Final Draft

Kittitas County
2010 Solid Waste and Moderate Risk Waste Management Plan Update

Kittitas County
Solid Waste Department
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Ellensburg, Washington 98926
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Prepared for:

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August 2011
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F WUTC Cost Assessment Questionnaire
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Executive Summary

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

The Kittitas County Solid Waste Management Plan Update (Plan) has been prepared to reflect the changes in the solid waste management programs and policies in the County since adoption of the revised Plan in 2004. The Plan provides a planning and implementation tool for decision makers, businesses and residents within the County.

The purpose and authority for solid waste planning is derived from state legislation that defines the roles of counties and cities in solid waste management. The Plan is the guide for managing solid waste in the County for a 20-year planning period. Washington State's Solid Waste Management - Reduction and Recycling Act goes further to require that the plan be maintained through periodic review and updated a minimum of every five years (Chapter 70.95.110 RCW).

Recommendations developed in the Plan provide decision makers with three important tools:

1. Guidelines for the development of programs, policy, and operating plans;
2. A basis for permitting decisions by the jurisdictional health district and other local government agencies; and
3. The support needed to obtain grants and funds for subsequent planning and project implementation.

The Plan also addresses the changing standards and requirements of Solid Waste Regulations, as outlined in guidelines developed by the Department of Ecology (Ecology)[1]. Of particular note is combining the Local Hazardous Waste Plan with the Plan, in accordance with the new requirements as established in the 2010 Guidelines.

Another important motivation behind the development of a 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.

[1] Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revisions, Washington State Department of Ecology, publication 10-07-005, February 2010; Guidelines for Developing and Updating Local Hazardous Waste Plans, publication 10-07-006, February 2010.

ES.1.1 PLAN REQUIREMENTS

Under the State Solid Waste Management Act, Chapter 70.95 RCW, primary responsibility for managing solid waste is assigned to local government. The state, however, is responsible for assuring that effective local programs are established throughout Washington State. Therefore, state and local solid waste planning go hand in hand. Local government is responsible for determining the nature and extent of the various solid waste categories and establishing management concepts for their handling, utilization, and disposal consistent with the priorities established in the State Solid Waste Management Act for waste reduction, waste recycling, energy recovery and incineration, and landfill. Each local plan is to be prepared in accordance with Chapter 70.95.080, 090, 100 and 110 RCW, and the Local Hazardous Waste Planning Guidelines, RCW 70.105.220 and RCW 70.95I.020. Chapter 70.95.165 RCW also requires counties to establish a local solid waste advisory committee (SWAC) to assist in the development of programs and policies concerning solid waste handling and disposal and to review and comment upon proposed rules, policies, or ordinances prior to their adoption.

According to the guidelines, a Plan should include the following:

- Review of pertinent regulations and ordinances
- Planning solid waste infrastructure and operations
    - Waste generation
    - Waste recycling
    - Waste diversion
    - Waste collection
    - Facility siting
- Financing solid waste infrastructure and operations
- Surveillance and control

ES.1.2 DEVELOPING THE PLAN

The Kittitas County Solid Waste Department (Solid Waste), along with the Kittitas County Solid Waste Advisory Committee (SWAC), is primarily responsible for the development of this Plan. The SWAC represents local government, business, and citizens from various areas of Kittitas County. In addition, staff members from Kittitas County and each participating jurisdiction actively participated through review and comment as the Plan was developed. Each participating jurisdiction will adopt the Plan once it has been finalized.

The first step in the Plan process was to develop a methodology for evaluating and revising the existing solid waste management plan. The purpose of the methodology was to compare and evaluate both compatible and mutually exclusive options, and for selecting and prioritizing the preferred options. The criteria for evaluating options were developed with close involvement of County staff and the SWAC members.

The next step involved identifying, collecting and analyzing data pertinent to the existing waste stream and waste management system. The following types of information were developed, using available Kittitas County data and state or national ratios:

1. Current solid waste generation, characterization/composition of solid waste.
2. Descriptions of existing private and public sector solid waste facilities and planned expansion/modifications, including existing recycling and composting facilities.
3. Current solid waste management operations.
4. Existing haulers and waste management contract agreements.

In order to identify viable and appropriate options for the planning horizon, demographic and economic development data and projections were gathered, as available. This information was then integrated with the information on the existing system, and used to forecast trends regarding solid waste generation, geographic distribution of solid waste in the County, solid waste disposal locations and capacities, and local and regional markets for recovered materials. The projections became the basis to formulate an integrated waste management strategy.

A list of options was developed and provided to the County and SWAC for comment or additions. All of the waste management options that were considered were designed to contribute to:

1. Long-term stability and flexibility.
2. Providing cost-effective, efficient services and programs.
3. Environmental protection.
4. Improving the waste management infrastructure.

After review and selection of options, this Preliminary Draft Plan has been prepared for review and comment by the public, cities, County, and Ecology. Comments received by this process will be incorporated into a revised Draft Plan as necessary. The Draft Plan will then be adopted through resolution by the Kittitas County Board of Commissioners and incorporated cities and submitted to Ecology for final review.

Yearly evaluation of the plan will be conducted by the SWAC, Ecology, and WUTC.

ES.1.3 ORGANIZATION OF THE PLAN UPDATE

The Plan update has been organized to facilitate the use and implementation by the County and member jurisdictions. Each section contains a description of the current conditions, needs, options, discussion, and selected or recommended options.

ES.2 GOALS AND OBJECTIVES

The goal of this Plan is to develop an integrated waste management system which influences individual waste generation patterns while providing for necessary and economically efficient waste management services that minimize environmental impacts and protect human health. The Plan aims to provide the mechanisms by which solid waste is handled in the County in a manner

that promotes, in order of priority: waste reduction, recycling, and composting; with source-separation of recyclables as the preferred method.

The goal statement is supported by the following general policies and objectives:

1. Continue and enhance waste reduction and recycling programs in order to achieve specified recycling and diversion goals, which will be subject to periodic review and modification.

2. Provide convenient recycling opportunities throughout the County to maximize participation from all practicable waste generator sectors.

3. Support the local economy (private and non profit) by maximizing the use of local markets, capabilities, and resources.

4. Manage the solid waste management system in the most efficient and cost-effective way to best protect public health, safety, and the environment.

5. Evaluate the need for, and when necessary, provide additional solid waste management facilities, including technology options that may enhance existing infrastructure.

6. Address and support evaluation, collaboration, and enforcement of inter-governmental policies relating to solid waste management.

7. Increase public awareness of solid waste issues by continuing and expanding educational opportunities within the County to promote waste reduction and recycling options.

8. Manage waste in a manner that promotes Washington State's waste management priorities.

9. Encourage coordination and communication among all jurisdictions and governmental entities to carry out components of this solid waste plan.

10. Provide an on-going mechanism for evaluation and feedback of the County's solid waste management system, including proper documentation of activities.

11. Maintain sufficient funding mechanisms to support selected program options.

12. Evaluate strategies for managing specific waste streams.

ES.3 EVALUATION METHODOLOGY

The pool of solid waste management options is large, and therefore decisions must be made about which ones to include and exclude when developing a preferred waste management strategy. Selection criteria that support the approved Policies and Objectives provide guidance and rationale for selecting options that will constitute the overall strategy for the next five years. The criteria are used to compare and contrast the relative characteristics, advantages / disadvantages, and impacts of the options.

Each option was evaluated against four criteria:

1. Promotes waste reduction, recycling, and/or composting.
2. Supports a sustainable solid waste management system.
3. Complies with and supports State solid waste laws, regulations and goals.
4. Enhances regional cooperation, education, and communication efforts.

The selection criteria were used as follows:

- For each option, each SWAC member assigned a rating of 0, 1 or 2 on each of the four criteria. A rating of 2 means the option meets the criteria, a rating of 1 means the option somewhat meets the criteria, and a rating of 0 means the option does not meet the criteria.
- The scores for each option were tabulated and a numeric rating was established for each option, based on average scores. The results were presented to the SWAC for further discussion and decision-making. .
- After the evaluation methodology was applied, a focused list was proposed for discussion and approval by the County and SWAC for recommendation to the Board of County Commissioners. The selected Plan options were then reviewed in detail according to the results of the evaluation.

ES.4 SUMMARY OF RECOMMENDATIONS

SWAC has selected a set of options in keeping with the Solid Waste Goals, Policies and Objectives. These recommendations form an integrated program of waste management for Kittitas County through the year 2015. The selected options are included in each chapter. The majority of the selected options are similar to those in the previous Plan. The SWAC reviewed each option, and those options that were previously implemented, but were not effective, were not included in the Plan update. Others were modified to better reflect current conditions. New options were evaluated and selected to replace those options that were eliminated from the Plan update. Table ES-1 includes a list of all options selected for recommendation.

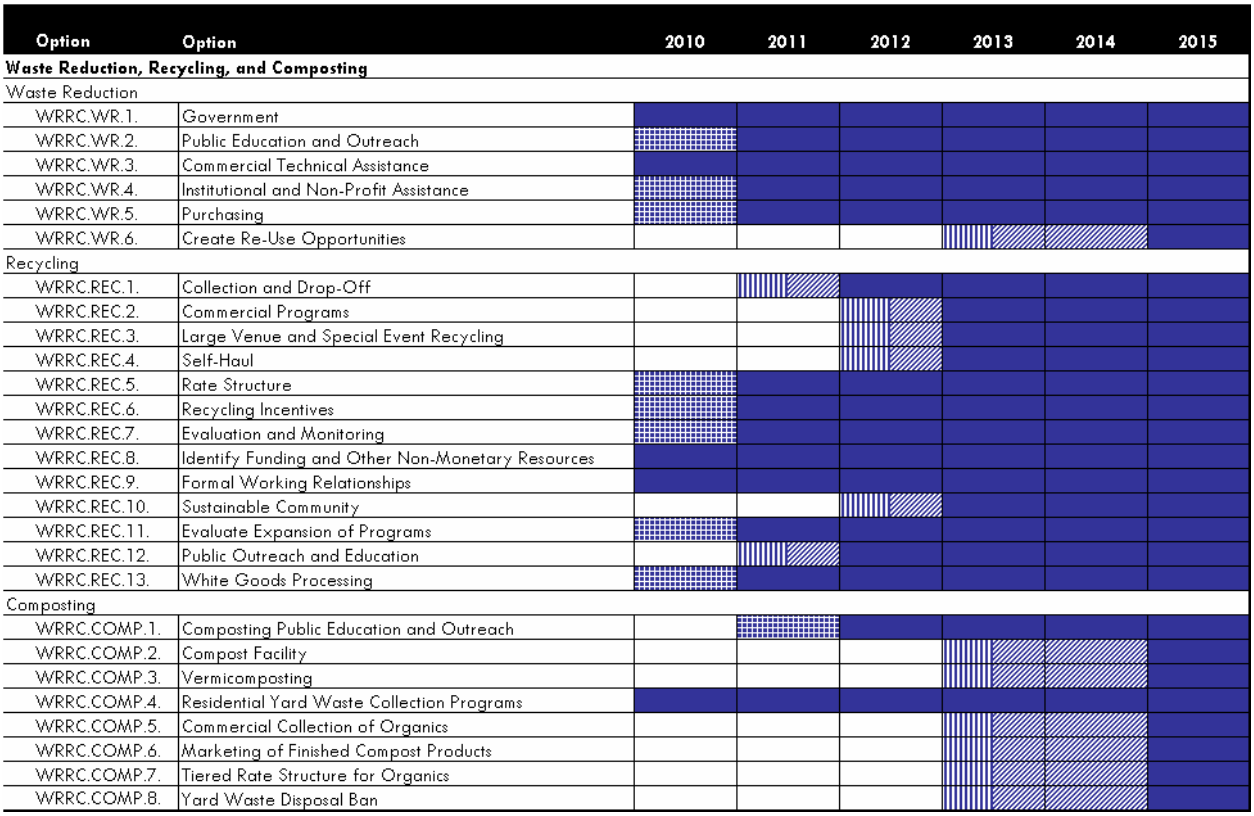
Table ES-1. SWAC Recommended Actions

No.	Option	Existing Option	Revised Option	New Option	SWMP Page No.
WRRC.WR.1.	Government	X			3-4
WRRC.WR.2.	Public Education and Outreach		X		3-4
WRRC.WR.3.	Commercial Technical Assistance	X			3-6
WRRC.WR.4.	Institutional and Non-Profit Assistance		X		3-6
WRRC.WR.5.	Purchasing		X		3-6
WRRC.WR.6.	Create Re-Use Opportunities			X	3-7
WRRC.REC.1.	Collection and Drop-Off			X	3-16
WRRC.REC.2.	Commercial Programs			X	3-16

No.	Option	Existing Option	Revised Option	New Option	SWMP Page No.
WRRC.REC.3.	Large Venue and Special Event Recycling			X	3-16
WRRC.REC.4.	Self-Haul			X	3-17
WRRC.REC.5.	Rate Structure		X		3-17
WRRC.REC.6.	Recycling Incentives		X		3-17
WRRC.REC.7.	Evaluation and Monitoring		X		3-17
WRRC.REC.8.	Identify Funding and Other Non-Monetary Resources	X			3-18
WRRC.REC.9.	Formal Working Relationships	X			3-18
WRRC.REC.10.	Sustainable Community			X	3-18
WRRC.REC.11.	Evaluate Expansion of Programs		X		3-19
WRRC.REC.12.	Public Outreach and Education			X	3-19
WRRC.REC.13.	White Goods Processing			X	3-19
WRRC.COMP.1.	Composting Public Education and Outreach		X		3-23
WRRC.COMP.2.	Compost Facility			X	3-23
WRRC.COMP.3.	Vermicomposting			X	3-23
WRRC.COMP.4.	Residential Yard Waste Collection Programs	X			3-24
WRRC.COMP.5.	Commercial Collection of Organics			X	3-24
WRRC.COMP.6.	Marketing of Finished Compost Products			X	3-24
WRRC.COMP.7.	Tiered Rate Structure for Organics			X	3-24
WRRC.COMP.8.	Yard Waste Disposal Ban			X	3-24
COLL.1.	Routing of Collected Waste through County Facilities	X			4-5
COLL.2.	Curbside Recycling Collection		X		4-5
COLL.3.	Review Collection Contracts	X			4-6
COLL.5.	Funding Sources	X			4-6
TRD.XFER.2.	Use of Transfer Stations		X		5-2
TRD.DISP.2.	Long-Term Disposal Opportunities	X			5-6
TRD.DISP.3.	Contractual Arrangements	X			5-7
TRD.ALT.1.	Future Consideration and Feasibility	X			5-11
TRD.ALT.2.	Alternative Energy Technologies	X			5-11
SPC.CD.1.	Recovery of C&D Debris		X		6-4
SPC.CD.6.	Materials Exchange Program		X		6-5
SPC.CD.8.	Evaluate Flow Control Measures			X	6-6
SPC.AG.1.	Evaluate Opportunities for Beneficial Reuse of Biomass			X	6-8
SPC.TIR.1.	Public Education Programs for Tires			X	6-10
SPC.TIR.3.	Evaluate Diversion Options for Tires		X		6-10
SPC.TIR.4.	Continue Current System	X			6-11
SPC.BIO.1.	Develop and Distribute Education Materials for Correct Management of Residential Medical Waste		X		6-13
SPC.BIO.2.	Monitoring of Solid Waste Programs for Biomedical Waste	X			6-14
SPC.BIO.3.	Pharmaceutical Waste			X	6-14
SPC.VET.1.	Large Animal Disposal	X			6-15
SPC.VET.2.	Education and Outreach - Large Animal		X		6-15
SPC.PCS.1.	In-County PCS Site		X		6-17

