Disposal Services, Inc. (CDS), G-190

Table 4.1 lists the style of residential garbage collection and the rates per household per month in Douglas County.

**Table 4.1 Solid Waste Collection Data**

City or Town	Population <sup>1</sup> 2016	Residential Garbage Cart Size	Collection Entity	Mandatory Service	Rate per Household per Month (2017)
Bridgeport	2,480	64 gallon 96 gallon	ZDS	Yes	\$18.35 \$27.45
East Wenatchee	13,500	35 gallon 64 gallon 96 gallon	WMW	Yes	\$13.32 <sup>2</sup> \$17.70 <sup>2</sup> \$24.27 <sup>2</sup>
Mansfield	330	68 gallon 95 gallon	CDS	Yes	\$21.50 \$24.50
Rock Island	965	35 gallon 64 gallon 96 gallon	WMW	Yes	\$10.99 <sup>2</sup> \$15.41 <sup>2</sup> \$19.66 <sup>2</sup>
Waterville	1,165	68 gallon 95 gallon	CDS	Yes	\$15.31 \$19.15
Unincorporated Area	22,095	35 gallon 64 gallon 96 gallon	WMW	No	\$12.40 <sup>2</sup> \$17.36 <sup>2</sup> \$22.37 <sup>2</sup>
		32 gallon 65 gallon 96 gallon	SD		\$12.67 \$18.60 \$32.19
		32 gallon 64 gallon 96 gallon	ZDS		\$16.35 \$20.55 \$24.25

1. Population information from Table 2.1. Data current as of April 2016.
2. Includes every other week curbside recycling in rate.

### 4.3.2 Bulky Waste Collection Service

Bulky waste collection is available countywide through each of the private haulers.

### **4.3.3 Commercial Collection Service**

Similar to residential garbage collection, commercial garbage collection is mandatory in jurisdictions and urban growth area and non-mandatory in the unincorporated areas of Douglas County. Style and frequency of service as well as rates charged vary by commercial customer.

### **4.3.4 Disposition of Collected Waste**

MSW collected within Douglas County is delivered to the GWRL located at 191 Webb Road for final disposal.

## **4.4 Status of Previous Recommendations**

The status of the recommendations made by the 2010 Plan can be found in Appendix D.

## **4.5 Alternatives**

### **Solid Waste Collection**

Curbside MSW collection programs appear to be operating satisfactorily in urban and suburban areas.

### **Douglas County Solid Waste Collection Service Fee**

In order to continue funding planning, administration, implementation and enforcement of solid waste and MRW programs for the benefit of residents, Douglas County should continue the assessment of the solid waste collection service fee.

### **Curbside Recycling**

Currently, curbside recycling services are offered in East Wenatchee and Rock Island and in the Urban Growth Area surrounding these jurisdictions in Douglas County. The relationship of collection and recycling is addressed in greater detail in Chapter 3.0 Waste Reduction, Recycling and Education.

### **Collection Contract Compliance with the Plan**

In order to check that collection contracts the cities have with the private haulers comply with the Plan, the cities could implement a contract review process. Douglas County would provide a checklist of items to be considered by the contract administrators in each city to review that collection contracts are in compliance with the Plan. The review process could occur at the time of renewals and/or re-procurement.

## **4.6 Recommended Actions**

The following recommendations are being made for solid waste collection programs:

- SWC1) Review collection contracts to confirm compliance with the Plan.
- SWC2) Douglas County should continue to assess the fee on solid waste collection companies operating in the unincorporated areas of the County.



# Chapter 5.0 Waste Transfer and Disposal

## 5.1 Introduction

This chapter discusses existing programs and facilities, identifies relevant planning issues, and develops alternative strategies for transfer and disposal of MSW.

## 5.2 Background

This section provides an update of Douglas County's waste transfer and disposal system, which is regulated by RCW 70.95 Solid Waste Management, WAC 173-350 Solid Waste Handling Standards, and WAC 173-351 Criteria for Municipal Solid Waste Landfills.

### 5.2.1 Douglas County Solid Waste Importation Ordinance

In December 2001, Douglas County adopted Ordinance Number 01-124-ORD-1, establishing a process in which solid waste may be imported into the unincorporated areas of Douglas County. The purpose of the Ordinance is to identify, assess and mitigate any know adverse impacts to Douglas County's infrastructure, environment, economy, public health and safety, substantial equivalence, and land use caused by any jurisdiction, agency, private corporation, individual or other entity requesting to import solid waste into the County. The Ordinance establishes procedures and criteria to follow beginning with a Letter of Request to the Douglas County Board of Commissioners for potential importation of solid waste. A copy of the Douglas County Ordinance Number 01-124-ORD-1, Solid Waste Importation is located in Appendix G.

### 5.2.2 Voluntary Solid Waste Disposal Host Agreement between Douglas County and Waste Management of Washington, Inc.

In July 2004, the Douglas County Board of Commissioners entered into a voluntary solid waste disposal Host Agreement with WMW to provide for the current and future operation, development and expansion of the Greater Wenatchee Regional Landfill (GWRL). A copy of the Host Agreement is included as Appendix H. The initial term of the Agreement is for a twenty year period as long as GWRL is accepting waste and has remaining capacity, however, if any conditions of the Conditional Use Permit or provisions of the Comprehensive Solid Waste Management Plan substantially change and cause a material increase in costs and/or expenses of operating GWRL, then WMW may have the option to renegotiate the terms and conditions of the Host Agreement. Highlights of the Host Agreement are outlined as follows:

- The initial term of the Agreement is twenty (20) years from the effective date and automatically renews for ten (10) years under the same terms and conditions as long as GWRL is accepting waste and has remaining capacity.
- WMW agrees to perform the following as part of community relations:
  - Local Hiring. To the extent permitted by law, WMW shall use its reasonable best efforts to recruit, train, and hire Douglas County residents for employee positions. Efforts to recruit and hire Douglas County residents shall include publishing employment advertisements in newspapers having a general circulation serving Douglas County.

- Local Purchasing. Where commercially reasonable and permitted by WMW's current contractual obligations and the law, WMW shall purchase goods and services from businesses located within Douglas County.
- Local Office. WMW shall maintain an office with regular office hours at GWRL or at another location within Douglas County. WM shall provide for records of and the prompt and efficient handling of all inquiries, claims or complaints by Douglas County residents or other Persons arising out of the activities of WMW.
- Scholarship Fund. For so long as GWRL accepts Solid Waste, WMW shall fund a scholarship program for students who are Douglas County residents graduating from high school and who are or will be engaged in college studies in environmental sciences and/or environmental engineering. Quarterly funding shall be equal to Two Cents (\$0.02) per Ton of Acceptable Waste actually disposed at GWRL, but not less than One Thousand Dollars (\$1,000.00) per calendar year. The scholarship fund shall be held, invested and administered by the Greater Wenatchee Community Foundation as it now exists or any like successor organization as may hereafter be created in its place. Scholarships shall be awarded upon consideration of both financial need and merit. Scholarship Funds shall accumulate in the scholarship fund to the extent such funds are not awarded.
- Per the 2012 Host Agreement Amendment, WMW agrees to pay the Douglas County Board of Commissioners operating fees for compliance and enforcement in the amount of \$0.06 per ton, a solid waste fee for acceptable waste disposed at GWRL of \$0.42 per ton, a road maintenance fee of \$0.50 per ton.
- Permitting, environmental compliance, waste importation requirements, operations, closure/post-closure, financial assurance, acceptable wastes, waste volumes, reporting, mitigation measures, designated haul route and insurance are all outlined.

In addition, Douglas County Board of Commissioners recognized the introduction of agricultural pests into the local area could be economically devastating to the established agricultural industry. Therefore, a Universal Agricultural Pest Protocol procedure and screening process was established with regards to identification, risk assessment, control protocol, and appropriate monitoring methods necessary to control the introduction of agricultural pests into Douglas County associated with the disposal of imported waste at GWRL.

Additional information on the Host Agreement and the Douglas County Universal Agricultural Pest Protocol Procedures is provided in Appendix H.

### **5.2.3 Waste Disposal Statistics**

As population growth occurs in the towns, cities, and unincorporated areas of Douglas County, the total tonnage of MSW also increases. Table 5.1 summarizes the quantities of MSW received at GWRL from Douglas County in the last three years. Taking into account the petroleum contaminated soils (PCS) accepted in 2014, MSW tonnage generated in Douglas County has shown an increase since 2014. In 2014, 25,461 tons of MSW were accepted and disposed of through the GWRL. In 2016, tonnage was 26,313. This reflects a 3.35% increase in MSW tonnage from 2014 to 2016.



**Table 5.1 Douglas County Solid Waste Disposed (in tons)**

Year	Greater Wenatchee Regional Landfill
2014	41,476 <sup>1,2</sup>
2015	26,543
2016	26,313

1. Tonnage reduced by 47,953 tons due to soil accepted and stockpiled for final landfill cover.
2. 16,015 tons of PCS were accepted in 2014.

### 5.3 Existing Conditions – Landfills

This section provides information regarding landfills within Douglas County.

#### 5.3.1 Greater Wenatchee Regional Landfill

GWRL is located at 191 Webb Road, East Wenatchee, Washington and is owned and operated by WMW. The location is shown on Figure 5-1. GWRL was opened in 1960 and has a projected remaining life of over ninety years. The facility encompasses 257 acres of which 135 acres are currently permitted for waste disposal.

GWLF is permitted to accept, but is not limited to, the following materials:

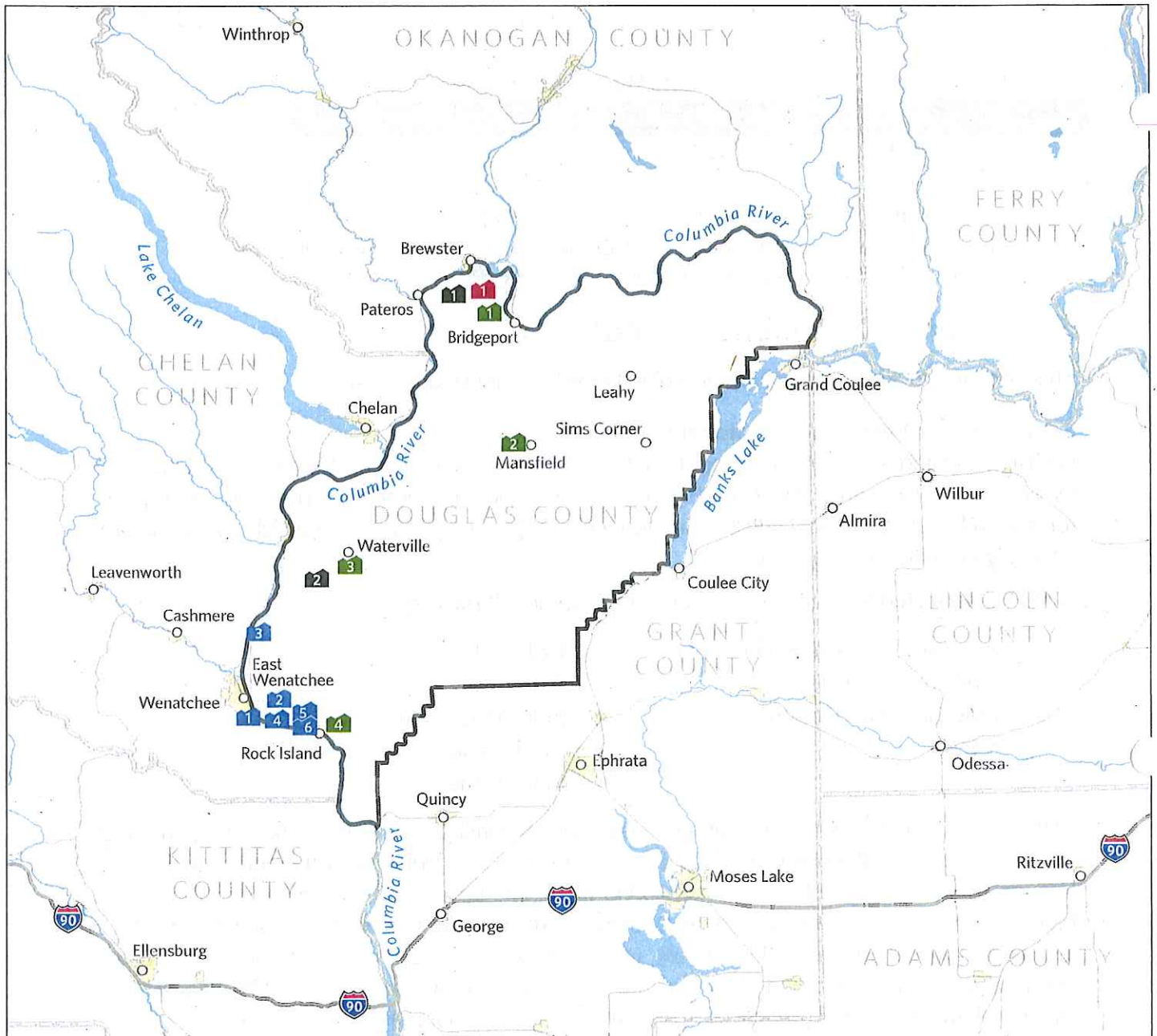
- Asbestos – Friable/Non-Friable
- Medical Waste (Treated)
- Auto Shredder Residue
- MSW
- C&D Debris
- Tires
- Industrial and Special Waste
- Yard Waste
- Inert Waste

GWRL uses a double-lined containment design which consists of a geo-synthetic clay liner plus a high-density polyethylene liner to isolate and contain waste from soil and groundwater. Groundwater is monitored by eight monitoring wells, one up-gradient and seven down-gradient. Monitoring results are submitted to the Chelan-Douglas Health District and Ecology. The site also has an active gas extraction system, which is managed by flaring and waste cells have an automated leachate collection and removal system, which maintains sump levels in accordance with regulatory standards. Leachate is then managed in a double-lined evaporation pond. Recycling services for asphalt and concrete are available at the GWLF site.

GWLF accepts waste from curbside collection trucks, transfer station trucks, and other commercial loads. Self-haulers are not allowed at GWRL due to safety concerns.

Currently GWRL disposes liquid wastes by a separate permit. The liquid waste disposal is issued under a liquids addition “research and development and demonstration” permit. When liquid wastes become a standard accepted waste a separate permit will not be required.

At the GWRL site, WMW improves biodiversity by sharing 80 acres of endangered “shrub-steppe” habitat as an outdoor learning laboratory for local high school students.



**Legend**





-  Public Existing Transfer Station (owned by Okanogan County)
  - 1 Bridgeport Bar Transfer Station
-  Private Existing Landfill/Transfer Station/Inert Waste Landfill
  - 1 Wenatchee Transfer Station
  - 2 Greater Wenatchee Regional Landfill
  - 3 Wenatchee Gun Club Inert Waste Landfill
  - 4 Lux Pit Inert Waste Landfill
  - 5 Pipkin Wells Inert Waste Landfill
  - 6 Pipkin Construction Ward Ave Inert Waste Landfill
-  Closed/Abandoned Disposal Sites
  - 1 Bridgeport Bar Landfill
  - 2 Pine Canyon Landfill
-  Community Recycling Centers
  - 1 Bridgeport Community Recycling Center
  - 2 Mansfield Community Recycling Center
  - 3 Waterville Community Recycling Center
  - 4 Rock Island Community Recycling Center

Figure 5-1



**Douglas County Solid Waste Facilities**

Douglas County Solid Waste and Moderate Risk Waste Management Plan

As a result of the hands-on environmental education and biodiversity work, WMW has earned a certification from the Wildlife Habitat Council. Biodiversity projects currently underway include the following:

- Water for mule deer and native birds - Water is an especially important resource in the vicinity of GWRL because of its location in the Cascade Mountains' "rain shadow". By installing wildlife water guzzlers to provide a constant water supply, WMW is supporting native wildlife and bird populations.
- Natural controls for invasive species - WMW uses natural methods to manage unwelcome plants and wildlife. WMW has used the lesser knapweed flower weevil to discourage knapweed. To control starling populations, WMW has installed nest boxes for American kestrel falcons.

### **5.3.2 Inert Waste Landfills**

Inert waste landfills may accept inert waste as per WAC 173-350. These facilities accept inert wastes, clean soil, and rock. These cannot accept MSW and organic wastes.