No.	Option	Existing Option	Revised Option	New Option	SWMP Page No.
SPC.PCS.2.	Street Sweepings Management			X	6-17
SPC.PCS.3.	Feasibility Study for PCS Management			X	6-17
SPC.PCS.4.	Import PCS	X			6-17
SPC.ACM.1.	Public Education on ACM			X	6-18
SPC.LIQ.1.	Catch Basin Liquids		X		6-20
SPC.EWA.1.	Monitor and Evaluate E-Waste Program			X	6-21
SPC.EWA.2.	E-Waste Education			X	6-22
MRW.1.	MRW Facilities		X		7-10
MRW.3.	Commercial Outreach, Education, and Technical Assistance	X			7-10
MRW.4.	Funding for MRW Programs	X			7-10
MRW.5.	Small Business Collection Assistance			X	7-10
ADM.ORD.1.	Staffing and Resources		X		8-9
ADM.ORD.2.	Funding	X			8-9
ADM.ORD.3.	Other Long-Term Needs	X			8-9
ADM.ORD.4.	New Regulations and Ordinance Requirements	X			8-9
ADM.ORD.5.	Permit Procedures, Policies and Fee Structures	X			8-10
ADM.ORD.6.	Permit Review	X			8-10

ES.5 IMPLEMENTATION SCHEDULE



Option	Option	2010	2011	2012	2013	2014	2015
Solid Waste Collection							
COLL.1.	Routing of Collected Waste through County Facilities						
COLL.2.	Curbside Recycling Collection						
COLL.3.	Review Collection Contracts						
COLL.5.	Funding Sources						
Transfer and Disposal							
Transfer Stations							
TRD.XFER.2.	Use of Transfer Stations						
Waste Import / Waste Export							
TRD.DISP.2.	Long-Term Disposal Opportunities						
TRD.DISP.3.	Contractual Arrangements						
Alternative Disposal Technologies							
TRD.ALT.1.	Future Consideration and Feasibility						
TRD.ALT.2.	Alternative Energy Technologies						
Special Waste							
Construction and Demolition Debris							
SPC.CD.1.	Recovery of C&D Debris						
SPC.CD.6.	Materials Exchange Program						
SPC.CD.8.	Evaluate Flow Control Measures						
Agricultural Waste							
SPC.AG.1.	Evaluate Opportunities for Beneficial Reuse of Biomass						
Tires							
SPC.TIR.1.	Public Education Programs for Tires						
SPC.TIR.3.	Evaluate Diversion Options for Tires						
SPC.TIR.4.	Continue Current System						
Biomedical Waste							
SPC.BIO.1.	Outreach for Management of Residential Medical Waste						
SPC.BIO.2.	Monitoring of SW Programs for Biomedical Waste						
SPC.BIO.3.	Pharmaceutical Waste						
Veterinary Wastes							
SPC.VET.1.	Large Animal Disposal						
SPC.VET.2.	Education and Outreach - Large Animal						
Petroleum-Contaminated Soils							
SPC.PCS.1.	In-County PCS Site						
SPC.PCS.2.	Street Sweepings Management						
SPC.PCS.3.	Feasibility Study for PCS Management						
SPC.PCS.4.	Import PCS						
Asbestos							
SPC.ACM.1.	Public Education on ACM						
Liquid Wastes							
SPC.LIQ.1.	Catch Basin Liquids						
Electronic Waste							
SPC.EWA.1.	Monitor and Evaluate E-Waste Program						
SPC.EWA.2.	E-Waste Education						
Moderate Risk Waste							
MRW.1.	MRW Facilities						
MRW.3.	Commercial Outreach, Education, and Technical Assistance						
MRW.4.	Funding for MRW Programs						
MRW.5.	Small Business Collection Assistance						
Administration and Enforcement							
ADM.ORD.1.	Staffing and Resources						
ADM.ORD.2.	Funding						
ADM.ORD.3.	Other Long-Term Needs						
ADM.ORD.4.	New Regulations and Ordinance Requirements						
ADM.ORD.5.	Permit Procedures, Policies and Fee Structures						
ADM.ORD.6.	Permit Review						

Planning Period **Implementation Period**

Prior Version of Program **Continued Option**

ES.6 IMPLEMENTATION BUDGET

Six Year Capital and Operational Financing

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Waste Reduction, Recycling, and Composting										
Waste Reduction										
Existing Programs	41,143	35,102	29,272	27,675	24,844	25,092	25,343	24,097	24,353	24,611
New Programs	0	0	0	0	0	0	0	1,500	1,500	1,500
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Waste Reduction	*41,143*	*35,102*	*29,272*	*27,675*	*24,844*	*25,092*	*25,343*	*25,597*	*25,853*	*26,111*
Recycling										
Existing Programs	77,830	77,415	75,106	75,670	52,508	48,033	43,513	38,948	34,338	29,681
New Programs	13,000	13,000	20,450	21,500	16,000	21,160	26,372	31,635	36,952	42,321
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Recycling	*90,830*	*90,415*	*95,556*	*97,170*	*68,508*	*69,193*	*69,885*	*70,584*	*71,289*	*72,002*
Composting										
Existing Programs*	39,965	40,000	94,438	27,000	16,090	113,494	114,629	110,775	106,883	102,951
New Programs	0	0	499,144	239,282	158,634	160,220	161,823	168,441	175,125	181,876
Capital Expenditures	0	0	530,400	860,000	96,280	0	0	0	0	0
Subtotal, Composting	*39,965*	*40,000*	*1,123,982*	*1,126,282*	*271,004*	*273,714*	*276,451*	*279,216*	*282,008*	*284,828*
Waste Reduction, Recycling, and Composting	***171,938***	***165,517***	***1,248,810***	***1,251,127***	***364,356***	***367,999***	***371,679***	***375,396***	***379,150***	***382,941***
Solid Waste Collection										
Existing Programs	7,643	7,643	7,099	7,108	6,500	6,565	6,630	6,697	6,764	6,831
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Solid Waste Collection	***7,643***	***7,643***	***7,099***	***7,108***	***6,500***	***6,565***	***6,630***	***6,697***	***6,764***	***6,831***
Transfer and Disposal										
Transfer Stations										
Existing Programs	174,253	179,558	230,801	236,673	209,964	343,616	347,052	350,523	354,028	357,568
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	117,000	81,375	81,000	80,625	130,250	0	0	0	0	0
Subtotal, Transfer Stations	*291,253*	*260,933*	*311,801*	*317,298*	*340,214*	*343,616*	*347,052*	*350,523*	*354,028*	*357,568*
Waste Import / Waste Export										
Existing Programs	1,269,500	1,322,100	1,575,000	1,508,947	1,400,976	1,414,986	1,429,136	1,443,427	1,457,861	1,472,440
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Waste Import / Waste Export	*1,269,500*	*1,322,100*	*1,575,000*	*1,508,947*	*1,400,976*	*1,414,986*	*1,429,136*	*1,443,427*	*1,457,861*	*1,472,440*
Alternative Disposal Technologies										
Existing Programs	4,826	3,316	2,247	1,841	1,568	1,584	1,600	1,616	1,632	1,648
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Alternative Disposal Technologies	*4,826*	*3,316*	*2,247*	*1,841*	*1,568*	*1,584*	*1,600*	*1,616*	*1,632*	*1,648*
Subtotal, Transfer and Disposal	***1,565,579***	***1,586,349***	***1,889,048***	***1,828,086***	***1,742,758***	***1,760,186***	***1,777,788***	***1,795,566***	***1,813,521***	***1,831,656***

* The increase from 2010-2011 reflects a shift from capital to operational expense for the composting facility.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Special Waste										
Construction and Demolition Debris										
Existing Programs	206,372	231,425	302,916	333,421	216,471	218,636	220,822	219,530	225,261	227,513
New Programs	0	0	0	0	0	0	0	3,500	0	0
Capital Expenditures	0	323,000	125,000	115,000	0	0	0	0	0	0
Subtotal, Construction and Demolition Debris	*206,372*	*554,425*	*427,916*	*448,421*	*216,471*	*218,636*	*220,822*	*223,030*	*225,261*	*227,513*
Agricultural Waste										
Existing Programs	4,826	3,316	2,247	1,841	1,568	1,584	1,600	1,116	1,632	1,648
New Programs	0	0	0	0	0	0	0	500	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Agricultural Waste	*4,826*	*3,316*	*2,247*	*1,841*	*1,568*	*1,584*	*1,600*	*1,616*	*1,632*	*1,648*
Tires										
Existing Programs	10,000	14,000	15,000	15,000	15,000	15,150	14,802	14,955	15,109	15,265
New Programs	0	0	0	0	0	0	500	500	500	500
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Tires	*10,000*	*14,000*	*15,000*	*15,000*	*15,000*	*15,150*	*15,302*	*15,455*	*15,609*	*15,765*
Biomedical Waste										
Existing Programs	5,459	5,459	5,071	5,077	4,643	4,689	4,236	4,283	4,331	4,380
New Programs	0	0	0	0	0	0	500	500	500	500
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Biomedical Waste	*5,459*	*5,459*	*5,071*	*5,077*	*4,643*	*4,689*	*4,736*	*4,783*	*4,831*	*4,880*
Veterinary Wastes										
Existing Programs	5,459	5,459	5,071	5,077	4,643	4,689	4,736	4,783	4,831	4,880
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Veterinary Wastes	*5,459*	*5,459*	*5,071*	*5,077*	*4,643*	*4,689*	*4,736*	*4,783*	*4,831*	*4,880*
Petroleum-Contaminated Soils										
Existing Programs	42,000	46,000	51,700	51,700	50,000	50,500	51,005	51,515	47,030	47,551
New Programs	0	0	0	0	0	0	0	0	5,000	5,000
Capital Expenditures	0	0	125,000	0	0	0	0	0	0	0
Subtotal, Petroleum-Contaminated Soils	*42,000*	*46,000*	*176,700*	*51,700*	*50,000*	*50,500*	*51,005*	*51,515*	*52,030*	*52,551*
Asbestos										
Existing Programs	4,826	3,316	2,247	1,841	1,568	1,584	1,600	1,616	1,632	1,648
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Asbestos	*4,826*	*3,316*	*2,247*	*1,841*	*1,568*	*1,584*	*1,600*	*1,616*	*1,632*	*1,648*
Liquid Wastes										
Existing Programs	84,338	108,337	103,420	103,069	73,169	73,901	74,640	75,386	76,140	76,901
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	445,000	0	0	0	0	0	0	0	0	0
Subtotal, Liquid Wastes	*529,338*	*108,337*	*103,420*	*103,069*	*73,169*	*73,901*	*74,640*	*75,386*	*76,140*	*76,901*
Electronic Waste										
Existing Programs	5,459	5,459	5,071	5,077	4,643	3,689	3,736	3,783	3,831	3,880
New Programs	0	0	0	0	0	1,000	1,000	1,000	1,000	1,000
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Electronic Waste	*5,459*	*5,459*	*5,071*	*5,077*	*4,643*	*4,689*	*4,736*	*4,783*	*4,831*	*4,880*
Subtotal, Special Waste	***813,741***	***745,773***	***742,743***	***637,105***	***371,705***	***375,422***	***379,176***	***382,968***	***386,797***	***390,665***

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Moderate Risk Waste										
Existing Programs	38,400	42,150	114,232	108,340	65,165	64,817	65,475	66,140	66,811	67,489
New Programs	0	0	0	0	0	1,000	1,000	1,000	1,000	1,000
Capital Expenditures	300,000	300,000	300,000	300,000	0	0	0	0	0	0
Subtotal, Moderate Risk Waste	***338,400***	***342,150***	***414,232***	***408,340***	***65,165***	***65,817***	***66,475***	***67,140***	***67,811***	***68,489***
Administration and Enforcement										
Existing Programs	237,821	252,995	343,239	448,006	386,374	918,973	928,162	937,444	946,818	956,287
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	20,000	25,000	0	0	523,500	0	0	0	0	0
Subtotal, Administration and Enforcement	***257,821***	***277,995***	***343,239***	***448,006***	***909,874***	***918,973***	***928,162***	***937,444***	***946,818***	***956,287***
Other										
Existing Programs	256,422	245,852	237,746	234,917	18,406	18,590	18,776	18,964	19,153	19,345
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Other	***256,422***	***245,852***	***237,746***	***234,917***	***18,406***	***18,590***	***18,776***	***18,964***	***19,153***	***19,345***
Grand Total	**3,411,544**	**3,371,279**	**4,882,917**	**4,814,690**	**3,478,763**	**3,513,551**	**3,548,686**	**3,584,173**	**3,620,015**	**3,656,215**

Chapter 1

Introduction and Background of the Planning Area

1 INTRODUCTION AND BACKGROUND OF THE PLANNING AREA

1.1 BACKGROUND

The Kittitas County Solid Waste Management Plan (**Plan**) provides a guide for the short and long-term management of the solid waste system within the planning area. The Plan documents the existing solid waste programs and facilities, describes the opportunities for improvement to the existing solid waste system, evaluates alternatives and recommends programs and facilities which will achieve the County's goals, and describes the strategy for implementing the recommended programs. The Plan's 20-year planning period is from 2010 through 2030. The six-year implementation schedules and the WUTC cost assessment was developed for the years 2010 through 2015.

This document identifies and discusses elements of the revised comprehensive solid waste and moderate risk waste management plans for the incorporated and unincorporated areas of Kittitas County. The plan elements conform to requirements of the State Solid Waste Management - "Reduction and Recycling Act," (Chapter 70.95 RCW), solid waste handling standards (WAC 173-350), and follows the guidelines outlined in Guidelines for the Development of Local Solid Waste Management Plans and Plan Revisions (WDOE 10-07-005, February 2010). The Plan is organized as follows:

- Chapter 1 Introduction and Background of the Planning Area
- Chapter 2 Waste Generation and Characterization
- Chapter 3 Waste Reduction, Recycling, and Composting
- Chapter 4 Solid Waste Collection
- Chapter 5 Transfer and Disposal
- Chapter 6 Special Waste
- Chapter 7 Moderate Risk Waste
- Chapter 8 Administration and Enforcement
- Chapter 9 Implementation

Formal adoption and approval of this plan is scheduled for 2011. Annual informal reviews may take place under SWAC guidance with minor amendments (if any) following the prescribed process. A formal five year review, as required by law, should be scheduled to begin in 2015.

1.1.1 GOVERNMENTS INVOLVED IN THE PLAN

The planning area includes the five municipalities located in Kittitas County and the unincorporated area of Kittitas County, excluding the lands under the authority of the U. S. Military.

The Solid Waste Interlocal Agreement, (**Appendix A**) entered into on March 19, 1979, established the County's authority to prepare the solid waste management plan on behalf of the following entities within the County:

- City of Roslyn
- Town of South Cle Elum
- City of Cle Elum
- City of Ellensburg
- City of Kittitas

1.1.2 SOLID WASTE ADVISORY COMMITTEE (SWAC)

The statute concerning SWAC functions states that:

> *"Each County shall establish a local solid waste advisory committee to assist in the development of programs and policies concerning solid waste handling and disposal and to review and comment upon proposed rules, policies, or ordinances prior to their adoption. Such committees shall consist of a minimum of nine members and shall represent a balance of interests, including, but not limited to, citizens, public interest groups, businesses, the waste management industry, and local elected public officials."*
>
> *Chapter 70.95.165 (3)*

The Solid Waste Planning Guidelines address SWAC roles and state that this Solid Waste Management Plan is to specify the procedures and operations of the local SWAC, including what specific documents the SWAC is to review and comment on.

SWACs are to be ongoing committees, with meetings to be held at least four times per year during development of a comprehensive plan, and at least twice a year at other times. Notice to the media is to be given stating the SWAC meeting times.

The SWAC operates under bylaws (See **Appendix B**) adopted by the Committee, elects its own chairman, and has a regular rotation of new members appointed by the Board of Commissioners. The Solid Waste Department (Solid Waste) provides staff support to the SWAC, including meeting arrangements, minutes and agenda preparation, and supplemental information.

The primary function of the SWAC is to review all significant policy and program development issues and recommend a position to the Board of Commissioners and Board of Health. Specific documents to be submitted for SWAC review prior to action by the Board include:

1. Solid Waste and Moderate Risk Waste Management Plans and Plan amendments.

2. Proposed changes in the County regulations on solid waste handling, and in the Board of Health regulations relating to solid waste.

3. Annual budgets and work plans that are related to implementation of current Solid and Moderate Risk Waste Management Plan recommendations.

4. Rates and rate revisions concerning solid and moderate risk wastes.

5. Annual operating data concerning solid and moderate risk waste diversion, recycling, and disposal.

In Kittitas County, meetings are typically held semi-annually, but more frequent meetings are held as necessary. Meeting notices are provided to the media and the public is encouraged to attend and participate.

SWAC will consider issues, concerns and possible amendments to the Plan at their regular meetings as follows:

- Complete, factual written information is submitted to Solid Waste Staff.
- Solid Waste Staff will review with SWAC Chair for completeness.
- Information is disseminated to each SWAC member two weeks in advance of the next SWAC meeting (Kittitas County Solid Waste Advisory Committee By-Laws and Meetings Procedures, VIII. Amendments).
- SWAC will attend the meeting prepared to discuss the material and act on the matter.

1.2 PLAN GOALS AND OBJECTIVES

1.2.1 GOAL STATEMENT

The goal of this solid waste management plan is to develop an integrated waste management system which influences individual waste generation patterns while providing for necessary and economically efficient waste management services that minimize environmental impacts and protect human health. The plan aims to provide the mechanisms by which solid waste is handled in the County in a manner that promotes, in order of priority: waste reduction, recycling, and composting; with source-separation of recyclables as the preferred method.

1.2.2 GENERAL POLICY AND OBJECTIVES

The goal statement is supported by the following general policies and objectives:

1. Continue and enhance waste reduction and recycling programs in order to achieve specified recycling and diversion goals, which will be subject to periodic review and modification.
2. Provide convenient recycling opportunities throughout the County to maximize participation from all practicable waste generator sectors.
3. Support the local economy (private and non profit) by maximizing the use of local markets, capabilities, and resources.
4. Manage the solid waste management system in the most efficient and cost-effective way to best protect public health, safety, and the environment.

5. Evaluate the need for, and when necessary, provide additional solid waste management facilities, including technology options that may enhance existing infrastructure.

6. Address and support evaluation, collaboration, and enforcement of inter-governmental policies relating to solid waste management.

7. Increase public awareness of solid waste issues by continuing and expanding educational opportunities within the County to promote waste reduction and recycling options.

8. Manage waste in a manner that promotes Washington State's waste management priorities.

9. Encourage coordination and communication among all jurisdictions and governmental entities to carry out components of this solid waste plan.

10. Provide an on-going mechanism for evaluation and feedback of the County's solid waste management system, including proper documentation of activities.

11. Maintain sufficient funding mechanisms to support selected program options.

12. Evaluate strategies for managing specific waste streams.

1.3 PLANS RELATED TO THE SOLID WASTE MANAGEMENT PLAN

1.3.1 MODERATE RISK WASTE MANAGEMENT PLAN

The Washington State Hazardous Waste Management Act requires local governments to prepare a plan to manage moderate risk wastes in their jurisdiction. Moderate risk wastes are hazardous wastes produced by households and by businesses and institutions in small quantities. Kittitas County implemented its Moderate Risk Waste Management Plan (MRWMP) in January 1992. The local governments who participated in the MRWMP included Kittitas County, the cities of Kittitas, Ellensburg, Cle Elum, South Cle Elum, and Roslyn. The unincorporated areas of the County and agricultural community also participated. The plan promotes the proper usage, safe storage, and correct disposal of household chemicals to protect the health of land and water resources. Products labeled with words like danger, flammable, warning, corrosive, poisonous, caution, explosive, reactive, combustible, and/or toxic are considered hazardous waste.

Goals of the MRWMP which relate to the solid waste system include:

- Improved opportunities for disposal of moderate risk wastes.
- Improved systems for moderate risk waste management.
- Encouraging cooperation and coordination in managing moderate risk wastes.
- Compliance with Washington State Hazardous Waste Management Act.

Since 1994, used motor oil has been included as part of the MRWMP.

In the prior update, Kittitas County included a section on Moderate Risk Waste. This 2010 update includes a chapter dedicated to Moderate Risk Waste and follows the guidelines outlined in Guidelines for Developing and Updating Local Hazardous Waste Plans (WDOE 10-07-006, February 2010).

1.3.2 COMPREHENSIVE LAND USE PLAN

The Growth Management Act, passed by the Washington Legislature in 1989, is designed to reduce or mitigate the negative effects of uncoordinated and unplanned population growth. The Act requires that cities and counties update their comprehensive land use plans consistent with state-wide goals and coordinate their planning efforts in order to prevent unstructured growth and development that depletes natural resources and that creates inefficient and costly provision of public services.

In July, 1996, the Kittitas County Board of Commissioners adopted the 1996 Kittitas County Comprehensive Plan (KCCP), through Ordinance 96-10. This also included the adopted Level of Service (LOS) for County services, including solid waste. The most recent version was adopted in December 2009 and includes:

- A Land Use Element which establishes official policy with regard to appropriate uses of land in the County and ensures that the County can accommodate the population growth projected to occur over the next 20 years.
- A Housing Element that addresses the need for affordable housing.
- A Transportation Element, which will be used as a guide in future street and road construction, programs to produce a safe and efficient arterial system. The Kittitas County Transportation Plan is maintained by the Kittitas County Department of Public Works.
- A Capital Facilities Element which is maintained by the Kittitas County Auditor's Office.
- A Utilities Element that describes planned utility expansions.
- A Rural Element that ensures the protection of rural lands and provides for a variety of rural densities.
- An Economic Development Element that addresses economic growth for the County.
- A Recreation and Parks Element that describes and inventories park and recreation opportunities in the County.

In addition, specific plans for the Snoqualmie Pass and Mountainstar planned resort Sub Areas were included.

1.3.3 WATER QUALITY PLANS

Through the "Critical Areas Review" process and the "Shorelines Master Program", the Kittitas County Planning Department governs development activities, construction, and land use activities near lakes, rivers, streams, wetlands, and other water bodies, within the County. This review, and the permit process, is in keeping with the requirements of Chapter 90.58 RCW and the Code of Federal Regulations 44, Part 60. Any modifications to the current Solid Waste System that may take place near water bodies within the County should proceed in consultation with the County Planning Department, and in accordance with these policies.

1.3.4 CAPITAL FACILITIES PLANS

The capital facilities plan is included in the County's most recent Comprehensive Plan.

1.3.5 EMERGENCY MANAGEMENT PLAN

The Kittitas County Comprehensive Emergency Management Plan (revised 2003) is for the use of officials in providing emergency management preceding, during, and following disasters. It gives the policies, information, recommendations and guidance necessary for the officials making operational decisions.

As of the date of this Plan, a disaster debris management plan is under development.

1.3.6 SHORELINE MANAGEMENT PLAN

Shoreline management is included in the County's most recent Comprehensive Plan.

1.3.7 WATERSHED PLAN

Elements of watershed management are included in the County's most recent Comprehensive Plan. Kittitas County is in the Upper Yakima River Basin Watershed (WRIA 37/38/39) and oversight lies with the Yakima Basin Water Resources Agency. However, the County chose to end their association with the watershed management planning process that prepared a standalone Watershed Management Plan in January 2003.

1.3.8 FLOODPLAIN MANAGEMENT PLAN

Floodplain management is included in the County's most recent Comprehensive Plan.

1.4 DESCRIPTION OF THE PLANNING AREA

1.4.1 GENERAL DESCRIPTION

Situated near the geographic center of Washington State, Kittitas County encompasses a wide range of environments in its 2,333-square-miles. It extends from the crest of the Cascade Mountains in the West, to the Columbia River in the East. Chelan County borders Kittitas County to the North and Yakima County lies across the southern border. The major highways

within the County are Interstate 90, which crosses from Snoqualmie Pass to Vantage; Interstate 82, which connects Interstate 90 at Ellensburg with the City of Yakima and the Tri-Cities area to the south; and U.S. 97, which runs north through Ellensburg, into Chelan, Douglas, and Okanogan Counties.

An understanding of the environmental, land use and demographic features of Kittitas County assists in providing baseline information regarding existing and potential future solid waste handling needs. This chapter provides information on the County including geology, climate, land use, industry and employment, and population.

1.4.2 GEOLOGY

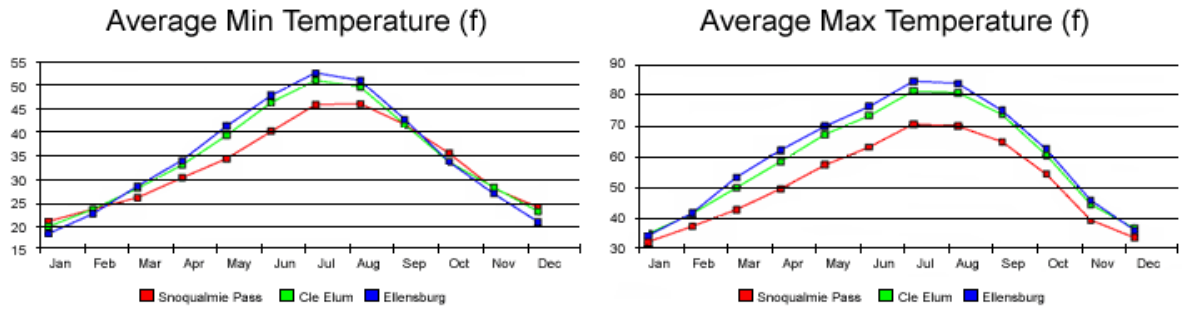
The geology of Kittitas County typically is complex, consisting of a variety of rocks and sediments. Volcanic and old marine sedimentary rocks occur mostly in western portions of the County. The eastern half is chiefly composed of younger sedimentary units and basalt flows. Valleys have deep glacial and alluvial deposits, with some areas of wind deposited soils. Depth to ground water is widely variable, reflecting the complexity of the geologic formations in Kittitas County.

1.4.3 CLIMATE

Kittitas County, like the rest of Washington State, has a wet winter season and a dry summer season. Approximately one-half of the total precipitation measured within the County falls between November and January. In the lowlands of the County, less than 1 inch of rain generally falls between May and September. Temperatures are cool in the winter and warm in the summer, with wide ranges in daily temperatures as well as summer heat waves and winter cold spells. Continental air masses cause Countywide cold spells with below zero temperatures almost every year. The generally dry air results in clear skies during much of the year.