#### **5.3.2.1 Pipkin Wells Inert Waste Landfill**

The Pipkin Wells Inert Waste Landfill is privately owned and operated by Pipkin Construction, 4801 Contractors Drive, East Wenatchee, Washington, who restricts landfill use and charges a fee for those that dispose of inert waste.

#### **5.3.2.2 Pipkin Construction Ward Avenue Inert Waste Landfill**

In 2015, Pipkin Construction received approval to operate an inert waste landfill on 4.5 acres on property owned by Andy Gale on South Ward Avenue, East Wenatchee, Washington.

#### **5.3.2.3 Lux Pit Inert Waste Landfill**

Lux Pit Inert Landfill is located on a 4-acre site approximately 3.5 miles southeast of the City of East Wenatchee with access by way of South Nile Avenue. The property was acquired in 1936 and developed as a sand and gravel pit until 1983 when it was converted to a Douglas County inert waste landfill. The Lux Pit Inert Waste Landfill is owned and operated by the Douglas County Transportation and Land Services Department (TLS) who is the primary user. However, contractors may use the landfill once entered into an agreement with TLS requiring a per cubic yard disposal fee. TLS restricts acceptable waste to brick, asphalt, bituminous concrete, concrete, masonry, and uncontaminated sand, soil, and rock.

#### **5.3.2.4 Wenatchee Gun Club Inert Waste Landfill**

Wenatchee Gun Club Inert Landfill is located on a 36-acre site at 13110 State Route 2, East Wenatchee, Washington. This landfill was permitted in 2011 as an inert landfill. Seland Construction operates this landfill on land owned by the Wenatchee Gun Club. The inert waste accepted is limited to concrete, asphalt, dirt, sand and gravel. No organic materials are accepted.

### **5.3.3 Closed Landfills**

Following is information on known closed landfills within Douglas County.

### **Pine Canyon Landfill**

Pine Canyon Landfill is located approximately 5-miles west of Waterville, 5-miles east of Orondo, and ½-mile south of State Route 2 on Douglas County Road Number 1222. Approximately 4-acres of the 16.7 acre site were used for the landfill. Douglas County acquired and operated the landfill from 1976 until 1989. Pine Canyon Landfill officially closed in 1993 and started its post closure care in February 1994.

The Pine Canyon Landfill site is listed by Ecology as a MTCA site and is currently in post-closure. Groundwater monitoring and visual inspections are performed on a quarterly basis.

### **Bridgeport Bar Landfill**

The Bridgeport Bar Landfill is located approximately 5-miles northwest of Bridgeport, 6-miles southeast of Brewster at 25 Perkins Road, Brewster Washington. The 5.4-acre site was acquired by Douglas County in 1932 for use as a gravel pit. In 1976, the parcel was sold to the Perkins Orchard Company and subsequently leased back to Douglas County for approximately 20 years. Douglas County operated this landfill from 1976 until 1987. The Bridgeport Bar Landfill officially closed in 1993 and started its post closure care in February 1994. Currently, groundwater monitoring and visual inspections are performed on a quarterly basis.

In 1988 this landfill was covered with 2 to 4 feet of native soil and Okanogan County purchased 2.5-acres of the eastern portion to construct the Bridgeport Bar Transfer Station. This transfer station remains in operation and is used by residents of Okanogan County and the Bridgeport Bar self-haulers. The landfill is listed by Ecology as a MTCA site and is in post-closure. As a component of this process, acquisition or a long-term lease the site between Douglas and Okanogan Counties will be necessary.

## **5.4 Existing Conditions – Transfer Stations**

This section provides information regarding Waste Management Wenatchee Transfer Station and Bridgeport Bar Transfer Station located within Douglas County.

### **5.4.1 Waste Management Wenatchee Transfer Station**

Waste Management Wenatchee Transfer Station is owned and operated by WMW and is located in Chelan County at 1421 S. Wenatchee Avenue, Wenatchee, Washington. The facility is open Tuesday through Saturday 9:00 a.m. to 5:00 p.m. WMW charges \$92.50 per ton for MSW brought to the facility.

Waste Management Wenatchee Transfer Station provides service to the Cities of Wenatchee and Entiat, unincorporated areas in Chelan County, and self-haulers from Douglas County. MSW received at the facility is loaded into trailers and delivered to GWRL located in Douglas County.

### **5.4.2 Okanogan County Bridgeport Bar Transfer Station**

Bridgeport Bar Transfer Station is owned and operated by Okanogan County and is located in Douglas County at 25 Perkins Road, Brewster, Washington. The facility is open Tuesday and Thursday from noon until 4:00 p.m. and Saturday from 9:00 a.m. to 4:00 p.m. Okanogan County charges \$74.00 per ton for MSW brought to Bridgeport Bar Transfer Station.



Bridgeport Bar Transfer Station services the towns of Brewster and Pateros (located in Okanogan County) as well as self-haulers from the Greater Bridgeport Bar Area. Collected MSW is placed in trailers and hauled to the Okanogan County Landfill for disposal.

## 5.5 Waste Import and Export

This section provides information on MSW imported and exported in and out of Douglas County.

### 5.5.1 Waste Import

Douglas County Board of Commissioners adopted Ordinance Number 01-124-ORD-1, included as Appendix G, establishing a process in which solid waste may be imported into the unincorporated areas of Douglas County. Refer to Section 5.2.1 for additional information. Prior to any waste being imported into Douglas County, a formal letter of request must be submitted to Douglas County Board of Commissioners asking that a request for solid waste importation be reviewed. This ordinance outlines at a minimum what must be submitted with the letter of request, criteria used to assess requests for solid waste importation, conformance with the importation ordinance, exemption to the importation ordinance and the appeals procedure. Once sufficient information has been provided and potential adverse impacts have been identified, assessed, and mitigated, the request may be approved by the Douglas County Board of Commissioners.

Table 5.2 outlines waste imported into the GWRL for 2014, 2015 and 2016.

**Table 5.2 Waste Imported into Greater Wenatchee Regional Landfill (in tons)**

Waste Import Origin	2014	2015	2016 <sup>1</sup>
Adams County	79	64	11,783
Benton County	13	0	7
Chelan County	84,678	136,105	95,084
Columbia County	0	0	20
Franklin County	11	0	111
Grant County	18,099	6,580	6,805
Grays Harbor County	0	0	35
King County	81,104	21,111	27,646
Kitsap County	0	24	15
Kittitas County	29,520	33,372	36,519
Okanogan County	23	712	37
Pierce County	1,161	76	49
Skagit County	428	0	1,368
Snohomish County	1,684	14,513	5,050
Spokane County	9,475	79,335	96,001
Stevens County	0	7	0
Whatcom County	12,849	19,558	21,286
Yakima County	558	157	176
Out of State – Idaho	30	28	0
Out of State - Alaska	1,076	0	0

Waste Import Origin	2014	2015	2016 <sup>1</sup>
Out of Country – British Columbia	2,130	4,187	3,312
<b>Total Waste Imported</b>	<b>242,918</b>	<b>315,839</b>	<b>305,304</b>

1. Ferry, Jefferson and Lincoln counties brought in less than 1 ton of waste each and are not included in the total.

### 5.5.2 Waste Export

Biomedical and pathological wastes are typically generated by hospitals, medical clinics, dental offices, and nursing homes and are regulated under RCW 70.95K. Refer to Chapter 7.0 - Special Wastes for detailed information on this waste stream.

MSW from the Town of Coulee Dam, located in Douglas County, is exported to the Grant County Landfill. Due to this arrangement, the Town of Coulee Dam is under the jurisdiction of Grant County for its solid waste planning purposes.

Minor amounts of MSW are exported to the Okanogan County Landfill from self-haulers utilizing the Bridgeport Bar Transfer Station. Refer to Section 5.4 for additional information.

## 5.6 Status of Previous Recommendations

The status of the recommendations made by the 2010 Plan can be found in Appendix D.

## 5.7 Alternatives

Existing service gaps and other issues connected to the transfer and disposal component of solid waste management are discussed below.

Given current technology and disposal patterns, landfills are and will remain a necessary and important component of waste management. For now, GWRL has capacity well beyond the timeframe addressed by this Plan to handle Douglas County's MSW disposal needs.

### 5.7.1 Alternatives

The following alternatives were reviewed as part of Plan development:

- Landfills - GWRL has sufficient capacity to handle the Douglas County current and projected waste stream. MSW should continue to be disposed at GWRL as the recommended disposal option during this planning period.
- Inert Waste Landfills – The three inert waste landfills in Douglas County should continue to provide this service during this planning period and development of additional facilities should not be required to meet demand.
- Transfer Station Facilities - Waste Management Wenatchee Transfer Station and Okanogan County Bridgeport Bar Transfer Station have sufficient capacity to handle self-hauled waste during this planning period.
- Continue to Monitor and Track Waste Importation and Exportation - The Douglas County Solid Waste Program Office should continue to monitor and track waste importation and exportation on an annual basis to insure the waste meets the requirements set out in the Host Agreement and the Universal Agricultural Pest Protocol Procedures.

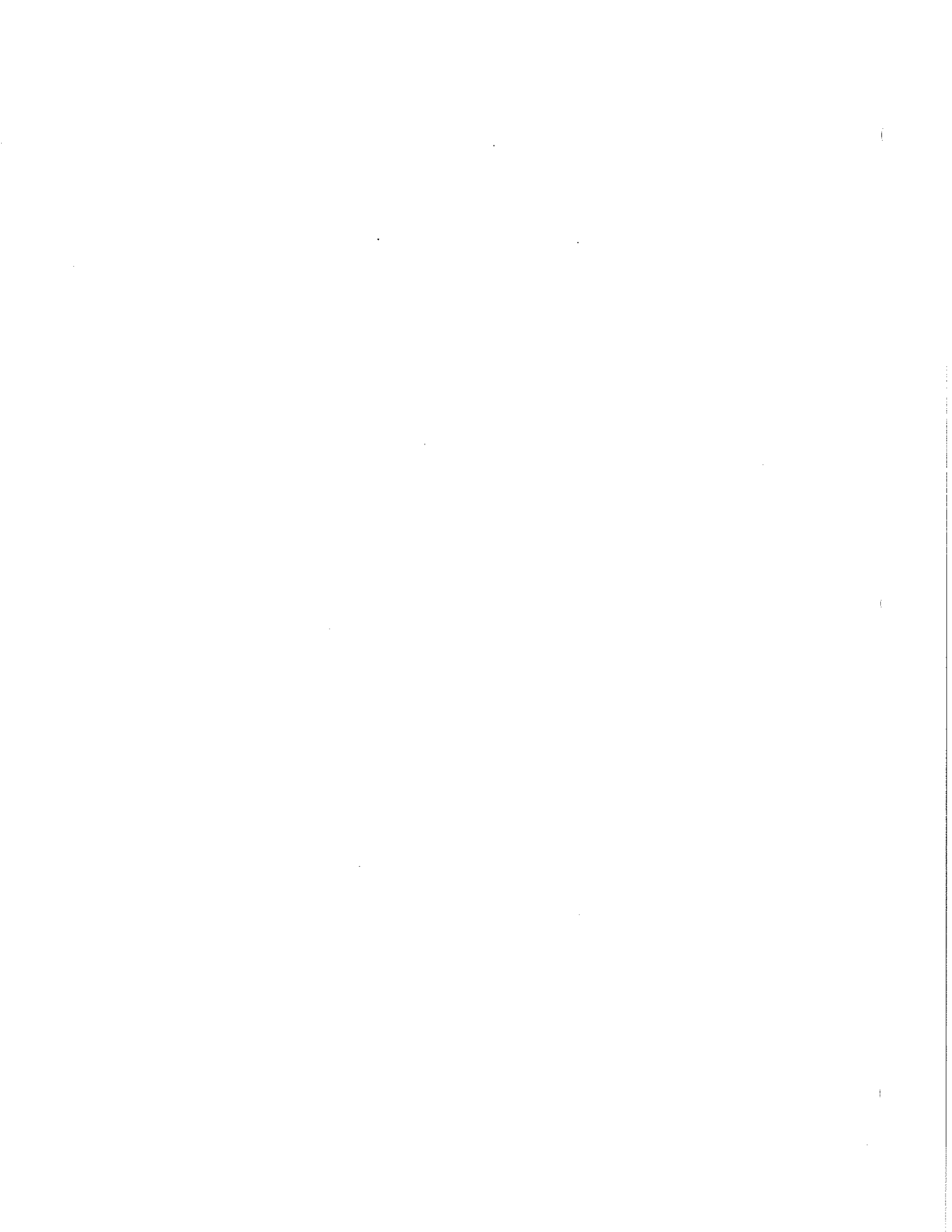


- Continue working with Chelan-Douglas Health District and Ecology on post closure care at Bridgeport Bar and Pine Canyon Landfills and consider options to reduce monitoring and inspections from quarterly to semi-annually or less.

## 5.8 Recommended Actions

The following alternatives were selected by the SWAC for implementation:

- WTD1) No new transfer stations should be constructed by Douglas County during this planning period.
- WTD2) Douglas County MSW should continue to be disposed at GWRL.
- WTD3) Douglas County should continue to monitor and track waste importation and exportation to ensure compliance with the Host Agreement and the Universal Pest Protocol Procedures.
- WTD4) Douglas County and WMW should continue to work cooperatively to ensure that the agreements for the importation of waste to GWRL meet the requirements of the Douglas County Waste Importation Ordinance Number 01-124-ORD-1.
- WTD5) Douglas County should continue to work with agencies to potentially reduce post closure care at its closed landfills.



# Chapter 6.0 Energy Recovery

## 6.1 Introduction

This chapter addresses emerging technologies in energy recovery that increase solid waste diversion and decrease disposal and greenhouse gas.

## 6.2 Background

Waste processing and conversion technology options can be grouped into the following main technology classes:

- Thermal Technologies
  - Direct Combustion (various forms of traditional waste-to-energy)
  - Gasification
  - Plasma Arc Gasification
  - Pyrolysis
- Biological Technologies
  - Aerobic Composting
  - Anaerobic Digestion with biogas production for electricity or fuel generation
- Chemical Technologies
  - Hydrolysis
  - Catalytic and Thermal Depolymerization
- Mechanical Technologies
  - Autoclave/Steam Classification
  - Advanced Materials Recovery
  - Refused Derived Fuel Production

There are also waste conversion technologies that are a combination of two or more technology classes. For example, Mechanical Biological Treatment technologies combine mechanical separation and treatment with biological processing, while Waste-to-Fuel Technologies combine mechanical pre-processing with thermal and chemical conversion processes.

## 6.3 Existing Conditions

As discussed in Chapter 5.0 Waste Transfer and Disposal, MSW from Douglas County is disposed at the GWRL located in Douglas County.

The GWRL site has an active landfill gas extraction system, which is currently managed by flare. A renewable energy plant is planned for the landfill in the future. The planned energy plant will use landfill gas to generate renewable electricity as part of broader Waste Management initiatives to extract value from waste.

There are no known hog burners or boilers using a solid fuel within Douglas County.

## 6.4 Status of Previous Recommendations

The status of the recommendations made by the 2010 Plan are shown in Table 6.1.

**Table 6.1 Status of Previous Recommendations for Energy Recovery**

Recommendation	Status
Conduct a Waste-to-Energy Study	Not Implemented

## 6.5 Alternatives

Existing service gaps and other issues connected to the Energy Recovery component of solid waste management are discussed below.

Douglas County's waste stream is relatively small and would not economically support the high capital expenditures required for facility construction and operation of waste processing and conversion technology alternatives at this time. The present tipping fee at Spokane's Waste to Energy Facility is \$108.41 per ton. In comparison, the current tip fee at Wenatchee Transfer Station is \$92.50 per ton.

Ample landfill capacity is available to Douglas County through the GWRL. Douglas County will monitor developments and progress in waste processing and conversion technologies, and may choose to explore Energy Recovery in more depth as a future waste disposal option. Detailed information regarding landfill disposal is included in Chapter 5.0 Waste Transfer and Disposal.

## 6.6 Recommended Actions

The following alternative was selected by the SWAC for implementation:

- ER1) Douglas County will monitor developments and progress in waste processing and conversion technologies.



# Chapter 7.0 Special Wastes

## 7.1 Introduction

This chapter discusses existing programs, identifies relevant planning issues, and develops and evaluates alternative strategies for the management of special wastes.