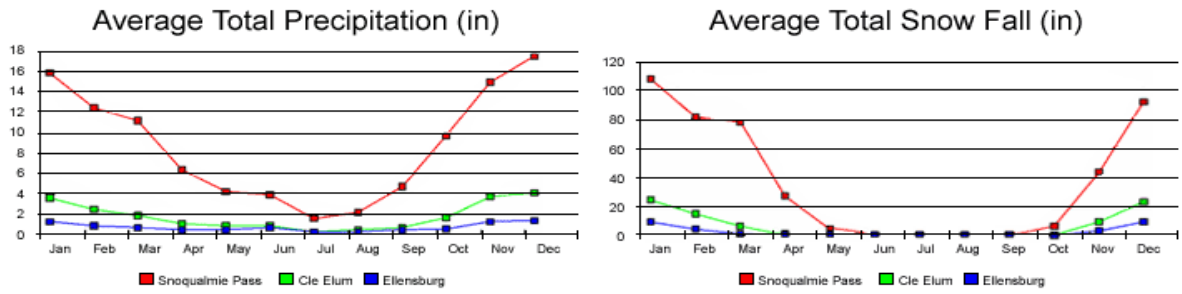
Temperatures and precipitation, in the form of rain and snow, vary widely from one part of the County to another. In spring or after early fall snows, depending on weather conditions, snow melt at higher elevations can result in flooding in stream valleys at lower elevations.

Figure 1. Average Minimum and Maximum Temperatures[2]



[2] 2001 Kittitas County Road Atlas, pg. i.

Figure 2. Average Annual Precipitation and Snowfall, in inches[3]



1.4.4 LAND USE

Kittitas County is largely rural[4] in nature, with sparse population over the majority of its area. Urban development is located primarily in Ellensburg, and to a lesser degree in the towns of Cle Elum, Roslyn, South Cle Elum, and Kittitas. In Ellensburg, commercial development is found in the central business district and near I-90 along Canyon Road. Central Washington University, which has an enrollment of about 8,000 students, is located in Ellensburg on a 350 acre campus. Industrial activities tend to be located along the Burlington Northern Railroad, I-90, and in the airport industrial park. A military reservation used for training purposes covers a 155 square mile area in the southeast corner.

Under current zoning, densities range from one unit per 6,000 square feet to one unit per 80 acres. Specifically, the Suburban zone allows a density of one unit per acre, while the Rural-3, Agricultural-3, Rural- 5, Agricultural- 5, Agricultural-20, and Forest and Range Zones allow for a density range of one unit per 6,000 square feet to 20 acres. The lowest density in the county is in the Commercial Forest Zone where the assigned density is one unit per 80 acres[5]. Table 1 details the County's zoning as of 2006, by major category.

Forests cover approximately 65% of the County, primarily at the higher elevations of the County in the west and north. Agricultural and urban development tends to be located in the lower elevations along river valleys and accounts for more than 30% of the County's land use. An exception to this pattern is recreational development near Snoqualmie Pass. Recreational, retirement, and second or summer homes have developed near Cle Elum and Roslyn. This type of development is rapidly increasing in that part of the County.

A County land use map is provided in Figure 3.

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[3] ibid.

[4] Rural is defined by the Washington Office of Financial Management as less than 100 persons per square mile.

[5] Source: Kittitas County Comprehensive Plan, December 2009, p.2-2.

Figure 3. Kittitas County Land Use - 2009

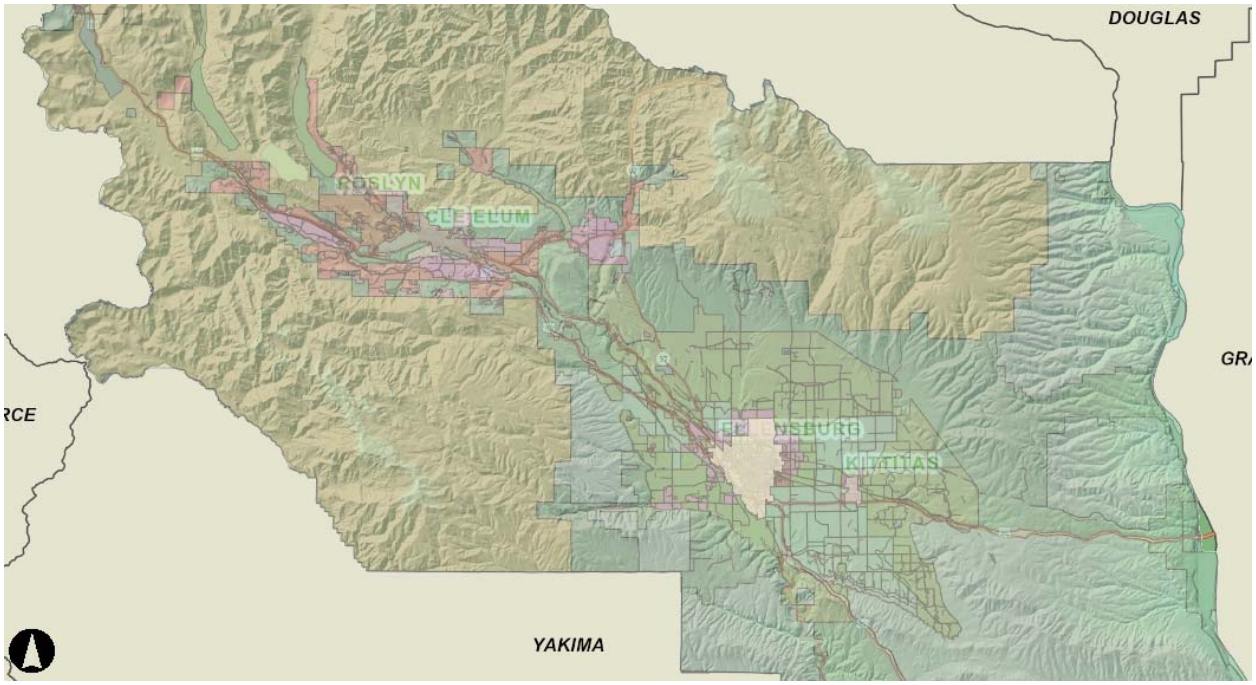


Table 1. Land Use in Kittitas County[6]

Zone	Acres	% of Total Land Use
Agriculture	487,376.6	32.8%
Commercial	550.6	0.0%
Forest lands	960,256.9	64.6%
Historic District	17.0	0.0%
Industrial	1,181.1	0.1%
Master Planned Resort	6,257.4	0.4%
Planned Unit Development	1,016.0	0.1%
Public Lands	0.0	0.0%
Residential	908.5	0.1%
Rural	25,102.9	1.7%
Suburban	3,482.3	0.2%
Total	**1,486,149.3**	**100.0%**

* Data as of October 2, 2006.

[6] ibid, p.2-2.

1.4.5 INDUSTRY AND EMPLOYMENT

Construction is the primary industry in the County, followed by the retail trade. Information on major industry sectors in the County is provided in Table 2. Major employers in the County include Central Washington University, Ellensburg School District, Kittitas County government, the Kittitas Valley Community Hospital, Shoemaker Manufacturing, and Twin City Foods, Inc.

Table 2. Number of Establishments and Employees

NAICS Sector	Number of Establishments	Employees
Agriculture, Forestry, Fishing and Hunting	123	739
Mining	*	*
Utilities	*	*
Construction	253	1,225
Manufacturing	39	665
Wholesale Trade	43	517
Retail Trade	144	1,665
Transportation and Warehousing	46	224
Information	16	255
Finance and Insurance	31	222
Real Estate and Rental and Leasing	50	155
Services	52	224
Federal Government	9	160
State Government	20	1,947
Local Government	32	2,001
Not Elsewhere Classified	9	81

* Not shown to avoid disclosure of data for individual employer

1.4.6 POPULATION

Population Estimates

The State of Washington Office of Financial Management (OFM) prepares annual population estimates. Table 3 summarizes the OFM population estimates from 2000 to 2009, and shows an overall growth rate of 20% since 2000. In 2009, the County population is estimated to be 39,900, with 45% of the population residing in the unincorporated areas.

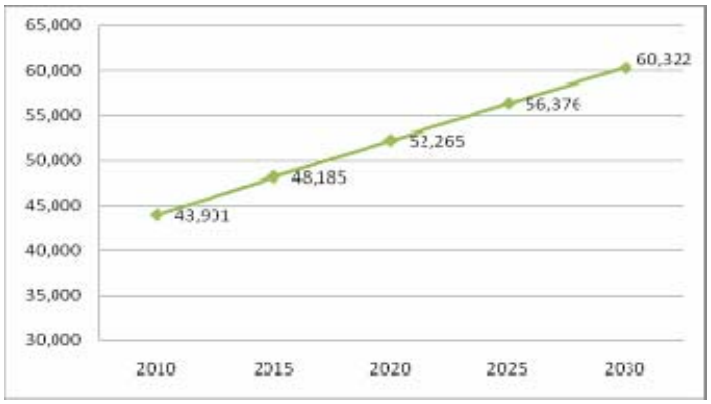
Table 3. County and City OFM Population Estimates: 2000-2009[7]

Area	2000	2009 Estimate	Estimated Growth Rate
County Total	33,362	39,900	19.6%
Unincorporated	13,614	18,060	32.7%
Incorporated	19,748	21,840	10.6%
Cle Elum	1,755	1,870	6.6%
Ellensburg	15,414	17,230	11.8%
Kittitas	1,105	1,150	4.1%
Roslyn	1,017	1,015	-0.2%
South Cle Elum	457	575	25.8%

Projected Growth

In addition to preparing population estimates, OFM develops projections of future population growth in accordance with the Washington State Growth Management Act. Three series are prepared, but for planning purposes, "high" series projections have been used. This series estimates that the County's population will reach 60,322 by the year 2030. These projections are used to estimate solid waste generation in the County during the planning period, which serves as a basis by which the policies, programs, and facilities that will be needed to ensure the safe handling of solid waste are determined. Figure 4 shows population estimates in 5-year increments.

Figure 4. Population Projections, High Series[8], 2010-2030



[7] State of Washington Office of Financial Management, April 1 Intercensal Population Estimates for the state, counties, and cities and towns for 1968 to 2000 and Postcensal Population Estimates for 2000 through 2009, State of Washington.

[8] State of Washington Office of Financial Management, Washington State County Growth Management Population Projections, High Series, October 2007.

Chapter 2

Waste Generation and Characterization

2 WASTE GENERATION AND CHARACTERIZATION

An accurate analysis of the types and quantities of waste generated provides the necessary data for identifying existing and future solid waste system needs, and the policies, facilities, and programs to be implemented to meet those needs. This chapter analyzes Kittitas County's waste generation trends, and uses historical and projected population data to produce a waste generation forecast.

For the purposes of this analysis, waste generation is defined as the sum of tons of solid waste disposed and diverted in Kittitas County. As used in this Plan, disposed solid waste is considered to be all solid waste placed in landfills or incinerated. Diverted waste includes waste that is recycled, composted, or otherwise diverted from disposal. The largest component of the waste stream is mixed municipal solid waste (MSW) and consists of waste typically generated by residences, offices, and other businesses and institutions. Other wastes include moderate risk waste and miscellaneous wastes, such as biomedical wastes, tires and automobiles, electronic wastes, and other types of wastes. Each category of miscellaneous waste has its own characteristics and handling needs. Miscellaneous waste and hazardous wastes produced by households, and by businesses in small quantities, are addressed separately in this Plan.

This chapter is organized as follows:

- **MSW and C&D Disposal** includes historical disposal and waste composition profiles for municipal solid waste (MSW) and construction and demolition (C&D) waste.
- **Recycling and Diversion** includes the quantities of materials recycled and diverted, recycling capture rates, and recycling and diversion rates.
- **Waste Stream Projections** presents projected future waste stream quantities based on historic data.
- **Level-of-Service Requirements** describes the County's commitment to a minimum level of service for solid waste management and the projected requirement for 2030.

2.1 WASTE DISPOSAL

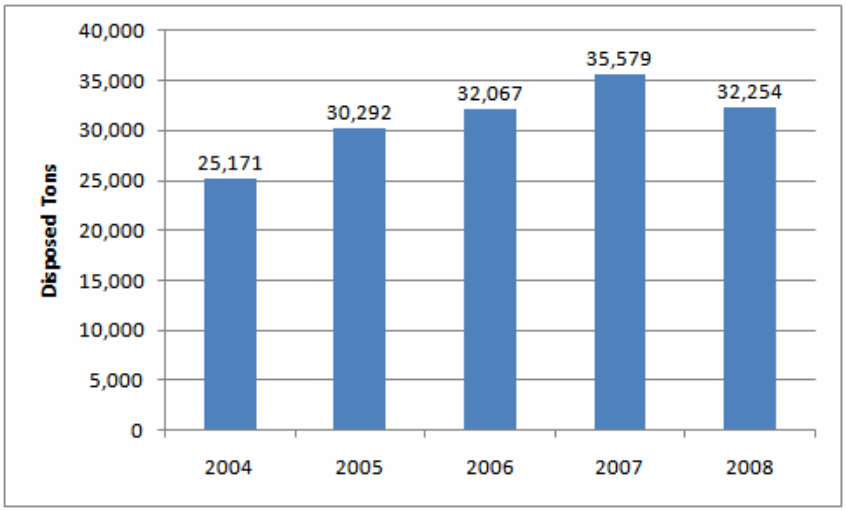
MSW that is collected from or self-hauled by residents, businesses, and institutions, is taken to one of two transfer stations located within the County, the Ellensburg or Upper County Transfer Stations. All MSW generated in the County is transferred from these facilities to the Greater Wenatchee Regional Landfill in Douglas County. Details regarding the County's MSW collection and disposal infrastructure are included in Chapters 4 and 5 of this Plan.

2.1.1 HISTORIC DISPOSAL

Figure 5 presents quantities of MSW disposed since 2004. Disposal climbed steadily between 2004, when approximately 25,000 tons were disposed, and 2007 when disposal reached a high of nearly 36,000 tons. In 2008, disposal decreased to about 32,000 tons, similar to the level of

disposal in 2006. This decrease in disposal may be attributed to increased waste reduction and recycling efforts in the County, as well as impacts from the decline in economic activity that has impacted waste generation throughout the country.