## 7.2 Background

Special wastes have some similarities to “normal” MSW and can be managed in a similar fashion with some additional precautions or special handling procedures. Each type of special waste is governed by slightly different regulations, based on its physical and chemical characteristics and the degree of environmental, health, or safety risk it poses. This Chapter is subdivided into the sections shown in the below table to describe regulations, current programs, and planning issues for each type of special waste.

**Table 7.1 Special Wastes**

Section	Special Waste
7.3	Agricultural waste
7.4	Animal carcasses
7.5	Appliances
7.6	Asbestos
7.7	Biomedical/infectious waste
7.8	Construction/Demolition Debris
7.9	Electronic waste
7.10	Litter and Illegal Dumping
7.11	Petroleum contaminated soils
7.12	Pharmaceuticals
7.13	Street sweepings/vector waste
7.14	Tires
7.15	Disaster Debris Management

## 7.3 Agricultural Waste

This section addresses disposal of agricultural waste within Douglas County.

### 7.3.1 Regulations and Guidelines

WAC 173-350-100 defines agricultural wastes as, “wastes on farms resulting from the raising or growing of plants and animals including, but not limited to, crop residue, manure from herbivores and non-herbivores, animal bedding, and carcasses of dead animals.” WAC 173-350-230 addresses land application, the beneficial use of solid waste applied to land for its agronomic value or soil-amending capability.

### **7.3.2 Current Practice**

As defined above, little of the agricultural waste generated is disposed of through Douglas County's solid waste programs. Hence, agricultural wastes are not under the purview of this Plan. Agricultural wastes, whether crop residues or animal manures, can be returned to the land where these were generated. Exceptions to this are the disposal of animal carcasses which is addressed below in Section 7.4.

Unusable produce from a food processor, such as a load of rotten potatoes, is handled as MSW and may be disposed of at the GRWL.

Note that empty pesticide and herbicide containers may be disposed of as refuse following triple rinsing.

### **7.3.3 Planning Issues**

Current agricultural waste management and disposal practices are generally adequate and should be maintained.

## **7.4 Animal Carcasses**

This section addresses disposal of animal carcasses within Douglas County.

### **7.4.1 Regulations and Guidelines**

Animal carcass disposal requirements generally differ according to cause of death, as follows:

1. Animals that die of natural causes (but not an infectious disease) can be buried on site (typically on a farm) in accordance with state and local regulations, taken to a rendering facility, or taken to Waste Management Wenatchee Transfer Station and Bridgeport Bar Transfer Station for disposal.
2. Animals killed by collision with motor vehicles ("road kill") are also taken to a transfer station for disposal.
3. The carcasses of animals that die from an infectious disease must be treated to destroy the disease-causing agent to prevent it from infecting other animals or humans. This involves coordination with Chelan-Douglas Health District.

### **7.4.2 Current Practice**

Douglas County's policy and procedures for disposal of animals can be summarized as follows:

- Animal carcasses are accepted at transfer stations for disposal.
- Customers are charged the same rate as for garbage disposal.
- Customers wishing to dispose of infectious and/or diseased animals are directed to the Chelan-Douglas Health District for further instructions.

### **7.4.3 Planning Issues**

Because they can potentially infect humans, two of the most important animal diseases are Bovine Spongiform Encephalopathy (BSE) and avian flu.

BSE-infected cattle must be buried in a lined landfill. In addition, BSE-infected cattle cannot be disposed in a landfill where the leachate goes to a sewage treatment plant, because chlorination does not deactivate prions. Incineration is also an accepted method of BSE-cow disposal.

Highly Pathogenic Asian Avian Influenza A (H5N1) or “avian flu” is caused by bird influenza viruses. Since 1997, H5N1 has infected and killed humans who had close contact with infected poultry. There is concern the H5N1 virus could mutate and eventually acquire the ability to spread easily from one person to another, without birds as the carrier. Onsite composting has been proven to be an effective mass disposal method for dead poultry, as the avian influenza virus is deactivated after 10 days of composting at 60° Celsius (140° Fahrenheit). Single birds may also be accepted as MSW if they are double bagged. In larger quantities, the birds are required to be disposed of at a lined landfill or incinerated.

## 7.5 Appliances

This section addresses disposal of appliances generated within Douglas County.

### 7.5.1 Regulations and Guidelines

Major appliances, also known as white goods, are considered to be a special waste because their size makes it difficult to handle them in the “normal” garbage collection system, and because some types of appliances contain chlorofluorocarbons (CFCs or “Freon”) that must be removed prior to disposal. On the federal level, the Clean Air Act prohibits the release of CFCs, and state law (RCW 70.94, the Washington Clean Air Act) also requires that CFCs be handled in a manner that prevents release into the atmosphere. Furthermore, CFCs and hydrochlorofluorocarbons are designated as dangerous wastes under WAC 173-303, although they are exempt from these rules if recycled properly.

### 7.5.2 Current Practice

Appliances are composed mainly of steel, copper, plastic, and rubber, but are typically recycled as ferrous scrap metal. As a service to customers, some appliance dealers recycle the old appliance when a new one is delivered. Appliances are accepted for a fee at the following locations:

- Community Recycling Centers in Bridgeport, Mansfield, Rock Island and Waterville.
- E-Z Auto, across the highway from BJ’s Shell Station in Rock Island.
- Greater Wenatchee Recycling, 3741 Airport Way, East Wenatchee.
- Wenatchee Valley Salvage and Recycling, 295 Urban Industrial Way, East Wenatchee.

Facilities confirm the “Freon” refrigerants from refrigerators, freezers, air conditioners, and similar devices are removed. Various companies haul and recycle the appliances based on price and availability.

### 7.5.3 Planning Issues

Current appliance management and disposal practices are generally adequate and should be maintained.

## 7.6 Asbestos

This section addresses asbestos disposal within Douglas County.

### 7.6.1 Regulations and Guidelines

Asbestos is a naturally occurring crystalline material that breaks down into small particles that float in air, and once inhaled these particles can become lodged in a person's lungs and cause cancer. Several federal laws address asbestos removal and disposal, including the Toxic Substances Control Act, the Occupational Safety and Health Act, the Clean Air Act, and the Clean Water Act. There are also several state laws that address asbestos through worker training and protection requirements as well as disposal rules under the Dangerous Waste Regulations (WAC 173-303).

### 7.6.2 Current Practice

Customers with asbestos containing materials are referred to GWRL for disposal.

### 7.6.3 Planning Issues

Current asbestos waste management and disposal practices are generally adequate and should be maintained.

## 7.7 Biomedical/Infectious Waste

This section addresses disposal of biomedical waste generated within Douglas County.

### 7.7.1 Regulations and Guidelines

Washington State's definition of biomedical waste (RCW 70.95K.010) includes the following waste types:

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

**Biosafety level 4 disease waste:** contaminated with blood, excretions, exudates, or secretions from humans or animals who are isolated to protect others from highly communicable infectious diseases that are identified as pathogenic organisms assigned to biosafety level 4 by the Center for Disease Control and Prevention.

**Cultures and stocks:** wastes infectious to humans, including 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 and inoculate 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 emanate from surgery, obstetrical procedures and autopsy. Does not include teeth,



human corpses, remains and anatomical parts that are intended for interment or cremation.

Sharps waste: all hypodermic needles, syringes and intravenous tubing with needles attached, scalpel blades, and lancets that have been removed from the original sterile package.

WUTC regulates transporters of biomedical wastes. Its regulations also allow regular solid waste haulers of refuse to haul wastes that they observe to contain infectious wastes as defined by the WUTC.

### **7.7.2 Current Practice**

Stericycle, Inc., collects biomedical/infectious wastes in Douglas County. Due to privacy considerations, Stericycle does not provide information about where these wastes are generated.

Sharps are currently accepted at the following locations in Douglas County:

- East Wenatchee City Hall
- Costco Pharmacy
- Bi-Mart Pharmacy
- Eastmont Pharmacy
- Fred Meyer Pharmacy
- Community Recycling Centers in Bridgeport, Mansfield, Rock Island and Waterville

### **7.7.3 Planning Issues**

The list of potential generators of biomedical waste includes medical and dental practices, hospitals and clinics, veterinary clinics, farms and ranches, as well as individual residences. Some of these may not always dispose of biomedical wastes properly. There is no definitive estimate of the quantity of syringes and other biomedical wastes that are improperly disposed locally, but haulers in other areas often report seeing syringes sticking out of garbage bags. This problem is expected to increase due to an aging population and additional medications (e.g., for human immunodeficiency virus, arthritis, osteoporosis, and psoriasis) delivered via syringe that have become available for home use.

## **7.8 Construction and Demolition Debris**

This section addresses disposal of C&D debris within Douglas County.

### **7.8.1 Regulations and Guidelines**

Construction, demolition and land clearing wastes are a solid waste resulting from the construction, renovation, and demolition of buildings, roads and other manmade structures. Construction wastes generally include wood scraps, drywall scraps, and excess concrete, as well as cardboard boxes and other packaging used to hold materials or products prior to installation. Demolition wastes typically contain concrete, brick, wood, drywall and other materials. Land clearing debris (tree stumps, brush and soil) is often included with C&D wastes, but little of this material is actually sent to disposal facilities. Another component of C&D wastes

are reusable building materials, which are salvaged materials from construction or demolition that would otherwise be landfilled.

C&D wastes are generated by construction companies, homeowners and others. Large amounts of C&D wastes generated by construction companies and contractors are more likely to be collected separately from normal garbage and brought to inert waste disposal sites. Homeowners are more likely to bring small, mixed loads containing both C&D wastes and MSW to disposal facilities.

WAC 173-350-400 allows many types of C&D wastes to be disposed in limited purpose landfills. In addition, state law prohibits the open or unregulated burning of “treated wood, metal and construction debris.”

Ecology released an updated waste and toxics reduction plan in September 2015, Moving Washington Beyond Waste and Toxics, which focuses on reducing C&D waste through design and recycling. Moving Washington Beyond Waste and Toxics Plan provides the following goals pertaining to C&D waste:

- Waste generation will be reduced throughout the system by both businesses and residents (GOAL SWM 4)
  - Advance building salvage and building material reuse to reduce construction and demolition waste by promoting design for deconstruction principles, sharing model contract language that requires salvage, and other related efforts.
- Sham recycling and improper disposal will decrease (GOAL SWM 11)
  - Work with local governments, solid waste collection companies, other transporters, and WUTC to address sham recycling. Communicate more with local governments and recycling businesses about recycling laws, requirements, and options for enforcement. Clarify definitions and terms, and track data from transporter recordkeeping.
  - Work with WUTC to ensure implementation of the Transporter Law provisions, with more enforcement by Ecology and others.
  - Discourage private property disposal on single family farms and residences by encouraging jurisdictional health departments to use local ordinances to restrict this practice.

The state legislature passed the “Sham Recycling Bill” in 2005, requiring transporters of recyclable materials to register with Washington, and requiring certain recycling facilities to notify the state before commencing operation. A new state rule, the Recyclable Materials Transporter and Facility Requirements (WAC 173-345), was developed in response to this legislation. Although originally directed at C&D recycling issues, the new rule covers recyclable materials (all materials designated as recyclable in this Plan). The new rule prohibits delivery of recyclable materials to transfer stations and landfills without drop-offs where source separated materials can be diverted. The rule does not apply to several entities, including residential self-haulers, cities and city contractors, and charities.

### **7.8.2 Current Practice**

There are no operational C&D recycling/processing facilities in Douglas County at this time. C&D debris is currently accepted, for disposal, at GWRL, Pipkin Wells Demolition and Inert Waste Landfill, Pipkin Construction Ward Avenue Inert Waste Landfill, Lux Pit Inert Waste Landfill and the Wenatchee Gun Club Inert Waste Landfill. Additional information regarding the inert and demolition debris landfills located within Douglas County is located in Chapter 5.0 Waste Transfer and Disposal.

### **7.8.3 Planning Issues**

Current C&D debris disposal practices are generally adequate and should be maintained. While there are inert and demolition debris landfills located in Douglas County for disposal, there are currently few opportunities for C&D recycling. The Alternatives Section of this Chapter includes reuse and recycling options for C&D wastes.

## **7.9 Electronic Waste**

This section addresses disposal of electronic and electronic equipment waste, commonly referred to as “e-waste,” generated within Douglas County.

### **7.9.1 Regulations and Guidelines**

Electronic products contain heavy metals and other chemicals at hazardous levels that make them difficult to dispose of safely. The Electronic Product Recycling law (Chapter 70.95N RCW) requires manufacturers of computers, monitors, laptops and portable computers to provide recycling services throughout the state at no cost to households, small businesses, small local governments, charities and school districts. This law led to the E-Cycle Washington program developed by Ecology. Names and locations of collection sites can be obtained by calling 1-800-RECYCLE or online at [www.ecyclewashington.org](http://www.ecyclewashington.org).

### **7.9.2 Current Practice**

The E-Cycle Washington program allows for the collection and recycling of televisions, desktop computers, laptop computers, tablet computers, e-readers, portable video disc players, and computer monitors. However, peripherals such as keyboards, mice, and printers are not covered by the program. Over 330 collection sites (statewide) have been established since January 2009. In the first five years of its existence, E-Cycle Washington has collected more than 200 million pounds of discarded electronics.

Douglas County currently has one site which accepts electronic wastes, the Goodwill East Wenatchee store.

### **7.9.3 Planning Issues**

Based on the E-Cycle statistics, the statewide program is working well.

## **7.10 Litter and Illegal Dumping**

This section addresses litter and illegal dumping within Douglas County.

### **7.10.1 Regulations and Guidelines**

The Waste Reduction, Recycling, and Model Litter Control Act (WRRLCA), or RCW 70.93, is the primary law that guides and directs litter programs in Washington State. Originally passed by the Washington State Legislature in 1971 as the Model Litter Control Act, the law was the first of its kind. Voters ratified the law in the 1972 general election as an alternative to beverage container deposits. Amendments in 1979 added a youth employment program and public awareness activities concerning recycling.

Concern over the litter problem increased in 1997. Ecology convened a Litter Task Force to examine the effectiveness of litter control in Washington State. The Task Force made several recommendations for improving the existing system and moving toward a standard of zero litter. These recommendations formed the basis of the 1998 Litter Act (Second Substitute House Bill 3058), amending Chapter 70.93 RCW. The 1998 Litter Act included several changes. Most significantly, it put Ecology in a leadership role overseeing funds from the Waste Reduction, Recycling, and Litter Control Account.

Ecology released an updated waste and toxics reduction plan in September 2015, *Moving Washington Beyond Waste and Toxics*, which includes discussion of litter prevention with the following applicable to Douglas County:

- Ecology will undertake an effective, comprehensive, litter prevention campaign and another litter survey. (GOAL SWM 9)
  - Work with stakeholders to revive a litter prevention campaign and complete a litter survey when adequate funding is restored through the WRRLCA account. Target the most heavily littered materials for prevention efforts.
  - Using litter survey data, evaluate the litter tax based on who pays, what items are most littered, and recommend changes to the tax structure or its administration.

### **7.10.2 Current Practice**

#### **Litter**

In 1998, Douglas County initiated its Community Litter Clean Up Program funded with grant money from Ecology's Waste 2 Resources Program dedicated account, the Waste Reduction, Recycling, and Model Litter Control Account (RCW 70.93.180). Money is raised from a tax on industries whose products tend to contribute to the litter problem. Starting July 1, 2013 funds were transferred from this dedicated account to State Parks to meet other state priorities. Between July 1, 2009 and June 30, 2015, about \$24 million has been cut from the litter account, amounting to approximately 40% of the total litter budget.

The Douglas County program is modeled after Ecology's summer youth litter program and litter is picked up on county and municipal roadways, trails, parks and properties. Each municipality submits litter projects to the Douglas County SWAC, which are prioritized for the upcoming year litter grant funding.

#### **Illegal Dumping**

The Chelan-Douglas Health District, Douglas County Sheriff's Department, Douglas County Commissioners and the Douglas County Solid Waste Program Office receive and investigate

illegal dumping and nuisances countywide. Additional information regarding the Chelan-Douglas Health District investigation and enforcement program can be found in Chapter 10.0 Administration and Enforcement.

### **7.10.3 Planning Issues**

Currently funding for the Countywide Litter Control Project comes from grant funding through Ecology. If funding continues to be reduced, the Countywide Litter Control Program would have to look to other funding sources or discontinue the program. In addition, funding for the Chelan-Douglas Health District enforcement program comes from Ecology grant funding.

## **7.11 Petroleum Contaminated Soils**

This section addresses PCS disposal within Douglas County.

### **7.11.1 Regulations and Guidelines**

PCS can contain fuel oil, gasoline, diesel, or other volatile hydrocarbons in concentrations below dangerous waste levels, but greater than cleanup levels established by Ecology. Small amounts of PCS may be disposed of as solid waste in an approved landfill. Depending on the contamination levels, large amounts may need to be treated by a process that reduces, removes, or destroys the contamination. Treatment processes include aeration, bioremediation, thermal stripping, and incineration.

### **7.11.2 Current Practice**

Douglas County refers PCS to GWRL for disposal.

### **7.11.3 Planning Issues**

Current management and disposal practices are generally adequate to handle the volume of PCS generated within Douglas County.

## **7.12 Pharmaceuticals**

This section addresses disposal of pharmaceuticals within Douglas County.

### **7.12.1 Regulations and Guidelines**

Generally, two types of pharmaceuticals are of interest to Douglas County waste management: 1) controlled substances (prescription drugs and illegal drugs) and 2) over-the-counter, nonprescription substances (e.g., aspirin, vitamins, other health supplements, cold medicines, etc.). Controlled substances are covered by their own regulations, which do not address disposal other than to prevent their reuse. Over-the-counter substances are not specifically addressed by solid waste regulations.

### **7.12.2 Current Practice**

Generally, disposal of unused or outdated prescription and nonprescription substances occurs in an informal and inconsistent fashion. Historically, people were told to flush unwanted prescription drugs and other medicines down the toilet. However, some of these compounds are only partially broken down (if at all) in wastewater treatment plants, and eventually show up as contaminants in ground and surface waters. Therefore, Washington State has established

temporary drop-off locations while it develops a statewide take-back program. A list of temporary drop-off locations is available online at [www.takebackyourmeds.org](http://www.takebackyourmeds.org).

If a collection program for unwanted medicines is not conveniently available to residents, people are currently being encouraged to dispose of these in their trash after mixing the medicines with an undesirable substance, such as used cat litter or coffee grounds, and putting the mixture into a sealed container.

If available, Douglas County encourages disposing of pharmaceutical waste via community drug take-back programs to provide proper disposal rather than mixing with trash.

### **7.12.3 Planning Issues**

Currently, the EPA lists pharmaceuticals and personal care products as “contaminants of emerging concern.” For household pharmaceuticals, the EPA’s interim recommendation is to not flush medications to the sewer or septic tank. Rather, the EPA recommends that residents double bag medications and place them directly into exterior garbage cans to prevent children or pets accessing them.

Take Back Your Meds is a group of over 270 organizations in Washington State that support creation of a statewide program for the safe return and disposal of unwanted medicines. Resources for this can be found online at [www.takebackyourmeds.org](http://www.takebackyourmeds.org).

Current pharmaceutical waste management and disposal practices are generally adequate.

## **7.13 Street Sweepings/Vactor Waste**

This section addresses disposal of wastes generated from maintaining paved areas within Douglas County.

### **7.13.1 Regulations and Guidelines**

Street sweepings and vactor wastes may be contaminated with a variety of materials, depending on the locale, unauthorized or accidental discharges, and frequency of cleaning. Both street sweepings and vactor waste may contain small amounts of petroleum hydrocarbons from motor oil that leaks from vehicles traveling on public streets. Currently, vactor wastes can be classified as clean fill, solid waste, special, or dangerous wastes, depending upon the level of contamination.

### **7.13.2 Current Practice**

Currently, the inert and demolition landfills are authorized to accept street sweeping and vactor waste after passing testing for petroleum and lead contaminants. If tests indicate presence of contaminants, the waste may be handled as solid waste, special, or dangerous wastes depending on concentrations.

### **7.13.3 Planning Issues**

Current waste management and disposal practices for street sweepings and vactor waste are generally adequate.

## **7.14 Tires**

This section addresses tire disposal within Douglas County.

### **7.14.1 Regulations and Guidelines**

WAC 173-350-100 defines waste tires as any tires that are no longer suitable for their original intended purpose because of wear, damage or defect. WAC 173-350-350 imposes restrictions on outdoor piles of more than 800 tires.

### **7.14.2 Current Practice**

Many tire shops and auto repair shops recycle the tires they replace (typically for a fee). Waste tires are also accepted at the Community Recycling Centers in Bridgeport, Mansfield, Rock Island and Waterville for a fee.

### **7.14.3 Planning Issues**

Recycling and disposal practices for tires are generally adequate. The areas of primary concern are large tire stockpiles, loads of tires that are illegally dumped on public or private property, and small quantities of tires stored by residents and businesses for disposal at some indeterminate future date. As funding is made available through the Ecology, future tire clean-up events may be held.

## **7.15 Disaster Debris Management**

This section addresses management and disposal of wastes generated during disasters within Douglas County.

### **7.15.1 Regulations and Guidelines**

Natural and man-made disasters can result in a surge of unanticipated debris that can inhibit or obstruct emergency services and overwhelm normal Douglas County Department of Public Works capabilities. Clearing debris immediately after a disaster is critical so emergency vehicles can respond to life-threatening situations. Once the debris is cleared from the right-of-way and vehicle access is achieved, the removal and disposal of debris are important for the community's recovery from a disaster.

Being prepared with a plan to address the increased quantity and potential types of disaster debris can help to protect the health and safety of the community. Successful implementation of that plan can positively affect speed and cost of recovery, and the ability to obtain financial assistance for the recovery efforts.

Numerous resources that provide guidance for the development of disaster debris management plans (DDMPs) are available. The EPA in March 2008 developed Planning for Natural Disaster Debris (EPA 2008) as a tool for local communities to create such a plan. Another guidance tool is the Federal Emergency Management Agency's (FEMA) Public Assistance Program and Policy Guide, Appendix D: Debris Management Plan Job Aid (FEMA 2016). Both of these documents are available online and provide guidance that could assist Douglas County in developing a DDMP.

**7.15.2 Potential Disasters**

From January 2010 to August 2017, two federally declared disasters affected Douglas County (not including fire management assistance) according to FEMA’s website.

- Washington Fires – Reach Complex Fire in 2015.
- Wildfire – Barker Canyon Fire in 2012.

Douglas County is historically at risk primarily for storm, flood and fire disasters. However, wind-borne ash from the 1980 volcanic eruption of Mt. St. Helens affected Douglas County. Table 7.2 summarizes the types of disasters most likely to occur in or near Douglas County and the types of debris likely to be generated. Evaluation of potential disasters and resultant debris can help prepare for disaster response and recovery.

**Table 7.2 Potential Disasters and Resultant Debris**

Debris	Bio-disaster/ Epidemic	High Winds	Floods	Wildfires	Winter Storms	Volcanoes
C&D Material: concrete, asphalt, metal, wallboard, brick, glass, wood		XX	X	X	X	X
Personal Property: appliances, e-waste, MRW, furniture, other personal belongings		XX	X	X		
Vehicles and vessels		X	X	X		
Vegetative Debris: trees, yard debris, woody debris		X	XX	X	XX	X
Animal carcasses, bedding, manure, contaminated items	XX		X	X	X	
Displaced Sediments: sand, soil, rock, sediment			XX	X		X
Mixed other debris		X	X	X		X

X = smaller quantity XX = significant quantity

Planning for debris management by developing a DDMP would enable Douglas County to consider and evaluate alternative debris management options before a natural disaster occurs. Adequate preparation assists with making disaster debris management more cost- effective and meet community concerns, which typically include:

- Public health and safety.
- Prioritizing response activities to target resources in an appropriate manner.
- Preserving property and the environment.
- Minimal impact or disruption of normal solid waste services.
- Cost.
- Compliance with regulations governing specific waste streams such as asbestos and hazardous waste.
- Availability of facilities permitted to accept specific waste streams.
- Ability to recycle portions of the waste stream.



- Eligibility for cost-recovery funds through FEMA or other government programs.

### 7.15.3 Current Practice

Douglas County Department of Emergency Management has prepared a Comprehensive Emergency Management Plan (CEMP). CEMP includes the following regarding disaster debris management:

- Debris Management and solid waste disposal are essential services and activities which are to be directed, controlled and coordinated.
- TLS is responsible for emergency debris clearance from roadways and other infrastructures.
- Public Works will grant emergency waivers and legal authority will be granted to dispose of materials from debris clearance.
- Public Works will maintain plans for debris disposal.
- All agencies will coordinate debris removal, disposal, permitting and/or waiver procedures with Douglas County Solid Waste and waste management contractors.
- Chelan-Douglas Health District will establish control measures related to emergency solid waste disposal.
- Long-term recovery goals should consider debris and waste removal as part of strategic planning.

CEMP indicates that as part of its Preparedness Activities, Douglas County Solid Waste should provide debris collection amounts and concerns to Department of Emergency Management.

### 7.15.4 Planning Issues

In an emergency, timely response, saving lives, and minimizing property damage are the primary goals. Following the initial response, disaster debris handling becomes important. A DDMP can be used to coordinate between emergency responders and Douglas County agencies that provide various services. Following the DDMP during and after an emergency is likely to allow for a speedier response and recovery and assist in reducing the financial impact. The DDMP is a supplement to the CEMP by elaborating on debris clearance and disposal activities. Following are issues the DDMP could address:

- Forecast of type and quantity of debris;
- Types of equipment required to manage debris;
- Description of critical local accessibility routes;
- Plan for public debris collection and removal and debris removal from private property;
- Plan for informing the public regarding debris handling;
- Health and safety requirements for emergency workers;
- List of environmental considerations and regulatory requirements;
- Temporary debris management sites and disposal locations, including any necessary permits or variances;
- Recordkeeping and documentation requirements for FEMA reimbursement;
- Potential resources, such as contractors or Douglas County staff, and their responsibilities; and
- Plan for monitoring debris removal and disposal operations.

## 7.16 Needs and Opportunities

The status of the recommendations made by the 2010 Plan can be found in Appendix D.

## 7.17 Alternatives and Evaluations

Existing service gaps and other issues connected to the Special Waste component of solid waste management are discussed below.

### 7.17.1 General Alternatives

Collection programs may be required or desired in the future for materials that cannot be fully anticipated at this time. As these needs arise or are identified, options should be evaluated and feasible cost-effective solutions implemented as necessary. Possible steps that could be taken include the following:

- Increased education: additional education for generators who are the sources of the waste stream could be conducted to promote safe handling and disposal practices.
- Collection programs: additional or new collection programs could be developed or existing ones expanded to include additional materials or sources.
- Product stewardship: new product stewardship programs could be considered or supported to address specific waste materials.

### 7.17.2 Construction and Demolition Debris Recycling Alternatives

While there are a number of inert and demolition debris landfills located in Douglas County, there are currently few opportunities for C&D recycling, although specific types of C&D materials (such as clean wood, cardboard, metals, and reusable building materials) can be diverted to various recovery operations. In general, reuse and recycling options for C&D wastes could include:

- Salvage for onsite and offsite reuse: This option generally applies to demolition projects, although a small amount of reusable materials and products are also generated at construction sites. To be effective, salvaging requires pre-demolition removal of reusable materials and hence requires some additional time and steps in a project's schedule. Offsite reuse could be accomplished through a variety of means, including reuse stores and private efforts.
- Onsite crushing and grinding for reuse and recycling: This generally applies to concrete and asphalt, which could be crushed to serve as road base or replace other basic materials, although in some cases wood and other materials could also be handled onsite.
- Source-separation for offsite processing: Source separation at C&D sites could allow recycling of wood, cardboard and other materials.
- Mixed C&D processing offsite: This option would require a significant investment in one or more facilities that are properly equipped and operated to process and market C&D waste.
- Central site for recycling and reuse: An ideal option could be a facility, or a series of local facilities, that combine reuse and recycling as appropriate for the material. These

facilities could sell salvaged products (such as doors, windows, and cabinets), as well as crush or grind other materials (such as concrete and wood) for use as aggregate or hog fuel.

- Collection depots at disposal facilities: Collection containers for reusable and/or recyclable C&D materials at solid waste facilities could allow these materials to be transferred to a central processing or salvage facility. Transportation costs can be a significant barrier, however, since the recovered materials typically have only a low monetary value.

Douglas County could partner with Habitat for Humanity Greater Wenatchee Area to salvage and divert recyclable materials received at facilities. Materials that could be recycled and resold through the Habitat for Humanity ReStore could be set aside for pickup or customers could be redirected to the Habitat for Humanity ReStore.

Contractors and homeowners could benefit from more information about the potentially hazardous materials that can be uncovered during demolition activities. Information could include proper handling and disposal, as well as the potential health impacts. Disposers of C&D waste can most easily identify potential hazards if they separate their demolished waste. Others can learn about the hazards they are exposing themselves to with Douglas County-provided brochures. Contractors and homeowners could be given a brochure when they apply for a permit.

Once diversion programs are established for C&D debris, Douglas County could pass an ordinance requiring contractors to recycle specific types of C&D materials such as clean wood, cardboard, metals, and reusable building materials.

### **7.17.3 Disaster Debris Management Alternatives**

The SWPO could coordinate with Douglas County Emergency Management, WMW, and the Chelan-Douglas Health District to determine details regarding debris removal and disposal activities that could provide better guidance for disaster debris management activities and preparedness. A portion of the details should be describing critical lines of communication related to debris removal and disposal. This would facilitate a quicker response and reduce the number of decisions that need to be made during a disaster while the extent of damage and possible options for addressing them were being assessed. Any revisions to the CEMP would best be done on the normal schedule for updating this document.

The SWPO can develop a separate DDMP. In this case, both the CEMP and a DDMP together would be used for guidance in the event of a disaster. The DDMP could either be a separate plan or added as an appendix to the CEMP. The DDMP could provide the detail for critical lines of communication specific to debris management activities, identify disasters that would most likely impact the solid waste system, the type of debris that would be generated from each one, address the need for temporary staging areas including potential locations, contain forms and brochures that could be easily modified for use in such an event, and have identified reuse/recycle activities that would minimize disposal at landfills. The level of detail for this plan could range from simple plans consisting largely of checklists and an outline of procedures to more complex plans that would be reviewed and approved by FEMA.

#### **7.17.4 Evaluation of Alternative Strategies**

For the most part, management practices for special wastes in Douglas County are adequate. Emerging regulations and guidance regarding pharmaceutical waste may require future action.

### **7.18 Recommended Actions**

The following options were selected by the SWAC for recommended implementation:

- SW1) Continue to dispose special wastes through a cooperative effort with the Chelan-Douglas Health District, WMW and Ecology.
- SW2) Monitor EPA and Washington State guidance regarding pharmaceutical waste and implement changes as needed to comply with statewide medicine take-back program.
- SW3) Promote proper reuse, recycling and disposal of C&D wastes.
- SW4) Partner with private organizations such as the Habitat for Humanity of the Greater Wenatchee Area to promote recycling and reuse of C&D wastes and building materials.
- SW5) Develop an internal plan for handling and disposal of disaster debris, in coordination with SWPO, WMW, Chelan-Douglas Health District, and Douglas County Emergency Management.

# Chapter 8.0 Moderate Risk Waste

## 8.1 Introduction

This chapter discusses programs for MRW, identifies relevant planning issues, and develops and evaluates alternative strategies.

## 8.2 Background

Section 8.2 provides MRW definitions, regulations and guidance, and Douglas County objectives for managing MRW.

### 8.2.1 Moderate Risk Waste Collection Events

Douglas County has traditionally held MRW annual turn-in events for households and Small Quantity Generators (SQG). During these annual one-day collection events, a hazardous waste permitted treatment, storage and disposal contractor is hired to collect, identify, contain, transport, store, process and dispose of waste collected at the event.

Wastes are prescreened to check that only acceptable MRW is collected. Participants fill out a collection event survey and sign a form certifying that they generated the MRW.

Contracted personnel transfer the collected MRW from the participant, determine the appropriate Department of Transportation shipping classification and place the waste into drums. Once the collection event is completed, the waste is manifested and loaded into a properly placarded transport vehicle prior to leaving the site.