Figure 5. MSW Disposal Quantities, 2004-2008



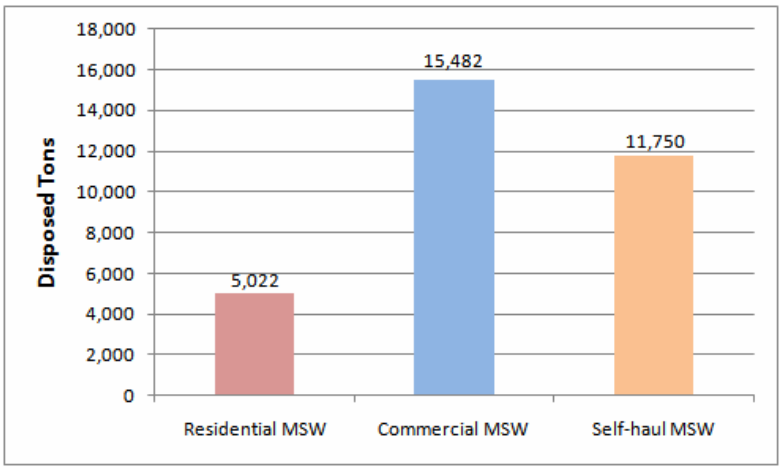
2.1.2 COMPOSITION OF DISPOSED WASTE STREAM

In order to assist the County in identifying where to focus their efforts for recycling and diversion programs, it is important to learn what materials are currently being disposed by different segments of the general population. This is done by creating a waste composition profile that is broken out by generator types. The figures and tables in this section summarize the estimated composition of waste disposed in Kittitas County in 2008, for the entire County, as well as by three distinct substreams, as defined below.

- **Residential.** Waste generated by single- and multi-family residences and collected by a municipal or private garbage hauler.
- **Commercial.** Waste generated by businesses, institutions, and industrial entities and collected by a municipal or private garbage hauler.
- **Self-Haul.** Waste transported to a disposal site by someone other than a municipal or private garbage hauler.

Figure 6 details the contribution to disposal from each of the substreams in 2008.

Figure 6. MSW Disposal by Substream, 2008



Each of the substreams was then analyzed separately to determine the relative types and quantities of materials disposed by each substream. The composition profiles for the County's waste stream were calculated as follows:

- **Residential** and **self-haul** substreams were derived using data from Yakima and Grant Counties from the 2009-2010 Washington State Department of Ecology (Ecology) Statewide Waste Characterization Study.

- **Commercial** waste composition was modeled on data reflecting numbers of employees by industry group as obtained from a business list service, as well as on composition data from over 900 samples of disposed waste from specific business types in studies previously conducted by Cascadia Consulting Group.

The following sections present a pie chart for each substream that provides an overview of waste composition, based on recycling and composting potential. The six broad material categories in each pie chart are as follows:

- **Recyclable Paper.** Paper materials that could be recycled in Washington State.

- **Other Curbside Recyclables.** Other recyclable materials, such as glass, plastic, and metals that have recycling markets in Kittitas County or in Washington State.

- **Clean Wood.** Untreated wood waste, such as dimensional lumber, that could be recycled or composted.

- **Recyclable C&D.** Non-wood, recyclable C&D materials, such as concrete, asphalt, and gypsum.

- **Compostable Materials.** Materials that could be processed at a commercial composting facility located within the state that is permitted for yard trimmings and/or pre- and post-consumer food waste.

- **Mixed Waste.** Materials that currently cannot be feasibly recycled or composted at facilities within the state due to a number of factors (market conditions, recyclability of material, etc).

Table 4 lists the materials in each of the recycling and composting categories described above.

Table 4. MSW Materials by Recoverability Category

Recoverability Category	Individual Materials
Recyclable Paper	Newspaper, cardboard, mixed waste paper
Other Recyclables	Glass bottles, aluminum cans, tin cans, other metals, plastic containers, film plastic
Clean Wood	Dimensional wood, engineered wood, pallets and crates
Recyclable C&D	Asphalt paving, concrete, gypsum board, rock/soil/fines
Compostable Materials	Compostable/soiled paper, food, leaves and grass, prunings and trimmings
Mixed Waste	All other materials

2.1.3 WASTE COMPOSITION, OVERALL COUNTY

Figure 7 provides an overview of MSW disposed in Kittitas County in 2008, including residential, commercial, and self-haul wastes. Compostable materials, such as food waste and compostable paper, make up almost one third of Kittitas County's disposed waste. When combined, the recyclable materials, such as mixed paper, ferrous metals, wood waste, and cardboard, comprise about 35% of the County's disposed waste stream.

Figure 7. Overview of Kittitas County Overall Waste Composition

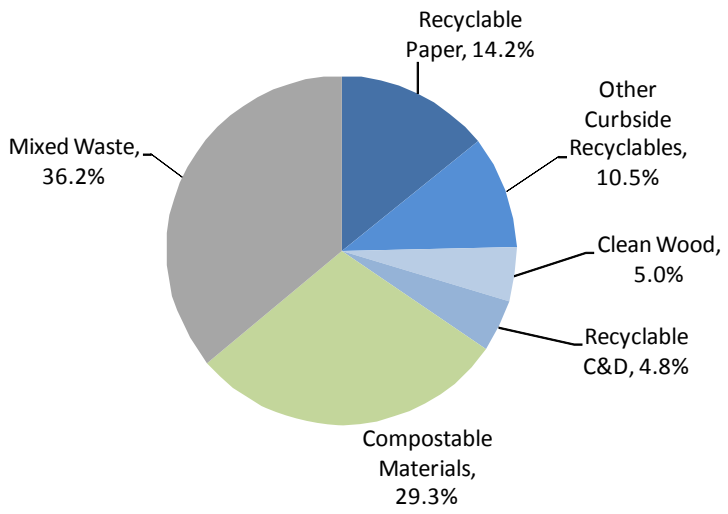


Table 5 provides details of MSW disposed in Kittitas County from all substreams in 2008.

Table 5. Detailed Composition Results: Overall Waste Composition, 2008

	Est. Pct.	Est. Tons
Paper	**21.3%**	**6,880**
Uncoated Corrugated Cardboard	4.64%	1,497
Paper Bags	1.04%	336
Newspaper	2.22%	716
Office Paper	2.83%	912
Other Miscellaneous Paper	3.49%	1,127
Compostable/Soiled Paper	5.09%	1,642
Remainder/Composite Paper	2.02%	651
Glass	**3.4%**	**1,083**
Clear Glass Bottles & Containers	1.25%	402
Green Glass Bottles & Containers	0.48%	154
Brown Glass Bottles & Containers	0.57%	182
Flat Glass	0.08%	27
Remainder/Composite Glass	0.98%	317
Metal	**6.4%**	**2,063**
Tin/Steel Cans	0.68%	218
Major Appliances	0.01%	3
Other Ferrous Metal	1.87%	603
Aluminum Cans	0.29%	92
Other Non-Ferrous Metal	0.53%	171
Remainder/Composite Metal	3.02%	976
Plastic	**8.7%**	**2,814**
HDPE Containers	0.24%	77
PETE Containers	0.90%	290
Miscellaneous Plastic Containers	0.71%	228
Film Plastic	2.95%	952
Durable Plastic Items	2.23%	719
Remainder/Composite Plastic	1.70%	548
Organic	**32.6%**	**10,530**
Food	17.09%	5,511
Leaves & Grass	5.28%	1,703
Prunings & Trimmings	1.81%	585
Branches & Stumps	0.00%	0
Agricultural Crop Residues	0.00%	0
Manures	0.69%	222
Textiles	4.15%	1,338
Remainder/Composite Organic	3.6%	1,170
Construction & Demolition	**23.0%**	**7,418**
Concrete	0.55%	179
Asphalt Paving	1.61%	520
Asphalt Roofing	3.87%	1,248
Clean Wood Waste	5.05%	1,627
Other Wood Waste	3.94%	1,272
Gypsum Board	1.96%	631
Rock, Soil & Fines	0.71%	229
Remainder/Composite Construction & Demolition	5.31%	1,712
Household Hazardous Waste	**0.7%**	**233**
Paint	0.01%	2
Vehicle & Equipment Fluids	0.00%	0
Used Oil	0.01%	2
Batteries	0.02%	6
Remainder/Composite Household Hazardous	0.69%	223
Special Waste	**2.5%**	**809**
Ash	0.02%	6
Sewage Solids	0.00%	0
Industrial Sludge	0.01%	3
Treated Medical Waste	0.20%	66
Bulky Items	1.82%	586
Tires	0.31%	101
Remainder/Composite Special Waste	0.14%	46
Mixed Residue	1.31%	424
Totals	**100%**	**32,254**

2.1.4 WASTE COMPOSITION, RESIDENTIAL SUBSTREAM

An overview of the composition of Kittitas County's residential waste stream is shown in Figure 8. Recyclable materials, together, make up about 30% of residential waste, while compostable materials account for almost 40% of this waste, by weight.

Figure 8. Overview of Residential Waste Composition

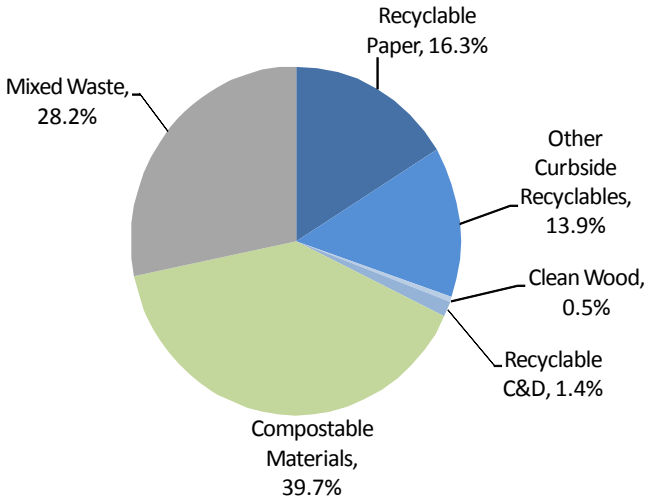


Table 7 provides details of MSW disposed in Kittitas County from the residential substream in 2008.

Table 6. Detailed Composition Results: Residential Waste Composition, 2008

	Est. Pct.	Est. Tons
Paper	**22.5%**	**1,132**
Uncoated Corrugated Cardboard	4.38%	220
Paper Bags	3.54%	178
Newspaper	2.62%	132
Office Paper	1.58%	79
Other Miscellaneous Paper	4.19%	211
Compostable/Soiled Paper	4.94%	248
Remainder/Composite Paper	1.28%	64
Glass	**3.1%**	**154**
Clear Glass Bottles & Containers	1.48%	74
Green Glass Bottles & Containers	0.34%	17
Brown Glass Bottles & Containers	0.76%	38
Flat Glass	0.00%	0
Remainder/Composite Glass	0.49%	25
Metal	**6.6%**	**332**
Tin/Steel Cans	1.36%	68
Major Appliances	0.00%	0
Other Ferrous Metal	1.46%	73
Aluminum Cans	0.74%	37
Other Non-Ferrous Metal	0.33%	16
Remainder/Composite Metal	2.73%	137
Plastic	**10.6%**	**533**
HDPE Containers	1.31%	66
PETE Containers	1.65%	83
Miscellaneous Plastic Containers	1.74%	88
Film Plastic	2.75%	138
Durable Plastic Items	1.59%	80
Remainder/Composite Plastic	1.56%	78
Organic	**45.1%**	**2,264**
Food	19.26%	967
Leaves & Grass	14.92%	749
Prunings & Trimmings	0.55%	27
Agricultural Crop Residues	0.00%	0
Manures	2.86%	144
Textiles	6.03%	303
Remainder/Composite Organic	1.47%	74

	Est. Pct.	Est. Tons
Construction & Demolition	**6.9%**	**348**
Concrete	0.00%	0
Asphalt Paving	0.00%	0
Asphalt Roofing	0.39%	19
Clean Wood Waste	0.47%	24
Other Wood Waste	1.46%	73
Gypsum Board	0.18%	9
Rock, Soil & Fines	1.24%	62
Remainder/Composite Construction & Demolition	3.20%	161
Household Hazardous Waste	**3.1%**	**155**
Paint	0.05%	2
Vehicle & Equipment Fluids	0.00%	0
Used Oil	0.00%	0
Batteries	0.02%	1
Remainder/Composite Household Hazardous	3.02%	152
Special Waste	**1.9%**	**96**
Ash	0.04%	2
Sewage Solids	0.00%	0
Industrial Sludge	0.00%	0
Treated Medical Waste	1.28%	64
Bulky Items	0.31%	16
Tires	0.27%	14
Remainder/Composite Special Waste	0.00%	0
Mixed Residue	0.17%	8
Totals	**100.0%**	**5,022**

2.1.5 WASTE COMPOSITION, COMMERCIAL SUBSTREAM

An overview of waste composition for Kittitas County's commercial substream is presented below (Figure 9). Approximately 80% of this waste is estimated to be recoverable. Recyclable and compostable portions each make up about 40% of the total, by weight.

Figure 9. Overview of Commercial Waste Composition

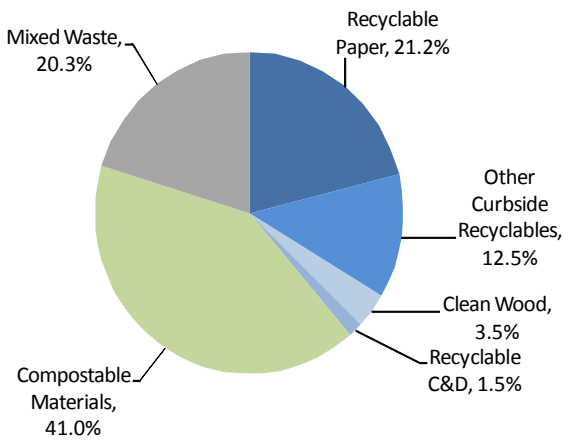


Table 7 provides details of MSW disposed in Kittitas County from the commercial substream in 2008.