The use of Ecology CPG funding has traditionally been used to assist in paying for the collection and disposal of homeowner generated MRW, however, due to the State of Washington capital budget not being approved for 2017 prior to the end of session, the July 2017 MRW Collection Event was fully funded by the SWPO for homeowners. Businesses preregister for the event and pay for the MRW Collection Event service.

### 8.2.2 Used Oil Collection

Currently there are two Used Oil Collection Facilities (UOCF) in Douglas County that accept and burn on-specification used oil for energy recovery. The UOCFs are open to the general public with established days and hours of operation and are in the following locations:

City of Rock Island Maintenance Shop

Town of Waterville Maintenance Shop

The general public is encouraged to bring used oil to a UOCF. Additional information on used oil collection in Douglas County is included in Section 8.4.

### 8.2.3 Definitions

MRW refers to materials that have the characteristics of and pose the same risks as hazardous wastes (e.g., they are flammable, corrosive, toxic, and/or reactive). State and Federal law do not regulate these wastes as hazardous wastes due to their relatively small quantities. MRW is

regulated by WAC 173-350-360 under the authority of RWC 70.105 and RCW 70.95. MRW is defined as solid waste that is limited to conditionally exempt SQGs waste and HHW.

**Household Hazardous Waste**

The Hazardous Household Substances List developed by Ecology is shown in Table 8.1. When generated in a residence, these products become HHW when discarded.

**Small Quantity Generator Waste**

Many businesses and institutions produce small quantities of hazardous wastes; the list is the same as for HHW (see Table 8.1). SQGs produce hazardous waste at rates less than 220 pounds per month or per batch (or 2.2 pounds per month or per batch of extremely hazardous waste) and accumulate less than 2,200 pounds of hazardous waste onsite (or 22 pounds of extremely hazardous waste). Extremely hazardous wastes include certain pesticides and other poisons that are more toxic and pose greater risks than other HHW. SQGs are conditionally exempt from State and Federal regulation, meaning they are exempt only as long as they properly manage and dispose of their wastes.

**Table 8.1 Hazardous Household Substances List**

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





Substance or Class of Substance	Flammable	Toxic	Corrosive	Reactive
<b>Group 4: Auto, Boat, and Equipment Maintenance</b>				
Batteries		X	X	X
Waxes and Cleaners	X	X	X	
Paints, Solvents, and Cleaners	X	X	X	X
Additives	X	X	X	X
Gasoline	X	X	X	X
Flushes	X	X	X	X
Auto Repair Materials	X	X		
Motor Oil		X		
Diesel Oil	X	X		
Antifreeze		X		
<b>Group 5: Hobby and Recreation</b>				
Paints, Thinners, and Solvents	X	X	X	X
Chemicals (including Photo and Pool)	X	X	X	X
Glues and Cements	X	X	X	
Inks and Dyes	X	X		
Glazes		X		
Chemistry Sets	X	X	X	X
Pressurized Bottled Gas	X	X		X
White Gas	X	X		X
Charcoal Lighter Fluid	X	X		
Batteries		X	X	X
<b>Group 6: Persistent Bioaccumulative Toxins</b>				
Mercury-Containing Products		X	X	
Lead-Containing Products		X		
E-Waste		X		
Polycyclic Aromatic Hydrocarbons		X		
Polychlorinated Biphenyl		X		
<b>Group 7: Miscellaneous</b>				
Ammunition	X	X	X	X
Asbestos		X		
Fireworks	X	X	X	X
Marine Aerial Flares	X	X		
Pharmaceuticals		X		
Non-Controlled Substances		X		
Sharps		X		
Personal Care Products	X	X	X	

Source: Guidelines for Developing and Updating Local Hazardous Waste Plans - Appendix F, Ecology, 2010.  
<https://fortress.wa.gov/ecy/publications/documents/1007006.pdf>

#### 8.2.4 Regulations and Guidance

MRW is regulated primarily by State and Federal laws that govern proper handling and disposal of these wastes. A review of the recent regulatory changes affecting solid wastes and MRW is provided in Chapter 1.0 Background, and the relevant details are reproduced below.

### **Moving Washington Beyond Waste and Toxics Plan**

Ecology released an updated waste and toxics reduction plan in June 2015. Moving Washington Beyond Waste and Toxics focuses on reducing waste and toxics by adopting a sustainable materials management approach which is also used by EPA. This approach looks at the full life cycle of materials from the design and manufacturing, through use, to disposal or recycling. The EPA believes a sustainable materials management approach can help identify more sustainable ways to produce products that are less impactful to the environment. Moving Washington Beyond Waste and Toxics' vision is as follows: "We can transition to a society where waste is viewed as inefficient, and where most wastes and toxic substances have been eliminated. This will contribute to economic, social and environmental vitality."

One of the five sections of Moving Washington Beyond Waste and Toxics Plan is "Managing Hazardous Waste and Materials." The background information for this initiative explains that as little as 1% of SQG waste is properly managed on a statewide basis. For HHW, only about 16% (statewide) is estimated to be collected through local programs. Moving Washington Beyond Waste and Toxics Plan provides the following goals pertaining to Douglas County MRW programs:

- Until toxic substances are phased out of products, and use of hazardous materials declines, MRW collection will be maximized (GOAL HWM 11).
- MRW locations and programs will provide increased services for residents, businesses, and underserved communities (GOAL HWM 12).
- Facilities that collect MRW will be properly permitted (if required) and in compliance with applicable laws and rules (GOAL HWM 13).

### **Hazardous Waste Management Act (Chapter 70.105 RCW)**

The Hazardous Waste Management Act establishes requirements for State and local hazardous waste management plans, rules for hazardous waste generation and handling, criteria for siting hazardous waste management facilities, and local zoning designations that permit hazardous waste management facilities. The Hazardous Waste Management Act also establishes waste management priorities for hazardous wastes. In order of decreasing priority, the management priorities are:

- Waste reduction,
- Waste recycling,
- Physical, chemical, and biological treatment,
- Incineration,
- Solidification/stabilization/treatment, or
- Landfill.

The waste hierarchy is a key element in determining compliance of this Plan with Washington State requirements.

Rules implementing the Hazardous Waste Management Act are codified in the Dangerous Waste Regulations (Chapter 173-303 WAC). This regulation defines dangerous waste materials and establishes minimum handling requirements. Washington State rules specifically exclude HHW and SQG wastes from Dangerous Waste Regulations, which have been amended several



times over the years, most recently in 2014. The 2014 amendments allow mercury-containing equipment to be managed as a universal waste, require recyclers and used oil processors to develop closure plans and meet financial responsibility requirements, and provide several other changes and updates.

### **Used Oil**

Washington State law (RCW 70.95I) requires local governments to manage used oil in conjunction with their MRW program and to submit annual reports to Ecology.

## **8.3 Moderate Risk Waste Generation**

RCW 70.105.220(1)(a) requires local governments to prepare hazardous waste plans that contain an assessment of the quantities, types, generators and fate of hazardous waste in each jurisdiction. This Plan serves to compile that data for Douglas County and this Chapter focuses on the MRW associated with HHW and SQG aspects/quantities of hazardous waste. The quantities, types and fate of MRW in Douglas County are described in Section 8.4. The following subsections focus on the generators of this waste in Douglas County.

### **8.3.1 Hazardous Waste Inventory**

The following information helps provide an inventory of hazardous waste management in Douglas County by addressing dangerous waste generators (i.e., large-quantity generators), contaminated sites, transporters and processing facilities, and locations where hazardous waste facilities can be sited (“zone designations”).

#### **Dangerous Waste Generators**

Ecology records (latest data as of September 2017) show that 72 businesses and institutions in Douglas County are registered as hazardous waste generators and reported generation of waste.

#### **Remedial Action Sites**

Ecology’s list of confirmed and suspected contaminated sites in Douglas County can be found at [www.ecy.wa.gov/programs/tcp/sites/sitelists.htm](http://www.ecy.wa.gov/programs/tcp/sites/sitelists.htm). As of September 2017, there were 52 of these sites identified in Douglas County.

#### **Hazardous Waste Services (Transporters and Facilities)**

Multiple private companies provide transportation and disposal services for a wide range of materials. The current list of these companies can be found at <http://www.esdwa.com/services/index.cfm>, under the Hazardous Waste & Materials master category group.

### **8.3.2 Inventory of Moderate Risk Waste Generators**

As stated above, MRW generators include HHW from local residents, as well as SQG from local businesses and institutions. The 2016 population of Douglas County is 40,538 residents, currently residing in an estimated 16,164 housing units<sup>1</sup>. However, not all residents and/or

---

<sup>1</sup> 2015 estimate of total housing units (source: Washington State Office of Financial Management)

businesses are generators of MRW. For residential sources in particular, products may be stored for several years before the resident determines that the material is no longer useful and takes it to a MRW facility for disposal. In addition, although quantities and types of MRW collected and shipped are tracked, it is unknown how many residents are recycling or disposing of wastes through drop-off programs and private collection services. Also unknown is the number of SQGs and large-quantity generators utilizing the services of private collection companies for their hazardous wastes.

## 8.4 Existing Conditions

This section describes existing programs to manage MRW in Douglas County.

### 8.4.1 Current Moderate Risk Waste and Oil Programs

#### MRW Collection

MRW in Douglas County is collected primarily through collection events as funding is available and drop-off programs. The following are available drop-off programs active in Douglas County, including:

- Electronics can be recycled in Douglas County at the Goodwill East Wenatchee Store
- Fluorescent tubes can be recycled in Douglas County at Stan's Merry Mart, Mansfield Community Recycling Center, Rock Island Community Recycling Center, Waterville Community Recycling Center and Bridgeport Community Recycling Center.
- The WSDA conducts agricultural chemical waste collection events in Eastern Washington on an as needed basis. Participants must sign up in advance to bring in wastes, but there is no cost to participate.
- SQGs and large-quantity generators use the services of private companies that collect specific types of wastes, but little information is available on the amounts collected by private companies.
- Douglas County conducts MRW Collection Events as funding is available. MRW is accepted free of charge at the Collection Events. SQGs must sign up in advance to participate in the Collection Events and a fee is assessed for MRW disposal. Table 8.2 below summarizes MRW processed at the Collection Events.

**Table 8.2 MRW Collection Event Materials Collected (in Pounds)**

Waste Type	2014 Collection Event	2015 Collection Event	2017 Collection Event
Aerosols	1,155	750	1,380
Acids	322	0	0
Antifreeze	1,560	1,500	860
Bases	844	0	0
Batteries:			
Auto	149	450	0
Dry Cell	481	410	424
Cylinders (Propane/Helium)	1,352	771	1,759
Fire Extinguishers	15	0	218



Waste Type	2014 Collection Event	2015 Collection Event	2017 Collection Event
Fluorescent Tubes and Lamps	748	166	1
Gas and Oil	4,224	5,500	0
Oxydizers	121	0	0
Paint:			
Oil Based	25,798	0	0
Paint Related Materials	20,943	9,350	7,395
Pesticides/Poisons	8,680	6,764	10,996
Flammables	1,744	10	10,544
Mercury	48	2	42
<b>TOTAL</b>	<b>68,184</b>	<b>25,673</b>	<b>33,619</b>

### Used Oil Collection

Currently there are two UOCF in Douglas County that collect and burn on-specification used oil for energy recovery. Each UOCF has five components:

- outdoor used oil collection and testing station;
- outdoor on-specification storage tank;
- indoor storage tank;
- outdoor used oil burner; and
- indoor closed loop heat exchanger(s).

The two UOCFs are open to the general public with established days and hours of operation. The two UOCFs are located at:

City of Rock Island Maintenance Shop

Town of Waterville Maintenance Shop

The general public is encouraged to bring their on-specification used oil to a UOCF. The used oil is removed from the public container(s) and placed into the used oil collection station. Once the used oil has been drained from the container(s) it is returned to the public for reuse. Off-specification, sludge's, water, impurities or contaminates will not be accepted. Participants disposing of their used oil are required to fill out and sign a certification form.

Once the used oil collection station is full, or if an individual brings in a large volume of used oil, it is tested. Used oil volumes of 55 gallons or more are tested to verify that it is indeed on-specification. Volumes tested are recorded and the testing operator certifies the test results.

The tested on-specification used oil is then pumped into the outdoor storage tank. The outdoor storage tanks have been sized to provide the necessary volume to provide heat for the facility during the normal winter months, October through April. On-specification used oil is pumped into the indoor storage tank where it is heated to room temperature for consistency. It is then pumped back outside, to be mixed with air and injected into the combustion chamber. Surrounding the combustion chamber are heating coils filled with heat absorbent liquid that is then pumped to the indoor heat exchangers. The heat absorbent liquid pass through the heat

exchangers, release their energy and return back to the heating coil. The system is a closed loop system, with no indoor combustion occurring.

For those households who traditionally generate large volumes of used oil but are unable or unwilling to transport the used oil to the UOCFs, appointments can be made to have the used oil tested and collected onsite if storage capacity is remaining.

Once the household has scheduled a pickup date and time, the jurisdiction that made the appointment will load the portable tank and drive to the individual's home or site. Once onsite, the used oil will be tested to determine if it is on-specification. If it tests on-specification and applicable paperwork is completed, the used oil will be pumped into the portable tank and transported back to the used oil collection facility. If the used oil tests off-specification, the homeowner will be notified, the used oil rejected and the individual provided information regarding other disposal options.

### **HHW Education**

Douglas County conducts limited activities to educate residents about proper handling and disposal of HHW due to LSWFA funding constraints. The Douglas County Solid Waste Program Office website offers education and outreach information to residents.

### **Compliance and Enforcement**

Compliance issues are handled by the Chelan-Douglas Health District, who responds to complaints and other problems as these are identified. The Chelan-Douglas Health District has received LSWFA grant funding for this purpose.

## **8.5 Status of Previous Recommendations**

The status of the recommendations made by the 2010 Plan can be found in Appendix D.

## **8.6 Alternatives**

There are generally five components for local MRW management programs; two that address educational efforts and three that help fulfill the mandate to prepare a "program to manage moderate-risk waste" (RCW 70.105.220(1)(a)). These five elements are as follows:

- Public education program;
- Technical assistance program for businesses;
- Collection program for HHW and used oil;
- Collection program for business wastes; and
- A plan or program to ensure compliance by SQG and others.

The existing service gaps and other issues connected to these components are discussed below.

### **8.6.1 Public Education**

There are currently limited efforts to inform the public about opportunities for proper disposal of oil and HHW in Douglas County due to LSWFA funding constraints. Public Education should be expanded to ensure that MRW is being properly handled and disposed of from households.

### **8.6.2 Business Technical Assistance**

Douglas County is not currently providing technical assistance and education to businesses about SQG waste handling and disposal. The level of expertise required to effectively assist many businesses would require significant amounts of training for specific types of businesses, and is better handled at the State level.

### **8.6.3 Household Collection**

Household collection will be provided through MRW collection events and other opportunities as funding is available.

### **8.6.4 Used Oil Collection**

Used oil is currently being collected at two UOCFs throughout the County and the public is encouraged to bring used oil to the closest facility. Education and outreach are being accomplished through the Douglas County Solid Waste Program Office for this service.

### **8.6.5 Business Collection**

Douglas County is currently providing business collection through the MRW collection events and is also directing businesses and institutions to contact private contractors.

### **8.6.6 Compliance and Enforcement**

Compliance and enforcement is currently being conducted on an as-needed basis and there are no known issues with this approach.

### **8.6.7 Moderate Risk Waste Plan Preparation**

RCW 70.105 requires local governments to prepare hazardous waste plans. Douglas County has incorporated the hazardous waste plan update process into the Douglas County Comprehensive Solid Waste Management Plan update process to maintain compliance with the rule.

## **8.7 Recommended Actions**

The following alternatives were selected by the SWAC for implementation:

- MRW1) Enhance the public education and outreach program for handling of MRW waste for households.
- MRW2) Continue the MRW collection events when grant funding is available.
- MRW3) Continue the used oil collection program if feasible and cost effective.
- MRW4) Continue to coordinate the schedule and process for updating the MRW Plan with the solid waste management plan (as is the current practice).



## Chapter 9.0 Organics

### 9.1 Introduction

This chapter discusses existing programs, identifies relevant planning issues, and develops/evaluates alternative strategies for organic materials, including yard debris and food waste.

### 9.2 Background

This Chapter and Chapter 3.0 Waste Reduction, Recycling and Education provide an update of Douglas County's waste diversion methods that comply with State requirements regarding waste diversion programs.