Table 7. Detailed Composition Results: Commercial Waste Composition, 2008

	Est. Pct.	Est. Tons
Paper	**33.4%**	**5,167**
Uncoated Corrugated Cardboard	6.02%	932
Paper Bags	0.63%	97
Newspaper	3.70%	573
Office Paper	5.19%	804
Other Miscellaneous Paper	5.63%	871
Compostable/Soiled Paper	8.69%	1,345
Remainder/Composite Paper	3.52%	546
Glass	**3.3%**	**508**
Clear Glass Bottles & Containers	1.39%	215
Green Glass Bottles & Containers	0.87%	135
Brown Glass Bottles & Containers	0.46%	72
Flat Glass	0.17%	26
Remainder/Composite Glass	0.39%	61
Metal	**5.1%**	**789**
Tin/Steel Cans	0.88%	136
Major Appliances	0.02%	3
Other Ferrous Metal	1.68%	259
Aluminum Cans	0.18%	28
Other Non-Ferrous Metal	0.24%	37
Remainder/Composite Metal	2.10%	326
Plastic	**10.0%**	**1,542**
HDPE Containers	0.00%	0
PETE Containers	1.22%	189
Miscellaneous Plastic Containers	0.58%	90
Film Plastic	4.96%	768
Durable Plastic Items	1.37%	212
Remainder/Composite Plastic	1.83%	283
Organic	**38.6%**	**5,975**
Food	28.47%	4,408
Leaves & Grass	3.30%	510
Prunings & Trimmings	0.59%	91
Agricultural Crop Residues	0.00%	0
Manures	0.00%	0
Textiles	3.17%	491
Remainder/Composite Organic	3.07%	475
Construction & Demolition	**7.8%**	**1,206**
Concrete	0.48%	75
Asphalt Paving	0.25%	38
Asphalt Roofing	0.09%	14
Clean Wood Waste	3.49%	541
Other Wood Waste	1.24%	192
Gypsum Board	0.38%	60
Rock, Soil & Fines	0.41%	63
Remainder/Composite Construction & Demolition	1.45%	224
Household Hazardous Waste	**0.3%**	**50**
Paint	0.00%	0
Vehicle & Equipment Fluids	0.00%	0
Used Oil	0.01%	2
Batteries	0.03%	5
Remainder/Composite Household Hazardous	0.28%	43
Special Waste	**1.2%**	**184**
Ash	0.02%	4
Sewage Solids	0.00%	0
Industrial Sludge	0.02%	3
Treated Medical Waste	0.01%	2
Bulky Items	0.48%	75
Tires	0.35%	54
Remainder/Composite Special Waste	0.30%	46
Mixed Residue	0.39%	61
Totals	**100.0%**	**15,482**

2.1.6 WASTE COMPOSITION, SELF-HAUL SUBSTREAM

Figure 10 presents an overview of the self-haul substream according to the six broad material categories. Only about 40% of self-haul waste is estimated to be recoverable: recyclable materials make up approximately 30%, and compostable materials account for the remaining 10% of the total, by weight.

Figure 10. Overview of Self-Haul Waste Composition

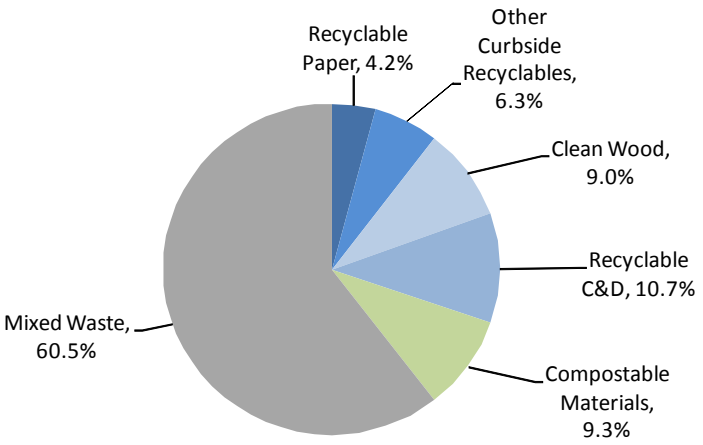


Table 8 provides details of MSW disposed in Kittitas County from the self-haul substream in 2008.

Table 8. Detailed Composition Results: Self-Haul Waste Composition, 2008

	Est. Pct.	Est. Tons
Paper	**5.0%**	**582**
Uncoated Corrugated Cardboard	2.93%	345
Paper Bags	0.52%	61
Newspaper	0.10%	12
Office Paper	0.24%	28
Other Miscellaneous Paper	0.39%	46
Compostable/Soiled Paper	0.42%	49
Remainder/Composite Paper	0.35%	41
Glass	**3.6%**	**421**
Clear Glass Bottles & Containers	0.96%	113
Green Glass Bottles & Containers	0.02%	3
Brown Glass Bottles & Containers	0.62%	72
Flat Glass	0.00%	0
Remainder/Composite Glass	1.97%	232
Metal	**8.0%**	**942**
Tin/Steel Cans	0.12%	14
Major Appliances	0.00%	0
Other Ferrous Metal	2.30%	271
Aluminum Cans	0.23%	27
Other Non-Ferrous Metal	1.00%	118
Remainder/Composite Metal	4.36%	513
Plastic	**6.3%**	**739**
HDPE Containers	0.10%	12
PETE Containers	0.15%	17
Miscellaneous Plastic Containers	0.43%	50
Film Plastic	0.39%	46
Durable Plastic Items	3.63%	427
Remainder/Composite Plastic	1.59%	187
Organic	**19.5%**	**2,290**
Food	1.16%	136
Leaves & Grass	3.78%	444
Prunings & Trimmings	3.97%	467
Agricultural Crop Residues	0.00%	0
Manures	0.66%	78
Textiles	4.63%	544
Remainder/Composite Organic	5.29%	621
Construction & Demolition	**49.9%**	**5,863**
Concrete	0.89%	104
Asphalt Paving	4.10%	482
Asphalt Roofing	10.34%	1,215
Clean Wood Waste	9.05%	1,063
Other Wood Waste	8.57%	1,007
Gypsum Board	4.78%	562
Rock, Soil & Fines	0.88%	104
Remainder/Composite Construction & Demolition	11.29%	1,327
Household Hazardous Waste	**0.2%**	**29**
Paint	0.00%	0
Vehicle & Equipment Fluids	0.00%	0
Used Oil	0.00%	0
Batteries	0.01%	1
Remainder/Composite Household Hazardous	0.24%	28
Special Waste	**4.5%**	**530**
Ash	0.00%	0
Sewage Solids	0.00%	0
Industrial Sludge	0.00%	0
Treated Medical Waste	0.00%	0
Bulky Items	4.22%	496
Tires	0.29%	34
Remainder/Composite Special Waste	0.00%	0
Mixed Residue	3.02%	355
Totals	**100.0%**	**11,750**

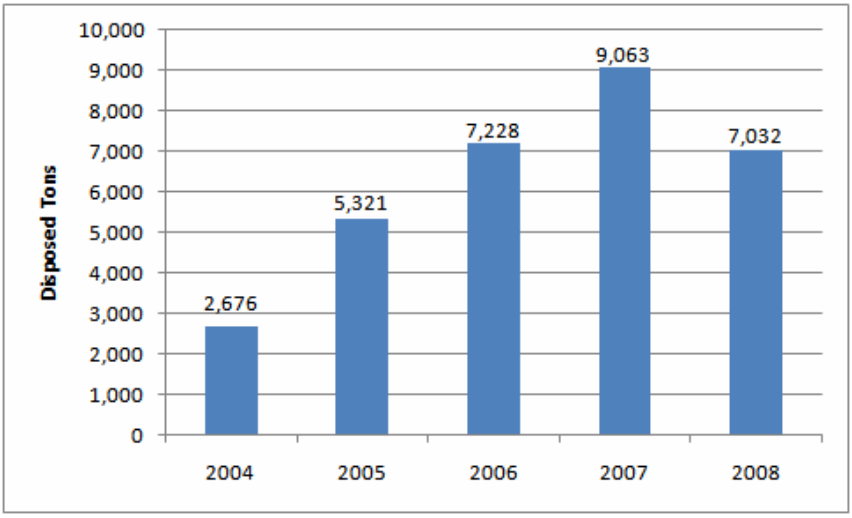
2.2 C&D WASTE

There are two disposal options for C&D waste generated in Kittitas County: 1) residents and businesses self-haul C&D waste to the two transfer stations for a reduced disposal fee; and 2) Waste Management, licensed contractors, and other businesses with customer accounts dispose of C&D waste at Ryegrass Limited Purpose Landfill.

2.2.1 HISTORIC DISPOSAL

As with MSW, C&D waste increased each year from 2004 to 2007, when the quantity disposed was more than three times the disposal in 2004. As would be expected, based on the reduced construction activity associated with the economic slow-down, the amount of C&D waste disposed declined in 2008.

Figure 11. C&D Disposal Quantities, 2004-2008[9]



2.2.2 WASTE STREAM COMPOSITION

Table 9 below presents an overview of waste composition for five material categories, based on recycling and composting potential. The five broad material categories are as follows:

- **Clean wood.** Untreated wood waste, including dimensional lumber, engineered wood, and pallets and crates, that could be recycled at facilities located within the state.
- **Other wood.** Wood that has been treated with paint or other chemicals so that it cannot be readily recycled.

[9] An investigation of C&D waste disposal estimates for this SWMP revealed that at least one estimate reported to Ecology was reported in volume rather than weight. For this reason, the estimates of C&D disposal reported in this section differ from Ecology's estimates.

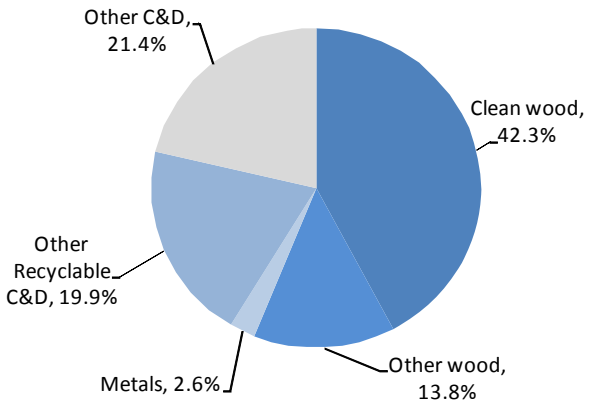
- **Metals.** Recyclable C&D metals, such as HVAC ducting.
- **Other recyclable C&D.** Other C&D materials that are currently recycled at facilities located within the County or state.
- **Other C&D waste.** C&D materials that currently cannot be feasibly recycled in the state due to a number of factors (market conditions, recyclability of material, etc).

Table 9. C&D Materials by Recoverability Category

Recoverability Category	Individual Materials
Clean Wood	Dimensional lumber, engineered wood, and pallets and crates
Other Wood	Treated wood and painted/stained wood
Metals	HVAC ducting and other metals
Other Recyclable C&D	Asphalt paving, asphalt roofing, rock/soil/fines
Other C&D Waste	All other materials

Figure 12 presents an overview of the composition of C&D waste in the County. Cascadia conducted a visual survey of C&D waste at the Ryegrass Limited Purpose Landfill in 2009. Concrete was excluded from the analysis, as it is placed in a separate cell for later recovery and use. The recoverable portions of the C&D waste stream were composed of clean wood (42.3%), metals (2.6%), and other recyclable C&D (19.9%).

Figure 12. Overview of C&D Waste Composition, 2008



2.2.3 DETAILED WASTE COMPOSITION RESULTS

A detailed composition table for C&D waste is presented below in Table 10.

Table 10. Detailed Composition Results: C&D Waste, 2008

	Est. Pct.	Est. Tons
Paper	**0.0%**	**0**
Uncoated Corrugated Cardboard	0.0%	0
Paper Bags	0.0%	0
Newspaper	0.0%	0
Office Paper	0.0%	0
Other Miscellaneous Paper	0.0%	0
Compostable/Soiled Paper	0.0%	0
Remainder/Composite Paper	0.0%	0
Glass	**8.0%**	**559**
Clear Glass Bottles & Containers	0.0%	0
Green Glass Bottles & Containers	0.0%	0
Brown Glass Bottles & Containers	0.0%	0
Flat Glass	8.0%	559
Remainder/Composite Glass	0.0%	0
Metal	**2.6%**	**180**
Tin/Steel Cans	0.0%	0
Major Appliances	0.0%	0
Other Ferrous Metal	2.6%	180
Aluminum Cans	0.0%	0
Other Non-Ferrous Metal	0.0%	0
Remainder/Composite Metal	0.0%	0
Plastic	**0.3%**	**19**
HDPE Containers	0.0%	0
PETE Containers	0.0%	0
Miscellaneous Plastic Containers	0.0%	0
Film Plastic	0.0%	0
Durable Plastic Items	0.3%	19
Remainder/Composite Plastic	0.0%	0
Organic	**0.0%**	**0**
Food	0.0%	0
Leaves & Grass	0.0%	0
Prunings & Trimmings	0.0%	0
Branches & Stumps	0.0%	0
Agricultural Crop Residues	0.0%	0
Manures	0.0%	0
Textiles	0.0%	0
Remainder/Composite Organic	0.0%	0
Construction & Demolition	**89.2%**	**6,274**
Concrete	0.0%	0
Asphalt Paving	0.0%	0
Asphalt Roofing	19.9%	1,402
Clean Wood Waste	42.3%	2,972
Other Wood Waste	13.8%	972
Gypsum Board	12.7%	896
Rock, Soil & Fines	0.0%	0
Remainder/Composite Construction & Demolition	0.5%	33
Household Hazardous Waste	**0.0%**	**0**
Paint	0.0%	0
Vehicle & Equipment Fluids	0.0%	0
Used Oil	0.0%	0
Batteries	0.0%	0
Remainder/Composite Household Hazardous	0.0%	0
Special Waste	**0.0%**	**0**
Ash	0.0%	0
Sewage Solids	0.0%	0
Industrial Sludge	0.0%	0
Treated Medical Waste	0.0%	0
Bulky Items	0.0%	0
Tires	0.0%	0
Remainder/Composite Special Waste	0.0%	0
Mixed Residue	0.0%	0
Totals	**100%**	**7,032**

2.3 RECYCLING AND DIVERSION

This section presents recycling and diversion data and rates for Kittitas County for 2008. Recycling and diversion are defined as follows.

- **Recycling** means "transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration. Recycling does not include collection, compacting, repackaging, and sorting for the purpose of transport."(WAC 173-350-100)[10]

- Ecology defines **diversion** as the recovery of "asphalt, concrete, and other construction, demolition, and landclearing debris" through uses "other than landfill disposal."[11]

[10] Solid Waste Handling Standards, Definitions, , http://apps.leg.wa.gov/WAC/default.aspx?cite=173-350-100

[11] Washington State Department of Ecology's Beyond Waste Solid Waste Recycling webpage: http://www.ecy.wa.gov/beyondwaste/sixteen_initiatives/solid_waste_recycling.html

2.3.1 RECYCLING QUANTITIES AND RATE

Recycled tonnages are based on responses to Ecology's Annual Washington State Recycling Survey and a survey conducted by Cascadia. The purpose of the additional survey was to contact recycling businesses to either verify that their quantities were included in Ecology totals or to document unreported recycling tonnages. Total recycling quantities resulting from these two surveys are listed in Table 11.