#### 9.2.1 State Legislation and Regulations, and Guidelines for Organics

Beginning in 1989, the Waste Not Washington Act (ESHB 1671) declared that waste reduction and recycling must become a fundamental strategy of solid waste management. To that end, RCW 70.95 includes a statement encouraging yard debris to be eliminated from landfills by 2012 in those areas where alternatives exist.

RCW 70.95.090 also requires that collection programs for yard debris be addressed in areas where there are adequate markets or capacity for composted yard debris within or near the service area.

#### 9.2.2 Douglas County Regulations

In July 2004, the Douglas County Board of Commissioners entered into a voluntary solid waste disposal host agreement with WMW which included the establishment of a Universal Agricultural Pest Protocol procedure screening process with regards to the identification, risk assessment, control protocol and appropriate monitoring methods necessary to control the introduction of agricultural pests into Douglas County associated with the importation of waste at the GWRL. Additional information on the Host Agreement can be found in Chapter 5.0 Waste Transfer and Disposal.

The Agricultural TAC, refer to Section 1.7 and Appendix A for addition information, determines whether pest threats are adequately mitigated. The role of the Agricultural TAC is to provide a process to control introduction of agricultural pests into Douglas County associated with the importation of waste. The Agricultural TAC keeps the SWAC informed of agricultural pests and make recommendations regarding tasks and programs to manage them.

In August 2010, the Douglas County Board of Commissioners adopted Resolution C.E. 10-63 establishing Minimum Service Levels within the Unincorporated Urban Growth Areas of Greater East Wenatchee and Greater Rock Island, creating the Douglas County Yard Waste Collection Area. This gave residents living within the Douglas County Yard Waste Collection Area the opportunity to voluntarily subscribe to curbside yard waste collection.

### 9.2.3 Washington State Department of Agriculture Regulations

The Washington State Department of Agriculture (WSDA) implemented rules under its Pest Program that specifies methods to prevent the introduction, escape or spread of apple maggots beyond the quarantine area. Figure 9-1 indicates the quarantine areas as they relate to counties adjacent to Douglas County which is a pest free area.

In 2016, WSDA amended WAC 16-470 Quarantine – Agricultural Pests as follows:

1. Adding MSW, yard debris, organic feedstocks, organic materials, and agricultural wastes to the list of commodities regulated under the apple maggot quarantine;
2. Establishing a special permit to allow transportation and disposition of MSW from the area under quarantine for disposal at a solid waste landfill or disposal facility in the apple maggot and plum curculio pest-free area; and
3. Establishing a special permit to allow transportation and disposition of yard debris, organic feedstocks, organic materials, and agricultural wastes from the area under quarantine for disposal at a solid waste landfill or treatment at a composting facility in the apple maggot and plum curculio pest-free area.

## 9.3 Existing Program Elements

The sections below describe existing collection and processing activities for organic materials.

### 9.3.1 Curbside Yard Debris Collection Programs

Currently, curbside yard debris collection is available in East Wenatchee, Rock Island and the Urban Growth areas surrounding these municipalities. WMW provides yard debris collection every-other-week in these collection areas. The collected yard debris is taken to the Stemilt Compost Facility in Wenatchee for composting. Table 9.1 summarizes the current yard debris curbside collection programs:

**Table 9.1 Yard Debris Collection Programs**

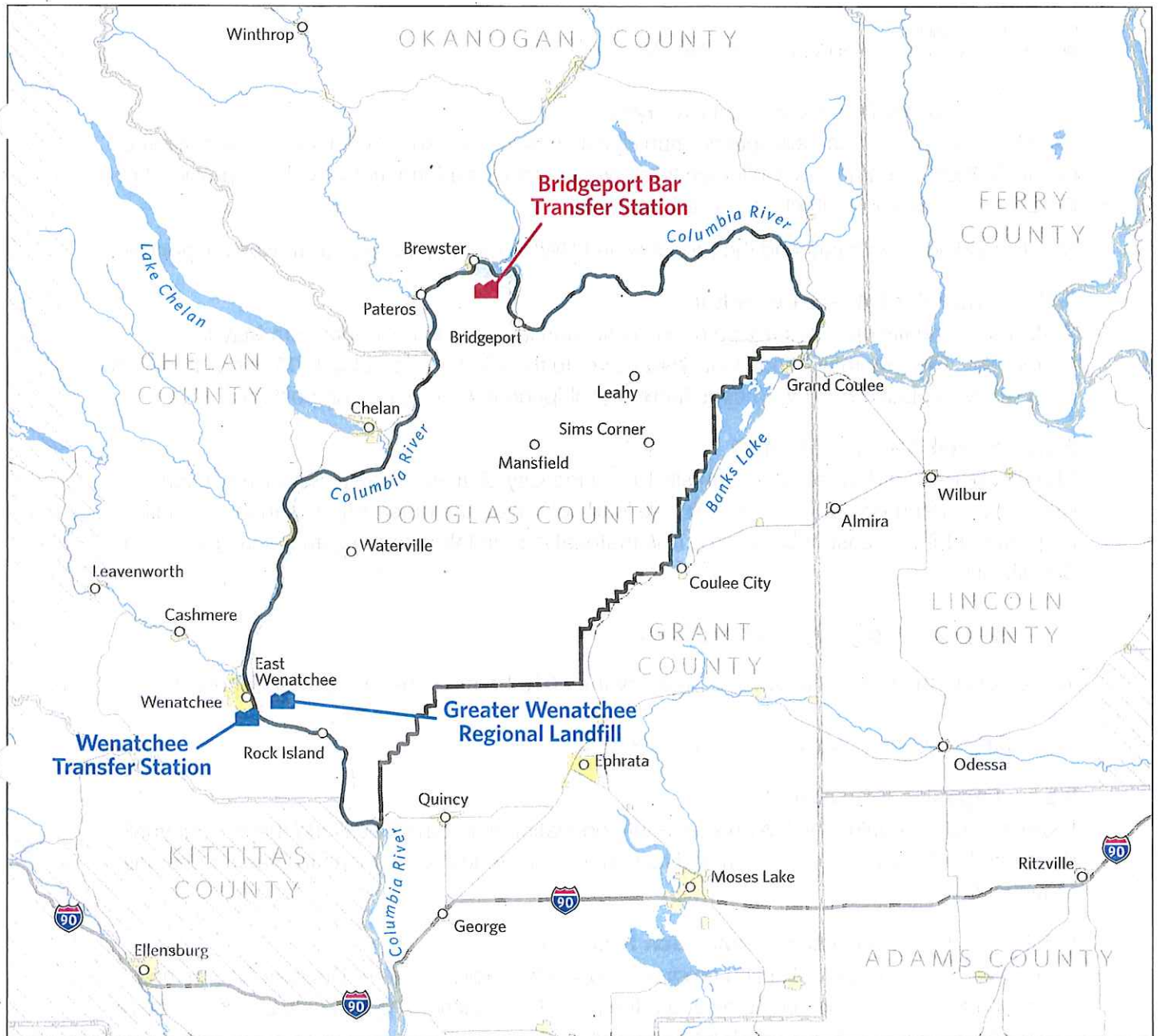
City/Town	Program	Cost per Month	Collection Entity
East Wenatchee	Every other week 96 gallon cart	\$9.66	WMW
Rock Island	Every other week 96 gallon cart	\$9.66	WMW
Unincorporated Area	Every other week 96 gallon cart	\$9.90	WMW

### 9.3.2 Food Waste

The majority of the food waste generated within Douglas County is from grocery stores, produce stores and restaurants. This waste stream typically is disposed at the GWRL.

Fruit waste from the warehouses, cold storage facilities and processing plants is either disposed at the GWRL or taken to the Stemilt Compost Facility.





**Legend**

- Public Existing Transfer Station (owned by Okanogan County)
- Private Existing Landfill/Transfer Station
- Apple Maggot Quarantine Area

Figure 9-1

**Apple Maggot Quarantine Areas Near Douglas County**

Douglas County Solid Waste and Moderate Risk Waste Management Plan



### **9.3.3 Christmas Tree Collection Program**

Douglas County and the participating municipalities have sponsored Christmas tree collection events in their communities. Collected trees were chipped and the mulch material provided to the Eastmont School District as a weed retardant.

Due to funding constraints and the reduction in LSWFA funding, this program was suspended.

### **9.3.4 Other Yard Waste Collection**

Waterville annually operates a yard debris collection area for its residents from May to November. Citizens may bring clean yard waste to the site for a fee of \$10.00 per pickup load. Yard waste is placed in 20-yard containers and shipped to Quincy for composting.

### **9.3.5 Stemilt Compost Facility**

Stemilt operates a drop-off collection site within the City of Wenatchee (located in Chelan County) for green waste. Citizens can take loads of brush and other organics to the Stemilt drop-off center at a cost of \$8 a yard. This material is then taken to the composting facility on Stemilt Hill.

## **9.4 Needs and Opportunities**

The status of the recommendations made by the 2010 Plan can be found in Appendix D.

## **9.5 Alternatives and Evaluations**

### **9.5.1 Organics Education**

Douglas County could develop and distribute educational materials outlining the current yard debris curbside collection program and its benefits including contributions to greenhouse gas reductions.

### **9.5.2 Yard Debris Curbside Collection Program**

The existing yard debris collection program is operating well. In future, Douglas County and participating municipalities could evaluate the potential of increasing curbside service to more customers in additional cities and unincorporated areas.

### **9.5.3 Christmas Tree Collection Program**

If funding becomes available, reinstating the Christmas Tree Collection Program would be a beneficial program to the citizens of Douglas County and participating municipalities.

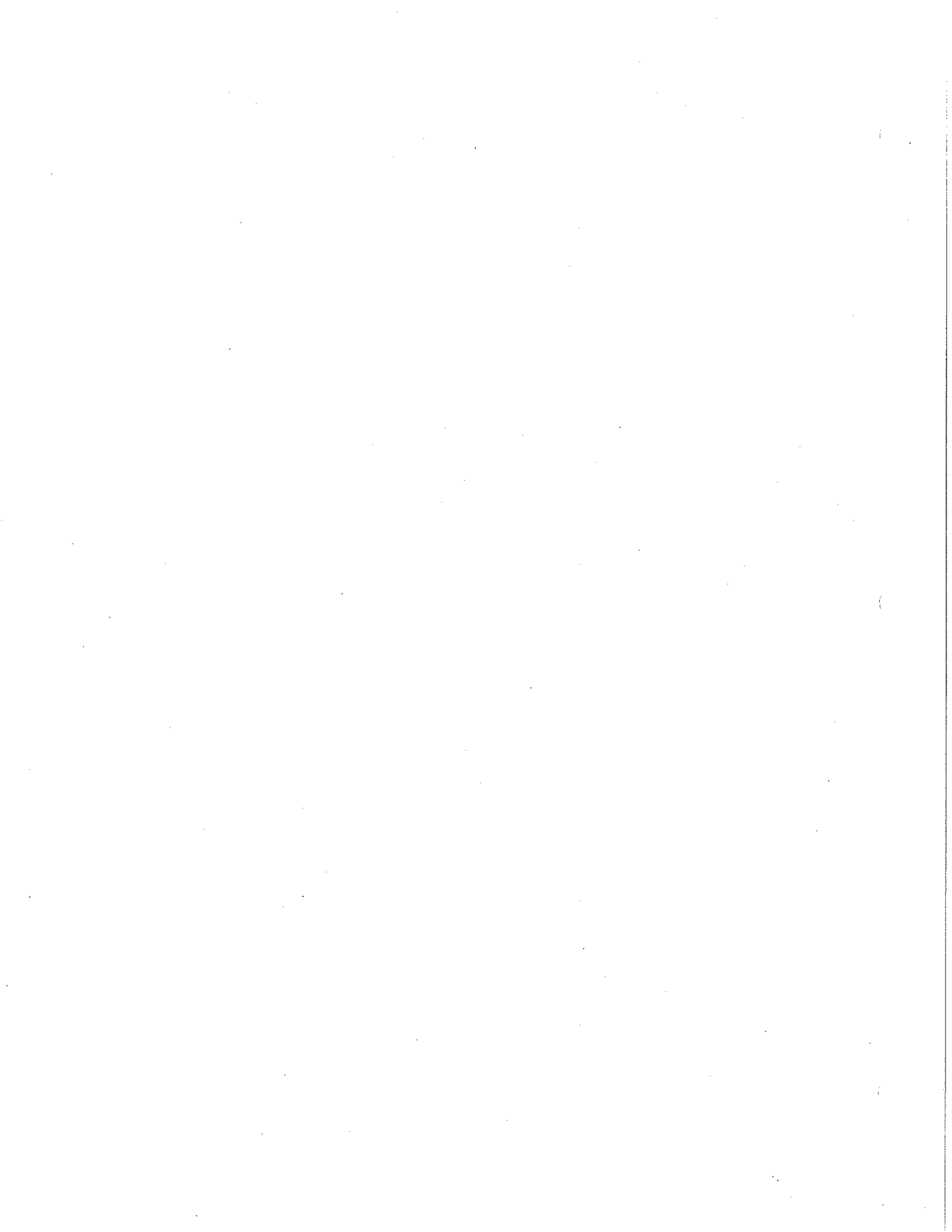
## **9.6 Recommended Actions**

The following recommendations are being made for organics:

- O1) Continue compliance with the Douglas County Universal Agricultural Pest Protocol procedure and WAC 16-470 the Washington State Department of Agriculture Quarantine – Agricultural Pest Regulation.
- O2) Develop and distribute educational materials regarding the yard debris curbside collection program.



- O3) Continue and expand the yard debris collection program as population growth and citizen needs warrant.
- O4) Reinstate the Christmas Tree Collection and Education Program as funding allows.



# Chapter 10.0 Administration and Enforcement

## 10.1 Introduction

This chapter addresses the administrative and enforcement activities related to solid waste and MRW.

## 10.2 Background

Douglas County, the cities, towns and several other organizations and agencies are responsible for providing enforcement of federal, state, and local laws and regulations that guide the planning, operation, and maintenance of the region's solid waste management system. This local enforcement authority ensures that the Douglas County system meets applicable standards for the protection of human health and environmental quality in the region.

## 10.3 Existing Conditions

Administrative responsibility for solid waste handling systems in Douglas County is currently divided among several agencies and jurisdictions in local, county, and state government. Organizations involved in the Douglas County solid waste management system are described below.

### 10.3.1 Countywide Solid Waste Program Office

The Washington State Solid Waste Management Act, Chapter 70.95 RCW assigns local government the primary responsibility for managing solid waste. Solid waste handling, as defined in Chapter 70.95 RCW, includes the “management, storage, collection, transportation, treatment, utilization, processing, and final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from solid wastes or the conversion of the energy in solid wastes to more useful forms or combinations thereof.”

Chapter 36.58 RCW authorizes Douglas County to develop, own, and operate solid waste handling facilities in unincorporated areas, or to accomplish these activities by contracting with private firms. Douglas County also has the authority and responsibility to prepare comprehensive solid waste and MRW management plans for unincorporated areas and for jurisdictions that agree to participate with Douglas County in the planning process. Douglas County expects to enter into interlocal agreements with incorporated cities and towns prior to final Plan adoption. These agreements address the Plan participation.