Table 11. 2008 Recycling Quantities

Recycling	Total Recycled (tons)
Aluminum Cans	30.2
Electronics	10.5
Container Glass	359.0
Corrugated Paper	3,198.6
Ferrous Metals	2,827.2
Fluorescent light bulbs	4.0
Food Waste	0.0
Used Cooking Oil	217.8
Rendering	121.5
Gypsum	0.0
HDPE Plastics	25.8
High Grade	144.2
Ink Cartridges	0.6
LDPE Plastics	9.8
MC-DB-Aseptic	0.4
Mixed Paper	508.1
Newspaper	963.5
Nonferrous Metals	1,241.9
Other Recyclable Plastics	65.4
Other rubber materials	0.0
PET Bottles	28.4
Photographic Films	1.1
Textiles (Rags, clothing, etc.)	52.5
Tin Cans	69.9
Tires - recycled	135.2
Used Oil	525.8
Vehicle Batteries	23.1
White Goods	0.0
Wood	0.0
Yard Debris	1,837.9
Total	**12,402.3**

The **recycling rate** is the amount of recycling, as a percentage, of the total waste generated and is calculated as follows.

$$\text{Recycling Rate (\%)} = \frac{\text{Recycling}}{\text{Waste Disposal + Recycling}} = \frac{\text{12,402 tons}}{\text{32,254 tons + 12,402 tons}} = \mathbf{27.8\%}$$

As shown above, the 2008 recycling rate for Kittitas County is approximately 28%.

A **capture rate** is defined as the proportion of a material (e.g., newspaper) generated that is diverted from disposal. The below equation illustrates how a capture rate is calculated.

$$\text{Capture Rate} = \frac{\text{Material Recycled}}{\text{Material Recycled + Material Disposed}}$$

Material-specific capture rates for commonly-recycled materials are listed in Table 12. The higher the rate, the more of that recyclable commodity is being recovered. Materials that generally have strong markets, such as cardboard and metals, tend to have higher capture rates without much government intervention, while aggressive diversion programs are typically needed for materials with weaker markets, such as glass. In Kittitas County, cardboard, newspaper, and other ferrous metals had fairly high capture rates in 2008. The other materials listed - mixed paper, aluminum and tin cans, container glass, PET and HDPE plastic bottles, and yard waste - have capture rates of less than 45%. In other words, for these materials with weaker markets, less than half of these materials are recovered from the waste stream.

Table 12. 2008 Capture Rates for Common Recyclables

Commodity	Recycled	Disposed	Capture Rate
Corrugated Paper	3,561	1,497	70%
Newspaper	1,191	716	62%
Mixed Paper	652	2,039	24%
Aluminum Cans	35	92	27%
Tin Cans	70	218	24%
Other Ferrous Metals	2,827	603	82%
Container Glass	491	739	40%
PET Bottles	36	290	11%
HDPE Plastics	32	77	29%
Yard waste	1,838	2,289	45%

2.3.2 DIVERSION QUANTITIES AND RATE

According to Ecology's statewide annual recycling survey, the materials listed in Table 13 were diverted from the waste stream in 2008. Over 3,200 tons of material was estimated to have been diverted in 2008.

Table 13. 2008 Diversion Quantities[12]

Material	Tons
Anti-freeze	24.5
Asphalt/Concrete	2,400.0
Composting Furnish	36.3
Household Batteries	4.5
Land clearing debris	200.0
Oil Filters	7.1
Paint	0.5
Tires - baled	195.2
Tires - burned for energy	226.0
Tires - reused	127.0
Total	**3,221.0**

Ecology calculates the diversion rate as shown in the below equation. The diversion rate for 2008 for Kittitas County is calculated to be approximately 28%.[13]

$$\text{Diversion Rate} = \frac{\text{Material Recycled} + \text{Material Diverted}}{\text{Material Recycled} + \text{Material Diverted} + \text{MSW disposed} + \text{C\&D disposed} + \text{Other waste disposed}^{14}}$$

$$\text{Diversion Rate} = \frac{12{,}402 + 3{,}221 \text{ tons}}{12{,}402 + 3{,}221 + 32{,}254 + 7{,}516 \text{ tons}} = \mathbf{28.2\%}$$

2.4 WASTE STREAM PROJECTIONS

The methodology used to estimate solid waste generation rates for the planning period consisted of the following two steps. These steps were used to allow for fluctuations in yearly recycling, diversion, and disposal totals instead of relying on one year's worth of data to extrapolate into the planning period.

[12] As submitted to Ecology.

[13] According to Ecology, the diversion rate is 19.7%. For the SWMP, an investigation of C&D waste disposal estimates revealed that at least one estimate reported to Ecology was reported in volume rather than weight. For this reason, the diversion rate reported in this section differs from Ecology's estimate.

[14] In this instance, other waste is likely special waste, which is defined as "any state-only dangerous waste that is solid only (nonliquid, nonaqueous, nongaseous), that is: Corrosive waste (WAC 173-303-090 (6)(b)(ii)), toxic waste that has Category D toxicity (WAC 173-303-100(5)), PCB waste (WAC 173-303-9904 under State Sources), or persistent waste that is not EHW (WAC 173-303-100(6)). Any solid waste that is regulated by the United States EPA as hazardous waste cannot be a special waste."(WAC 173-303-040)

1. Projecting per-capita disposal by fitting a trend line to existing data. This involved calculating per-capita disposal for all years with reasonable data, fitting a line through the points, and developing an equation to project future disposal. The per-capita disposal rate, then, does not remain static over the planning period.

2. Projecting disposed tonnage totals as per-capita disposal multiplied by projected population, as originally shown in Figure 4. Waste generation was calculated using the estimated 2008 disposal total and an average recycling rate, based on the previous four years of 21.7%. Changes to the County's diversion rate over time are assumed not to change the County's generation rate, as tons would shift from disposal to recycling and does not include source reduction or waste minimization efforts that are difficult to quantify.

Table 14 below reflects the total projected waste generation over the planning period.

Table 14. Kittitas County Solid Waste Projections

Year	Population	Projected Waste Generation (tons)
2010	43,901	49,913
2015	48,185	58,940
2020	52,265	68,438
2025	56,376	78,684
2030	60,322	89,394

2.4.1 LEVEL OF SERVICE

The minimum Level of Service (LOS) for County services, including solid waste, is included in Ordinance 1999-01 (**Appendix C**).

In order to maintain the current level of service, the County will need to increase solid waste services to meet future waste stream projections. The population projections for Kittitas County predict a growth of approximately 16,000 people between 2010 and 2030. In order to maintain the adopted Level of Service, Kittitas County would need to provide waste management programs for an additional 23,500 tons generated annually by 2030.[15]

[15] Population projections were obtained from the State of Washington's Office of Financial Management at http://www.ofm.wa.gov/pop/gma/projections07.asp. The medium growth rate estimates were used for this analysis.

Chapter 3

Waste Reduction, Recycling, and Composting

3 WASTE REDUCTION, RECYCLING, AND COMPOSTING

3.1 INTRODUCTION

Beginning in 1989 with the adoption of Chapter 70.95 RCW (the Waste Not Washington Act), County governments in Washington have been required to include waste reduction and recycling (WR&R) elements in their Solid Waste Management Plans (SWMP). The Waste Not Washington Act set a goal of 50% recycling. This act also set priorities for the collection, handling, and management of solid waste, which are as follows:

1. Waste reduction.

2. Recycling, with source separation of recyclable materials as the preferred method.

3. Energy recovery, incineration, or landfilling of separated waste.

4. Energy recovery, incineration, or landfilling of mixed waste.

In addition to helping Kittitas County meet the State's recycling goal, waste reduction and recycling provides the following short and long-term benefits locally:

- Reduces the need for additional garbage processing facilities, thereby protecting local water, soil, and air quality, as well as preserving agricultural lands and forest resources within the County.

- Lowers the volume and thus the cost of waste collection and long-haul/landfill operations providing economic benefits to the public and the County.

- Provides recycling industry employment opportunities in the community.

The goal of this chapter is to identify specific opportunities to achieve the objectives defined in Chapter 1 of this Plan, which will help the County meet the requirements of the Waste Not Washington Act. This chapter outlines Existing Conditions for waste reduction, recycling, and composting programs; the need for additional programs; and recommendations for future options. The chapter is organized into three sections, as follows:

- Waste Reduction.
- Recycling.
- Composting and Yard Waste.

3.2 WASTE REDUCTION

3.2.1 BACKGROUND

Waste reduction is the State's top priority for managing solid waste. Ecology defines it as reducing the amount or toxicity of waste generated or reusing materials. It involves reuse of

materials, repair and restoration of broken items, elimination of excess packaging, use of durable products instead of disposable items, on-site waste management (e.g., composting), and other efficient uses of resources.

Waste reduction can be the most effective, economical, and environmentally sound way to manage waste. Kittitas County is distant from most recyclables markets which, in conjunction with current low market prices for many commodities, reduces or eliminates the potential for revenues from the sale of recyclables. Waste reduction also avoids the need to develop and finance systems to collect, process, market, manufacture, and/or dispose of recyclables and garbage. Because waste reduction is such an efficient and economical tool, the County would benefit from implementing broad-based waste reduction programs and encouraging city governments to plan complementary programs.

There are four basic methods for waste reduction:

1. Reduce consumption by using product alternatives that generate less waste.

2. Reuse products for their original or compatible purposes.

3. Increase the durability or lifetime of products.

4. Decrease the amount of material used to produce each product or reduce product packaging.

When developing a waste reduction program, the County should be aware that waste reduction is generally not as well documented or understood as recycling and requires extensive education. Additionally, some waste reduction tactics, especially those involving product and packaging waste, are controlled by economic, political, and educational forces beyond the County's control. Several outreach programs targeted at waste reduction have already been implemented in Kittitas County.

3.2.2 EXISTING CONDITIONS

Waste reduction is supported in Kittitas County through various programs and offerings. Many promotional materials and outreach programs exist to spread awareness of waste reduction and recycling. This section includes a listing of material reuse programs and current education and outreach efforts.

Material Reuse Programs

Material donation and reuse opportunities currently available include:

- Numerous private and non-profit businesses operate secondhand material outlets throughout the County.

- Websites such as www.craigslist.org and www.oodle.com provide an internet-based forum to buy, sell, and exchange secondhand products locally.

- Kittitas County, Central Washington University (CWU), and cities sponsor public surplus sales of materials and equipment no longer needed by those agencies but still usable.

- The Solid Waste Department provides free, usable products, such as paint, for the public as they are retrieved from the Moderate Risk Waste Facility.

Public Outreach and Education

Kittitas County has a number of outreach and education programs. Table 15 shows the education and outreach programs that are in place, including target sectors, and highlights of each program.

Table 15. Kittitas County Waste Reduction and Recycling Public Outreach

Program	Target Sector	Highlights of the Program
Backyard Composting	Residential	• Master Composter seminar held once per year; in exchange for the free training, participants agree to volunteer for 15 hours • Worm composting classes for the community, including children's program • Pamphlets, books, videos, and displays are also available
Website	Residential Commercial	Information provided on the County website includes: • Waste reduction tips • Recycled-content purchasing websites • General recycling information • Promotion of the Master Composting Program • Yard waste recycling information
School Presentations	Schools	• Promote waste reduction and recycling. • Tours of solid waste facilities are provided upon request.
Teacher Workshops	Schools	• Promote Ecology's Away With Waste curriculum for K-12.
Promotional Materials	All	• KCSW provides brochures, posters, flyers, and newspaper and radio ads
Community Events	Residential	Provide local waste reduction and recycling information and activities at events, including: • Kittitas County Environmental Education Network • Kittitas County Fair • Earth Day / Arbor Day Celebration at CWU • Farmer's Markets • KXLE Home, Business & Garden EXPO • Master Gardener Class • Compost Class • Get Intimate with the Shrub Steppe Event • Yakima River Clean Up • Christmas Tree Recycling

3.2.3 NEEDS

Waste reduction could be further encouraged in Kittitas County by addressing the following needs:

- Residents and businesses are not exposed to education and promotion programs focusing on alternatives to toxics and proper disposal of household hazardous waste.
- Organics make up 30% of the residential waste stream and the cost of home composting bins or mulching mowers may be a deterrent to residents.
- The Master Composter program could be expanded to comprehensively cover composting, waste reduction, and other solid waste topics.
- Businesses do not have access to technical assistance and outreach addressing waste reduction opportunities.
- Web-based materials exchange opportunities are limited.
- Educational and promotional materials do not currently link climate change to solid waste management.

3.2.4 OPTIONS

The following options for improving waste reduction were presented to the SWAC for evaluation.

WRRC.WR.1. Government

Encourage government agencies within the County to adopt procurement policies that encourage their operations to purchase products made from recycled-content materials and set targets by which implementation can be measured. Also encourage government agencies to incorporate source reduction efforts at all levels and develop a system to track progress, based on reductions in waste generation and a certain material list.

WRRC.WR.2. Public Education and Outreach

Kittitas County could work with community partners to further develop a waste reduction and recycling public education and outreach program that targets specific audiences. Activities to encourage waste reduction, recycling, and home composting could include the following:

Electronic--

- Send an e-newsletter to subscribers on a regular basis with tips on waste reduction and recycling, as well as promoting upcoming events.
- Provide television PSAs that are broadcast through cable or city TV stations.

Print--

- Update "Where, When, and How to Recycle in Kittitas County" at least once per year.
- Provide real estate companies with new move-in and move-out procedures for residents.
- Prepare brochures that highlight waste reduction programs, such as buying recycled, donating, grasscycling, etc.
- Use print media to promote waste reduction resources (thrift shops, Craig's List, garage sales, food banks, etc.).
- Material reuse: Use newspaper and brochures to provide information about donating or selling reusable items and to encourage the use of repair facilities over disposal.
- Provide common waste reduction recommendations flyer.
- Provide brochures that highlight waste reduction programs, such as tips on waste reduction, where to purchase recycled-content items, donation and material reuse opportunities (i.e. thrift shops, Craigslist.org, Ooodle.com, garage sales, food banks), and grasscycling.
- Submit newspaper articles to provide information about donating or selling reusable items and to encourage the use of repair facilities over disposal.