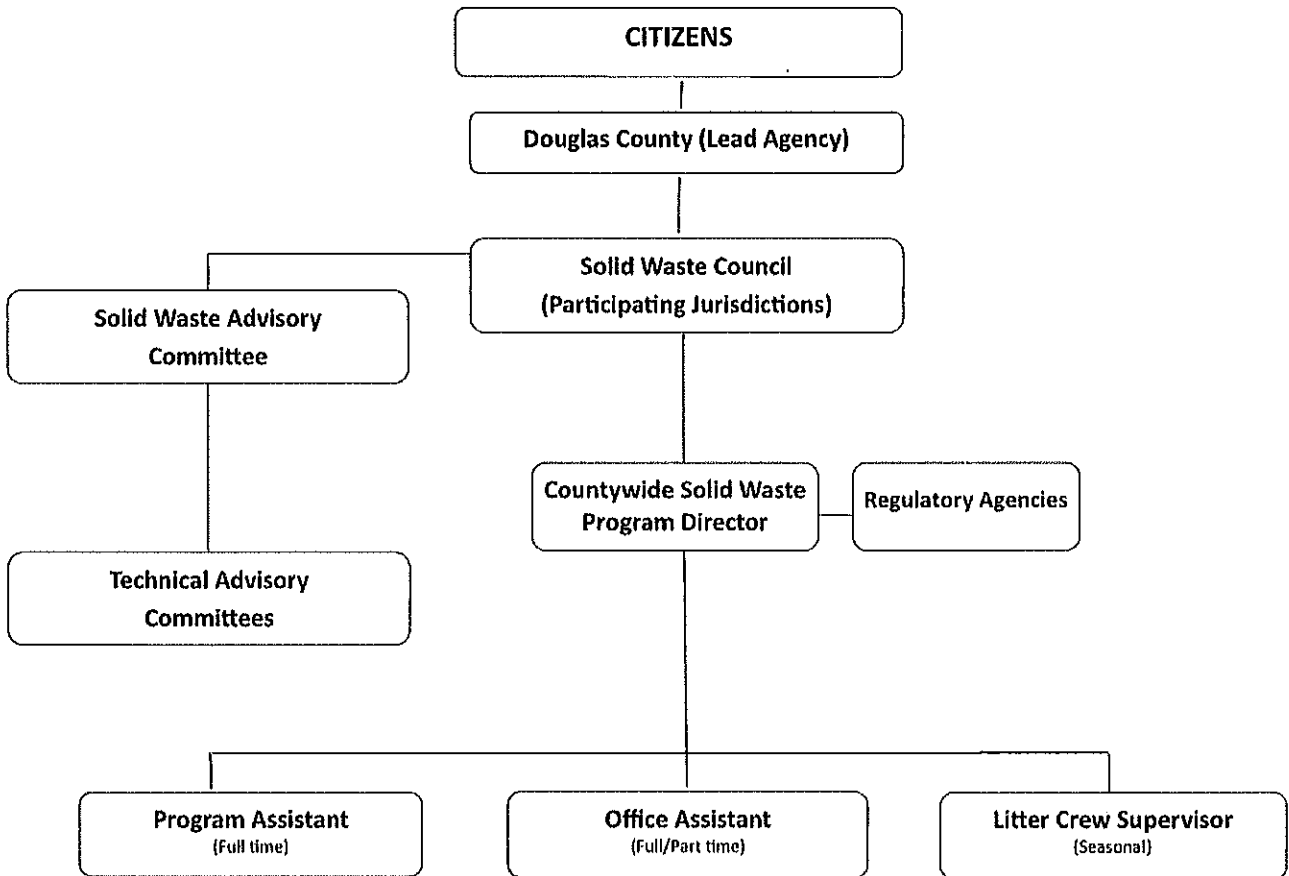
Douglas County exercises its solid waste responsibilities through SWPO. The specific administrative functions performed include the following:

- Administering and staffing public education programs for waste reduction and recycling.
- Administering contracts.
- Maintaining the Plan as adopted relating to public health, safety, and sanitation, and providing regulations to govern the storage, collection, transfer, transportation, processing, use, and final disposal of solid waste by persons in Douglas County.

- Providing staff support for the SWAC.

Figure 10-1 illustrates the SWPO organizational structure. The SWPO is staffed by three employees who handle coordination, recycling programs and education and outreach activities along with a seasonal litter crew supervisor.

**Figure 10-1. Douglas County SWPO Organizational Structure**



The SWPO is funded by the fees collected from an assessment on curbside garbage collection in the unincorporated areas of Douglas County and fees assessed under the Host Agreement with WMW for the GWRL. The SWPO also receives grant monies from Ecology for solid waste management planning activities, litter clean up and pilot projects. Table 10.1 shows the current budget (2017) for the SWPO.

**Table 10.1 Douglas County Solid Waste Program Office 2017 Budget**

2017 <sup>1</sup> Budgeted	
<i>Revenues</i>	
Coordinated Prevention Grant	\$135,230
Solid Waste Fee	\$90,000
Solid Waste Hauler Fee	\$196,463



<b>2017<sup>1</sup> Budgeted</b>	
Other Revenue	\$2,600
<b>Total Revenues</b>	<b>\$424,293</b>
<b>Expenditures</b>	
Salaries and Wages	\$128,576
Personnel Benefits	\$58,232
Supplies	\$30,000
Other Services	\$114,820
Intergovernmental Services	\$20,000
Capital Expenditures	\$118,675
<b>Total Expenses</b>	<b>\$470,303</b>
<b>Total Balance/(Deficiency)</b>	<b>(\$46,010)<sup>2</sup></b>

Note: All figures are in dollars.

1. The 2017 figures are the budgeted amounts.
2. Deficit due to 2017 HHW collection event and lack of 2017 CPG funding.

### 10.3.2 Douglas County Solid Waste Advisory Committee

Per RCW 70.95.165, the Board of County Commissioners has appointed the SWAC to help develop solid waste handling programs and policies. The SWAC has adopted bylaws that can be amended by the SWAC at any time, subject to approval by the Board of County Commissioners. The term of the SWAC members is two years and members can be reappointed by the Board of County Commissioners to serve consecutive terms. The SWAC consists of a minimum of nine members each with one vote and membership is outlined in the bylaws to include: citizens, public interest groups, business, the waste management industry, agricultural industry, and local elected officials.

### 10.3.3 Incorporated Cities

RCW 35.21.152 empowers cities to develop, own, and operate solid waste handling systems and to provide for solid waste collection services within their jurisdictions. There are five incorporated cities and towns in Douglas County that participate as part of this Plan.

These five municipalities contract for collection programs and one private haulers currently operates in the unincorporated areas of Douglas County. Fees charged for the service cover the expenses of the system. Detailed information about collection in individual cities is included in Chapter 5.0 Solid Waste Collection.

### 10.3.4 Chelan-Douglas Health District

The Chelan-Douglas Health District works with the public, cities, Douglas County agencies, and Washington State agencies to develop and implement plans for the safe storage, collection, transportation, and final disposal of solid waste. The Chelan-Douglas Health District works to assure compliance with Chapter 70.95 RCW and WAC 173-304 - Minimum Functional Standards for Solid Waste Facilities. The Chelan-Douglas Health District is responsible for the following:

- Permitting solid waste facilities operating in Douglas County.
- Confirm permits are consistent with the Plan, local ordinances and appropriate Washington State and Federal regulations.
- Oversight of existing permitted facilities.
- Responding to complaints or code violations regarding improper storage and disposal of solid waste.
- Investigating illegal dumping and non-permitted dump sites on private property.

Solid waste facility permits are required in accordance with WAC 173-303, 173-350, and 173-351. Facilities are required to obtain solid waste handling permits from Chelan-Douglas Health District.

For this planning document, a SEPA checklist has been completed and is included as Appendix I.

Applicants applying for new solid waste permits within Douglas County will notify Chelan-Douglas Health District. The applicant will submit a permit application and a SEPA checklist to Chelan-Douglas Health District which forwards such applications to SWPO.

SWPO will request a SWAC meeting for the purpose of reviewing the permit application for conformance to this Plan. SWAC will review the documents and will return its findings to Chelan-Douglas Health District who will consider and include those findings in its final decision.

Chelan-Douglas Health District will forward such findings and comments along with the SEPA checklist and permit application, on to the Chelan-Douglas County Board of Health. Final approval or disapproval of the permit application shall rest with Chelan-Douglas Health District, which shall issue its approval/disapproval of the application within 90 days after its receipt pursuant to RCW 70.95.180.

### **10.3.5 Washington State Department of Ecology**

RCW 70.95 provides for a comprehensive, statewide solid waste management program and assigns primary responsibility for solid waste handling to local governments. This regulation gives each county, in cooperation with its cities, the task of setting up a coordinated solid waste management plan that places an emphasis on waste reduction and recycling programs. Enforcement and regulatory responsibilities are assigned to cities, counties, or jurisdictional health departments (e.g. Chelan-Douglas County Health District), depending on the specific activity and local preferences, but Ecology issues permits for land application of biosolids.

The State Environmental Policy Act (SEPA), RCW 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. In order to determine if an EIS is necessary, an environmental checklist must be completed. Chelan-Douglas County Health District will review SEPA Checklists for this Plan as well as project specific SEPA Checklists.

Ecology has promulgated WAC 173-350, Solid Waste Handling Standards, which addresses the operational and other requirements for recycling and composting facilities as well as inert and



special purpose landfills. WAC 173-351, Criteria for Municipal Solid Waste Landfills, contains the current standards for MSW landfills.

The Model Litter Control and Recycling Act (RCW 70.93.060) prohibits depositing garbage on any property not properly designated as a disposal site. There is also a “litter fund” that has been created through a tax levied on wholesale and retail businesses, and the monies from this fund are being used for education, increased litter cleanup efforts, and contracts to eligible county entities for illegal dump cleanup activities.

Under the MTCA (RCW 70.105D), grants are available to local governments for solid waste management plans and programs, hazardous waste management plans and programs, and remedial actions to clean up existing hazardous waste sites. Solid and hazardous waste planning and programs are funded through the LSWFA program administered by Ecology’s Solid Waste and Financial Assurance Program. The state rule that governs this program is WAC 173-312.

### **10.3.6 Washington Utilities and Transportation Commission**

WUTC regulates privately-owned utilities that provide public services such as electric power, telephone, natural gas, private water, transportation, and refuse collection. WUTC’s authority over solid waste collection is established in RCW 81.77. This authority does not extend to companies operating under contract with any city or town, or to any city or town that undertakes solid waste collection. WUTC regulates solid waste collection companies by granting “certificates of convenience and necessity” that permit collection companies to operate in specified service areas. WUTC also regulates solid waste collection, under authority of RCW 81.77.030, by performing the following functions:

- Fixing collection rates, charges, classifications, rules, and regulations.
- Regulating accounts, service, and safety of operations.
- Requiring annual reports and other reports and data.
- Supervising collection companies in matters affecting their relationship to their customers.
- Requiring collection companies to use rate structures consistent with Washington State waste management priorities.

WUTC requires certificate holders to provide the minimum levels of solid waste collection and recycling services established by a local solid waste management plan and enacted through an ordinance. Solid waste companies operating in the unincorporated areas of a county must comply with the local solid waste management plan (RCW 81.77.040).

At its option, Douglas County may notify WUTC of its intention to have the G-certificate holder bid on the collection of source-separated recyclable materials from residences in unincorporated areas. Commercial recycling is also regulated by the WUTC, under laws that apply in general to motor freight carriers (RCW 81.80), although their oversight is limited to requiring a permit (at \$100 per year) and also to require companies to carry insurance, conduct drug testing of employees, and conduct a few other activities.

This Plan contains a cost assessment (refer to Appendix J) prepared according to the WUTC Cost Assessment Guidelines for Local Solid Waste Management Planning (WUTC 2001). RCW

70.95.096 grants the WUTC 45 days to review the plan’s impact on solid waste collection rates charged by solid waste collection companies regulated under RCW 81.77, and to advise Douglas County and Ecology of the probable effects of the Plan’s recommendations on those rates.

**10.3.7 United States Environmental Protection Agency**

At the Federal level, the Resource Conservation and Recovery Act (RCRA) of 1976, as amended by the Solid Waste Disposal Act Amendments of 1980 (42 U.S.C. 6901-6987), is the primary body of legislation addressing solid waste. Subtitle D of RCRA deals with non-hazardous solid waste disposal and requires the development of a state comprehensive solid waste management program that outlines the authorities of local, state and regional agencies. Subtitle D requires the state program prohibit “open dumps” and provide that solid waste is handled in an environmentally-sound manner.

**10.4 Status of Previous Recommendations**

The status of the recommendations made by the 2010 Plan can be found in Appendix D.

**10.5 Alternatives**

Existing service gaps and other issues connected to Administration and Enforcement components of solid waste management are discussed below.

**10.5.1 Long-Term Funding Needs**

Financial resources are necessary to provide for the continuation of recycling and hazardous waste education programs and for complying with new and more stringent rules and regulations governing solid waste management. These resources may be provided by taxes, solid waste tipping fees, grants, or any combination of these sources.

Solid waste funding for recycling, MRW, and educational programs in Douglas County are currently reliant on LSWFA funding, the fee assessed on the unincorporated curbside collection of garbage and the Host Agreement with WMW for GWRL. LSWFA funding is being decreased by Ecology over the next biennium. Potential additional funding options (grouped by category) and the associated implementation entity are presented on Table 10.2.

**Table 10.2 Potential Funding Methods for Solid Waste Management**

Possible Funding Methods	Potential Implementation Entity			
	City	County	State	Private Sector
<i>User Fees, Rates, Surcharges</i>				
1. Cost-of-Service-Based Rates	X	X		X
2. Other Volume-Based Rates	X			
3. Fixed Per-Customer Service Rates	X			X
4. Collection Rate Surcharges	X			
5. Planning Fees		X		
6. Weight or Volume-Based Disposal Fees	X	X		X
7. Fixed Per-Customer Disposal Fees	X	X		X



Possible Funding Methods	Potential Implementation Entity			
	City	County	State	Private Sector
8. Disposal Surcharges	X	X		
<i>Taxes</i>				
9. MTCA Funds, Hazardous Substance Tax		(x)	X	
10. State Litter Tax		(x)	X	
11. Disposal District Excise Tax		X		
12. Mandatory Collection		X		
13. Franchise Fees	X		X	
<i>Other</i>				
16. Enforcement Fines/Penalties		X		
17. Sales of Recyclable Materials	X	X		X
18. Recycling Fees/Charges	X	X		X
19. Sales of Recovered Energy		X		X
20. Utility Tax	X			
21. General Fund Revenues	X	X		
22. Bond Financing		X		(x)
23. Public Works Assistance Account <sup>1</sup>	X	X		

Note: X = Implementing authority, (x) = potentially benefits from funding method but cannot implement it.

1. Public Works Assistance Account, commonly known as the Public Works Trust Fund, was established by C 43.155 to be used by the Public Works Board to finance local government infrastructure loans.

### 10.5.2 Staffing

Adequate funding should be provided to increase staff at county and city levels as needed for departments having primary responsibility for solid waste management and for the Chelan-Douglas Health District to monitor, permit and enforce solid waste facilities and programs.

### 10.5.3 Permit Review

The SWAC should be included in the review of all new solid waste facility permit requests within Douglas County, although final approval shall continue to reside with the jurisdictional Chelan-Douglas Health District. Such permit requests, after review by the SWAC, will be forwarded to the Chelan-Douglas Health District with comments. This review will assure adherence to the Plan, RCW 70.95 (165) and (180).

## 10.6 Recommended Actions

The following options were selected by the SWAC for recommended implementation:

- AE1) Consider pursuing some potential additional funding strategies listed in Table 10.2 that can be implemented by Douglas County existing staff directly and independently from other alternatives if additional funding sources are necessary to maintain staff and programs.
- AE2) Provide adequate funding to maintain or increase staff at county and city levels, as needed.
- AE3) Include the SWAC in the review of all new solid waste facility permit requests.





# Chapter 11.0 Implementation Plan

## 11.1 Introduction

This chapter provides information regarding the cost and schedule for implementing the recommendations made in this Plan. Information is also provided on monitoring progress and maintaining the Plan.

## 11.2 Recommended Strategies

The recommendations made in previous chapters of this Plan are repeated below for convenient reference, as later sections of this chapter discuss costs and implementation responsibilities. More details about specific recommendations can be found in the respective chapters.

Specific information regarding anticipated budget and likely schedule for recommendations may be found in Tables 11.1 and 11.2, respectively, presented below the list of recommendations.

### Chapter 3.0: Waste Reduction, Recycling and Education

Chapter 3.0 discusses existing programs and provides recommendations for three related topics: waste reduction, recycling and education. The following recommendations are proposed:

- WWR1) Adopt the updated list of designated materials (Table 3.4) and maintain it through periodic review and updates.
- WWR2) Incorporate and expand the education and promotion program.
- WWR3) Provide support for recycling at public events.
- WWR4) Continue the operations of the Community Recycling Centers and the Douglas County rural drop-off recycling program if feasible and cost effective.

Some of these policies have no direct costs, but could lead to additional costs through new programs that may be needed or expanded in the future. Douglas County has the primary responsibility for these recommendations except for WRR4 for which the municipalities and Douglas County are jointly responsible.

### Chapter 4.0: Solid Waste Collection

Chapter 4.0 discusses existing MSW collection services in unincorporated Douglas County and in the five participating cities and towns. These programs are operating satisfactorily. Chapter 4.0 concludes with the following recommendations:

- SWC1) Review collection contracts to confirm compliance with the Plan.
- SWC2) Douglas County should continue to assess the fee on solid waste collection companies operating in the unincorporated areas of the County.

The budget for these activities will consist primarily of continuing the existing funding.

### **Chapter 5.0: Waste Transfer and Disposal**

Chapter 5.0 discusses existing transfer and disposal systems and programs. The system is working well. Chapter 5.0 outlines the following recommendations:

- WTD1) No new transfer stations should be constructed by Douglas County during this planning period.
- WTD2) Douglas County MSW should continue to be disposed at GWRL.
- WTD3) Douglas County should continue to monitor and track waste importation and exportation to ensure compliance with the Host Agreement and the Universal Pest Protocol Procedures.
- WTD4) Douglas County and WMW should continue to work cooperatively to ensure that the agreements for the importation of waste to GWRL meet the requirements of the Douglas County Waste Importation Ordinance Number 01-124-ORD-1.
- WTD5) Douglas County should continue to work with agencies to potentially reduce post closure care at its landfills.

Douglas County would take the lead in implementing and funding these recommendations.

### **Chapter 6.0: Energy Recovery**

Chapter 6.0 discusses energy recovery options available to Douglas County. This Chapter concludes with the following recommendation:

- ER1) Douglas County will monitor developments and progress in waste processing and conversion technologies.

Douglas County is the lead agency for this recommendation. No additional budget is necessary for this recommendation.

### **Chapter 7.0: Special Wastes**

Chapter 7.0 discusses the various materials considered “special wastes” because they pose somewhat elevated risks, require additional precautions, or special handling procedures. For the most part, special wastes can be handled by the existing solid waste infrastructure and programs, but with a few additional considerations:

- SW1) Continue to dispose special wastes through a cooperative effort with the Chelan-Douglas Health District, WMW, and Ecology.
- SW2) Monitor EPA and Washington State guidance regarding pharmaceutical waste and implement changes as needed to comply with statewide medicine take-back program.
- SW3) Promote proper reuse, recycling and disposal of C&D wastes.
- SW4) Partner with private organizations such as the Habitat for Humanity of the Greater Wenatchee Area to promote recycling and reuse of C&D wastes and building materials.

- SW5) Develop an internal plan for handling disaster debris, in coordination with SWPO, WMW, Chelan-Douglas Health District, and Douglas County Emergency Management.

Douglas County is the lead agency for these recommendations, and these are essentially ongoing activities that would be funded by continuing the existing budget with the potential exception of SW3. SW1, SW2, SW4 and SW5 would be in collaboration and/or dependent upon other agencies and partners. As reuse and recycling options are further developed in Douglas County, the SWPO will need to promote the programs which may require additional budget.

#### **Chapter 8.0: Moderate Risk Waste**

Chapter 8.0 provides an update of the Douglas County Moderate Risk Waste Plan. The following recommendations are being proposed for MRW programs:

- MRW1) Enhance the public education and outreach program for handling of HHW.
- MRW2) Continue the MRW collection events when grant funding is available.
- MRW3) Continue the used oil collection program if feasible and cost effective.
- MRW4) Continue to coordinate the schedule and process for updating the MRW Plan with the comprehensive solid waste management plan (as is the current practice).

Douglas County has the primary authority for these recommendations. The budget for these activities will consist primarily of continuing the existing budget and additional amounts for annual collection events.

#### **Chapter 9.0: Organics**

Chapter 9.0 discusses organic materials including yard debris and food waste. This Chapter concludes with the following recommendations:

- O1) Continue compliance with the Douglas County Universal Agricultural Pest Protocol procedure and WAC 16-470 the WSDA Quarantine – Agricultural Pest Regulation.
- O2) Develop and distribute educational materials regarding the yard debris curbside collection program.
- O3) Continue and expand the yard debris collection program as population growth and citizen needs warrant.
- O4) Reinstate the Christmas Tree Collection and Education Program as funding allows.

Douglas County has the primary authority for these recommendations. The budget for these activities will consist primarily of continuing the existing budget and additional amounts for expanding programs and collection events.

### Chapter 10.0: Administration and Enforcement

The administration and enforcement of the solid waste system is an activity shared among several parties, including SWPO, Chelan-Douglas Health District, cities and towns, and the private sector. SWPO and the Chelan-Douglas Health District have the primary responsibility for these activities.

- AE1) Consider pursuing potential additional funding strategies listed in Table 10.2 that can be implemented by Douglas County existing staff directly and independently from other alternatives if additional funding sources are necessary to maintain staff and programs.
- AE2) Provide adequate funding to maintain or increase staff at county and city levels, as needed.
- AE3) Include the SWAC in the review of all new solid waste facility permit requests.

Douglas County is the lead agency for these recommendations so the additional costs are largely limited to a portion of staff time (for existing staff). The budget for these activities will consist primarily of continuing the existing budget plus additional amounts and/or reallocation of existing funds for new activities.

### 11.3 Estimated Additional Costs

Table 11.1 shows the approximate budget for Plan recommendations that incur additional costs above and beyond current status quo costs and programs.

**Table 11.1 Six-Year Implementation Budget for Additional Costs**

Recommendation	Additional Cost by Implementation Year <sup>1</sup>					
	2018	2019	2020	2021	2022	2023
<b>3.0 Waste Reduction, Recycling and Education</b>						
WWR1) Adopt the updated list of designated materials (Table 3.4) and maintain it through periodic review and updates.	No Additional Costs					
WWR2) Incorporate and expand the education and promotion program.	-	-	\$5,000	-	-	-
WWR3) Provide support for recycling at public events.	-	-	-	-	-	-
WWR4) Continue the operations of the Community Recycling Centers and the Douglas County rural drop-off recycling program if feasible and cost effective.	No Additional Costs					
<b>4.0 Solid Waste Collection</b>						
SW1) Review collection contracts to confirm compliance with the Plan.	No Additional Costs					
SW2) Douglas County should continue to assess the fee on solid waste collection companies operating in the unincorporated areas.	No Additional Costs					





Recommendation	Additional Cost by Implementation Year <sup>1</sup>					
	2018	2019	2020	2021	2022	2023
<b>5.0 Waste Transfer and Disposal</b>						
WTD1) No new transfer stations should be constructed by Douglas County during this planning period.	No Additional Costs					
WTD2) Douglas County MSW should continue to be disposed at GWRL.	No Additional Costs					
WTD3) Douglas County should continue to monitor and track waste importation and exportation to ensure compliance with the Host Agreement and the Universal Pest Protocol Procedures.	No Additional Costs					
WTD4) Douglas County and WMW should continue to work cooperatively to ensure that the agreements for the importation of waste to GWRL meet the requirements of the Douglas County Waste Importation Ordinance Number 01-124-ORD-1.	No Additional Costs					
WTD5) Douglas County should continue to work with agencies to potentially reduce post closure care at its landfills.	No Additional Costs					
<b>6.0 Energy Recovery</b>						
ER1) Douglas County will monitor developments and progress in waste processing and conversion technologies.	No Additional Costs					
<b>7.0 Special Wastes</b>						
SW1) Continue to dispose special wastes through a cooperative effort with the Chelan-Douglas Health District, WMW, and Ecology.	No Additional Costs					
SW2) Monitor EPA and Washington State guidance regarding pharmaceutical waste and implement changes as needed to comply with statewide medicine take-back program.	No Additional Costs					
SW3) Promote proper reuse, recycling and disposal of C&D waste.	-	\$1,000	-	-	-	-
SW4) Partner with private organizations such as the Habitat for Humanity of the Greater Wenatchee Area to promote recycling and reuse of C&D wastes and building materials.	No Additional Costs					
SW5) Develop an internal plan for handling disaster debris, in coordination with SWPO, WMW, the Chelan-Douglas Health District and Douglas County Department of Emergency Management.	-	-	\$25,000	-	-	-
<b>8.0 Moderate Risk Waste</b>						
MRW1) Enhance the public education and outreach program for handling of HHW.	\$5,000	-	-	-	-	-
MRW2) Continue the MRW collection events when grant funding is available.	No Additional Costs					
MRW3) Continue the used oil collection program if feasible and cost effective.	No Additional Costs					

Recommendation	Additional Cost by Implementation Year <sup>1</sup>					
	2018	2019	2020	2021	2022	2023
MRW4) Continue to coordinate the schedule and process for updating the MRW Plan with the solid waste management plan (as is the current practice).	No Additional Costs					
<b>9.0 Organics</b>						
O1) Continue compliance with the Douglas County Universal Agricultural Pest Protocol procedure and WAC 16-470 the WSDA Quarantine – Agricultural Pest Regulation.	No Additional Costs					
O2) Develop and distribute educational materials regarding the yard debris curbside collection program.	\$2,000	-	-	-	-	-
O3) Continue and expand the yard debris collection program as population growth and citizen needs warrant.	No Additional Costs					
O4) Reinstate the Christmas Tree Collection and Education Program as funding allows.	-	-	\$5,000	-	-	-
<b>10.0 Administration and Enforcement</b>						
AE1) Consider pursuing some of the additional funding strategies listed in Table 10.2 that can be implemented by Douglas County existing staff directly and independently from other alternatives if additional funding sources are necessary to maintain staff and programs.	No Additional Costs					
AE2) Provide adequate funding to maintain or increase staff at county and city levels, as needed.	No Additional Costs					
AE3) Include the SWAC in the review of new solid waste facility permit requests.	No Additional Costs					
<b>TOTAL</b>	<b>\$7,000</b>	<b>\$1,000</b>	<b>\$35,000</b>	<b>-</b>	<b>-</b>	<b>-</b>

Notes:

1. All amounts are approximate and subject to update.

## 11.4 Six-Year Implementation Schedule

The proposed implementation schedule and primary responsibility is shown in Table 11.2. The SWAC will review and comment on proposed resolutions and ordinances prior to their adoption.

**Table 11.2 Six-Year Implementation Schedule**

Recommendation	Implementation Responsibility	Implementation Year					
		2018	2019	2020	2021	2022	2023
<b>3.0 Waste Reduction, Recycling and Education</b>							
WWR1) Adopt the updated list of designated materials (Table 3.4) and maintain it through periodic review and updates.	Douglas County	Ongoing					
WWR2) Incorporate and expand the education and promotion program.	Douglas County	-	-	X	-	-	-



Recommendation	Implementation Responsibility	Implementation Year					
		2018	2019	2020	2021	2022	2023
WWR3) Provide support for recycling at public events.	Douglas County					Ongoing	
WWR4) Continue the operations of the Community Recycling Centers and the Douglas County rural drop-off recycling program if feasible and cost effective.	Douglas County, Cities and Towns					Ongoing	
WTD5) Douglas County should continue to work with agencies to potentially reduce post closure care at its landfills.	Douglas County					Ongoing	
<b>4.0 Solid Waste Collection</b>							
SW1) Review collection contracts to confirm compliance with the Plan.	Douglas County					Ongoing	
SW2) Douglas County should continue to assess the fee on solid waste collection companies operating in the unincorporated areas.	Douglas County					Ongoing	
<b>5.0 Waste Transfer and Disposal</b>							
WTD1) No new transfer stations should be constructed by Douglas County during this planning period.	Douglas County					Ongoing	
WTD2) Douglas County MSW should continue to be disposed at GWRL.	Douglas County					Ongoing	
WTD3) Douglas County should continue to monitor and track waste importation and exportation to ensure compliance with the Host Agreement and the Universal Pest Protocol Procedures.	Douglas County					Ongoing	
WTD4) Douglas County and WMW should continue to work cooperatively to ensure that the agreements for the importation of waste to GWRL meet the requirements of the Douglas County Waste Importation Ordinance Number 01-124-ORD-1.	Douglas County					Ongoing	
<b>6.0 Energy Recovery</b>							
ER1) Douglas County will monitor developments and progress in waste processing and conversion technologies.	Douglas County					Ongoing	
<b>7.0 Special Wastes</b>							
SW1) Continue to dispose special wastes through a cooperative effort with the Chelan- Douglas Health District, WMW, and Ecology.	Douglas County, Chelan-Douglas Health District, WMW, Ecology					Ongoing	
SW2) Monitor EPA and Washington State guidance regarding pharmaceutical waste and implement changes as needed to comply with statewide medicine take-back program.	Douglas County					Ongoing	

Recommendation	Implementation Responsibility	Implementation Year					
		2018	2019	2020	2021	2022	2023
SW3) Promote proper reuse, recycling and disposal of C&D waste.	Douglas County	-	X	-	-	-	-
SW4) Partner with private organizations such as the Habitat for Humanity of the Greater Wenatchee Area to promote recycling and reuse of C&D wastes and building materials.	Douglas County	Ongoing					
SW5) Develop an internal plan for handling disaster debris, in coordination with SWPO, WMW, Chelan-Douglas Health District and Douglas County Emergency Management.	Douglas County	-	-	X	-	-	-
<b>8.0 Moderate Risk Waste</b>							
MRW1) Enhance the public education and outreach program for handling of MRW waste for households.	Douglas County	X	-	-	-	-	-
MRW2) Continue the MRW collection events when grant funding is available.	Douglas County	Ongoing					
MRW3) Continue the used oil collection program if feasible and cost effective.	Douglas County	Ongoing					
MRW4) Continue to coordinate the schedule and process for updating the MRW Plan with the solid waste management plan (as is the current practice).	Douglas County	Ongoing					
<b>9.0 Organics</b>							
O1) Continue compliance with the Douglas County Universal Agricultural Pest Protocol procedure and WAC 16-470 the WSDA Quarantine – Agricultural Pest Regulation.	Douglas County	Ongoing					
O2) Develop and distribute educational materials regarding the yard debris curbside collection program.	Douglas County	X	-	-	-	-	-
O3) Continue and expand the yard debris collection program as population growth and citizen needs warrant.	Douglas County	Ongoing					
O4) Reinstate the Christmas Tree Collection and Education Program as funding allows.	Douglas County	-	-	X	-	-	-
<b>10.0 Administration and Enforcement</b>							
AE1) Consider pursuing potential additional funding strategies listed in Table 10.2 that can be implemented by Douglas County existing staff directly and independently from other alternatives if additional funding sources are necessary to maintain staff and programs.	Douglas County	Ongoing					





Recommendation	Implementation Responsibility	Implementation Year					
		2018	2019	2020	2021	2022	2023
AE2) Provide adequate funding to maintain or increase staff at county and city levels, as needed.	Douglas County					Ongoing	
AE3) Include the SWAC in the review of new solid waste facility permit requests.	Douglas County					Ongoing	

## 11.5 Twenty-Year Implementation Program

Solid waste management in Douglas County will continue to evolve based on changes in population, demographics, the local, state, and national economy, regulations, and advancements in waste handling and recycling. Fortunately, Douglas County's current solid waste management system is functioning effectively.

The current process of funding solid waste programs via grants, solid waste haulers fees, GWRL host fee, administration and implementation fees, and GWRL and other facilities permit fees provides adequate funding. If in the future it becomes advisable to seek additional sources of funding, Chapter 10.0 provides a list of potential additional funding sources.

## 11.6 State Environmental Policy Act

Ecology requires the potential impacts of this Plan be evaluated according to SEPA process. The checklist has been prepared to fulfill that requirement and is included as Appendix I.

The SEPA checklist is a “non-project proposal” intended to address new programs recommended by the Plan. Any new facility will need to undergo its own SEPA review process to fully address the potential impacts.

On **XXXXX**, 2017 Douglas County issued a determination of non-significance that the recommendations in the Plan will not have a probable significant adverse impact on the environment. A copy of this determination is included in Appendix I.

## 11.7 Draft Plan Review

Douglas County provided the draft 2017 Plan for review to stakeholders. Comments were received from **XXXXXX**. Comments received and response to comments by Douglas County are included as Appendix K.

## 11.8 Procedures for Amending the Plan

The Solid Waste Management-Reduction and Recycling Act (RCW 70.95) requires local governments to maintain their solid waste plans in current condition. Plans must be reviewed at least every five years and revised, if necessary. This Plan should be reviewed in 2023. Before that time, the Plan can be kept in current condition through amendments. An “amendment” is defined as a simpler process than a revision. If there is a significant change in the solid waste system, however, a revision may be necessary before the five-year period is complete.