Presentations--

- Conduct teacher workshops to introduce an environmental curriculum.
- Conduct Hazard-Free Home workshops.
- Train farmers on Integrated Pest Management Strategies and proper pesticide disposal.
- Information booths.
- Presentations at local clubs and gatherings, community events, County fairs, and other events (e.g., Ellensburg Rodeo).
- Composting information and workshops.

Other--

- Educate residents and businesses about hazardous waste, and promote use of Moderate Risk Waste facilities.

WRRC.WR.3. Commercial Technical Assistance

Offer technical assistance and provide resources to businesses to incorporate waste reduction strategies, such as those listed below:

- Assist non-residential generators in identifying opportunities to reduce waste, purchase recycled content products, locate appropriate recycling services and promote local waste reduction successes through site visits, telephone contacts, and workshops as appropriate.
- Assess supply chain and material usage at local, large commercial, industrial, and agricultural sites to identify opportunities for increased waste reduction.
- Explore opportunities for two-way packaging.
- Focus on reducing paper usage (e.g., defaulting to duplex printing).

WRRC.WR.4. Institutional and Non-Profit Assistance

- Support community activities, such as Earth Day and clean up events.
- Support local organizations in their efforts, such as the Kittitas County Environmental Education Network, the Iron Straw group, and Habitat for Humanity.
- Expand school waste reduction and recycling programs.
- Increase information booth hosting and presentations at local clubs and gatherings, community events, County fairs, and other events (e.g., the Ellensburg Rodeo).

WRRC.WR.5. Purchasing

On a broader basis, work with agencies, retailers, and consumers to develop procurement policies as well as outreach and assistance programs to promote smart consumer purchasing options.

Procurement--

Adopt and assist cities in adopting procurement policies that require the purchase of recycled-content products, with content specifications and minimum purchasing goals for recycled products. Purchasing goals for recycled content products will be developed for paper and as many other types of supplies, as feasible. Procurement policies developed will meet or exceed the provisions of Chapter 43.19A RCW.

Consumer Purchasing Options--

- Provide information on ways consumers can reduce their waste through smart purchasing practices, such as using reusable bags instead of paper or plastic, buying in bulk to reduce packaging waste, buying products made with recyclable packaging, and buying or renting durable goods instead of disposable.

- Provide information on ways consumers can choose less toxic products, reducing the need for special handling.

- Provide outreach and technical assistance to help retailers feature less toxic and less wasteful products.

WRRC.WR.6. Create Re-Use Opportunities

Provide forums for residents and businesses to exchange reusable items, such as:

- Provide links, resources, and options for re-use on the County's website using existing opportunities in the County and promote reuse stores and events, as well as opportunities at the transfer stations.

- If staff and resources become available, design a user-friendly materials exchange web page or link into an already established website, such as 2good2toss.com, where residents, businesses, contractors, and organizations can post available items and items wanted by such as clothing, household goods, electronics, and appliances. 2good2toss is coordinated by Ecology, although the County would need to establish and maintain the website.

3.2.5 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

3.2.6 SELECTED OPTIONS

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

Selected Options - Waste Reduction
WRRC.WR.1. Government
WRRC.WR.2. Public Education and Outreach
WRRC.WR.3. Commercial Technical Assistance
WRRC.WR.4. Institutional and Non-Profit Assistance
WRRC.WR.5. Purchasing
WRRC.WR.6. Create Re-Use Opportunities

3.3 RECYCLING

3.3.1 BACKGROUND

Recycling is the second highest priority in strategies to manage materials in the waste stream. Chapter 70.95 RCW defines recycling as transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration. Recycling,

then, can be any technique that turns waste materials into useful products. This section addresses current recycling conditions in Kittitas County and provides recommendations for future actions based on the needs of the County.

According to the statewide recycling survey conducted by Ecology, the recycling rate in Kittitas County was almost 28% in 2008. Kittitas County SWAC has set an overall recycling goal of 50% for the County. While the SWAC recognizes that Kittitas County may not reach this goal for some time due to its lower population density, the committee felt it was a goal the County should strive to meet in the long term. This section outlines Existing Conditions, needs, and options for achieving the 50% recycling goal.

3.3.2 EXISTING CONDITIONS

In Kittitas County, recycling consists primarily of drop-off locations, with the exception of curbside recycling and greenwaste collection in the City of Ellensburg. Drop-off opportunities are offered at the two County transfer stations as well as a number of private locations. This section includes a listing of materials currently recycled, a designation of urban and rural areas served, and current public and private recycling opportunities.

Identification of Recyclable Materials

According to Chapter 70.95.010(7)(c) RCW, a list of designated recyclable materials must be included in the SWMP. Criteria used to determine recyclables include potential for significant waste stream diversion, state and local recycling goals, local market conditions, and continuity in materials collected. The materials designated on the following page are categorized into three tiers using criteria included in Ecology guidelines. Urban and rural residential recycling programs are then based on the collection of these designated recyclables. Each of these tiers are defined below.

Tier 1: Materials feasible (i.e., current market, ease of collection, size of waste stream) for current regular recycling programs.

Tier 2: Materials that can be recycled, but for which there are limitations in collecting or marketing on a regular basis. These materials may be collected for recycling on an irregular basis, seasonally, at special events, or at selected locations as feasible or necessary.

Tier 3: Materials for which recycling may become feasible in the future.

Table 16 lists the materials currently in each of the three tiers of recyclables for Kittitas County. This list is used in this section to identify needs for collection, drop-off, and processing programs in the County.

New market opportunities may be created as new technologies develop, as virgin commodity prices fluctuate, and/or as new environmental concerns arise. For example, converting organic materials for biodiesel production may become economically feasible recycling opportunities. As such, this list should be considered dynamic and open to modification during the term of the SWMP. Any proposed changes to the designated recyclables list must be made to the Solid Waste Director and taken presented to the SWAC for review. The SWAC will then make a

recommendation to modify the list and the item brought forth to the County Commission for review and approval. If approved, the list will be updated and submitted to Ecology. This process should not be considered an amendment to the SWMP, and does not require commission action.

Table 16. Tiered Designation of Recyclable Materials

Tier 1: Routine Collection	Tier 2: Limited Collection	Tier 3: Potentially Recyclable
Aluminum	Ink Cartridges	Plastic Film including shopping bags
Glass containers	Cell Phones	Expanded Polystyrene
Corrugated Cardboard	Textiles	Construction/Demolition Debris
Magazines	Wood Waste	
Newspaper		
High Grade Paper		
Mixed Waste Paper		
Plastic Containers		
Tinned Cans		
Ferrous Metals		
Non-Ferrous Metals		
Yard Debris		
Motor Oil		
Vehicle Batteries		
Non-Vehicle Batteries		
Tires		
Antifreeze		

Urban/Rural Service Areas

The Waste Not Washington Act includes amendments to Chapter 70.95 RCW with provisions to develop criteria for designating areas as urban or rural. In urban areas, recyclables must be collected from single and multi-family residences. Rural areas should have drop-off recycling or buy-back centers. The Act recommends considering several criteria including anticipated population growth, the presence of other urban services, and density of commercial and industrial properties as well as geographic boundaries and transportation corridors.

To ensure that this SWMP is consistent with the Act as well as other planning documents within the County, the SWAC has decided to utilize the urban/rural designations adopted in the County's Growth Management Plan (see **Error! Reference source not found.**).

City and County Recycling Programs

Currently, recycling opportunities are available in Kittitas County through curbside collection service, drop-off locations, and other facilities as described below. See Table 17 for a list of city and County recycling programs. The County promotes awareness of their recycling programs through education and outreach, as described in Section 2 of this chapter.

Figure 13. Kittitas County Urban/Rural Growth Boundaries Map

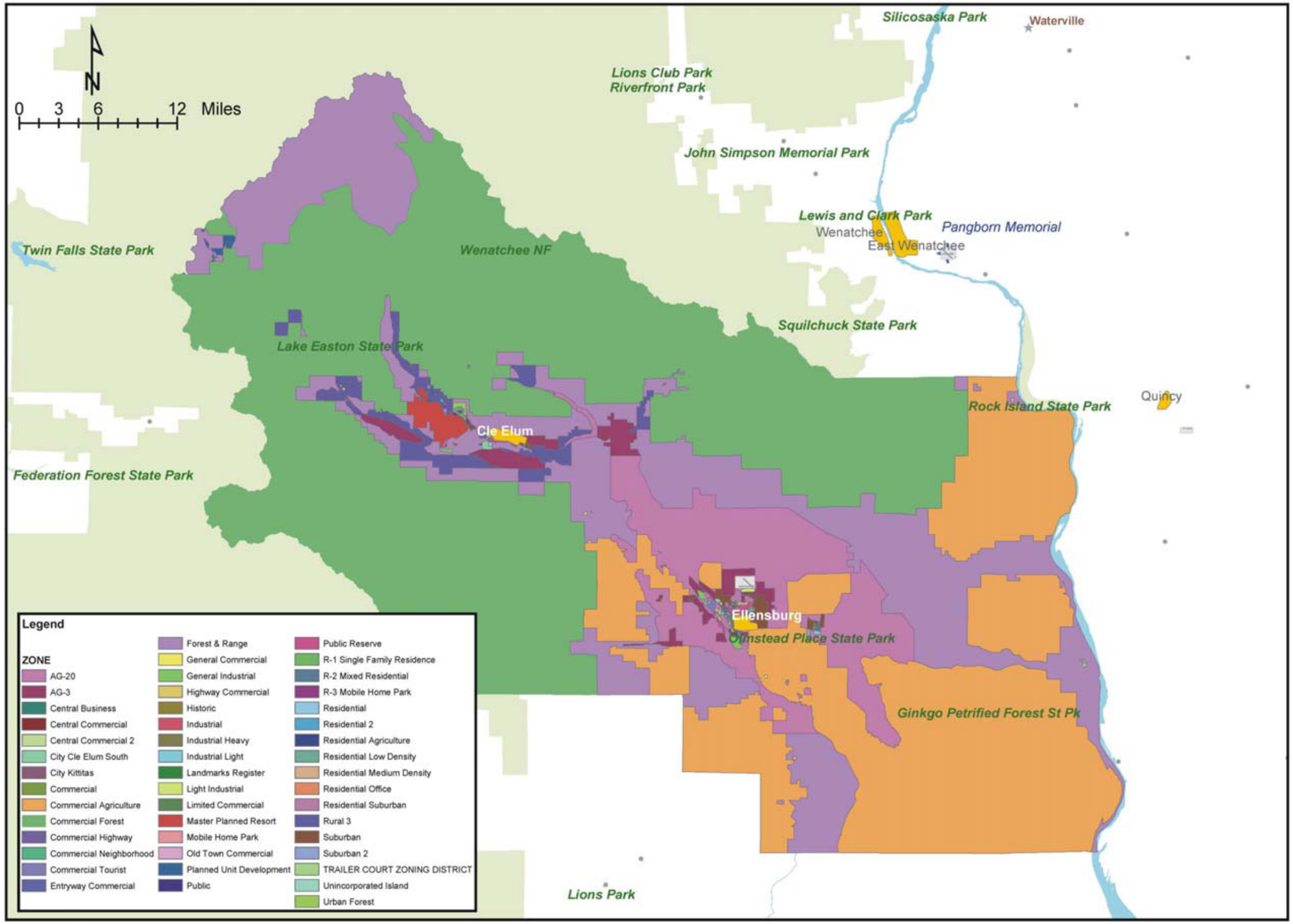


Table 17. City and County Recycling Programs

KEY
♦ – accepts material
F - charges for material
$ - pays for material

	Address	Hours	Phone	Glass	Aluminum Cans	Building Materials	Tinned Cans	Newspaper	Office Paper	Magazines	Mixed Waste Paper	Bagged Shredded Paper	Corrugated Cardboard	Yard Waste	Plastic (PETE) soda bottles	Plastic (HDPE) milk jugs	Other Plastic Bottles and Jugs	Plastic Film	Ferrous Metal	Non-Ferrous Metal	Antifreeze	Gasoline	Used Motor Oil	Lead Acid Batteries	Household Batteries	Other HHW	Covered Electronics	Electronics/Peripherals	Ink Cartridges	Fluorescent Lighting	Cell Phones	Textiles	Tires	Waste Cooking Grease	Wood	Appliances	Comments
City and County Programs																																					
Ellensburg Recycling Curbside Collection	607 N Railroad Ave, Ellensburg, WA	N/A	800-592-9995	♦	♦		♦	♦	♦	♦	♦				♦	♦	♦																				Curbside recycling included in garbage fee
Ellensburg Yard Waste Curbside Collection	607 N Railroad Ave, Ellensburg, WA	N/A	800-592-9995											F																							96-gallon toter = $12.95 Apr-Oct and $4.13 Nov-Mar; 2 96-gallon toters = $25.90; extra yard waste = $2.45
Ellensburg Transfer Station	1001 Industrial Way, Ellensburg, WA	M-Sa (8-4)		♦	♦		♦	♦		♦			♦	F	♦	♦			F	F													F			F	Free recycling; Yard waste = $35.92 per ton plus refuse tax (minimum = $2.00 including refuse tax); C&D = $58.54 per ton plus refuse tax (minimum = $3.00 including refuse tax); Refrigerator units = $10.36 plus weight; Tires: Passenger = $1.81 each (Other type of tires varies); Special Waste: Street sweeping = $51.75 per ton; free document shredding
Cle Elum Transfer Station	50 - #5 Mine Road Cle Elum WA	Tu-Sa (8-1 and 1:30-4)		♦	♦		♦	♦		♦			♦	F	♦	♦			F	F													F			F	Free recycling; Yard waste = 35.92 per ton plus refuse tax (minimum = $2.00 including refuse tax); C&D = 72.08 per ton plus refuse tax (minimum = $4.00 including refuse tax); Refrigerator units = $10.36 plus weight; Tires: Passenger = $1.81 each (Other type of tires varies); Special Waste: Street sweeping = $51.75 per ton; Free document shredding; Antifreeze, Auto Batteries, Oil are free
Oil, antifreeze, and battery drop-off - Ellensburg	925 Industrial Way, Ellensburg WA	M-Sa (8-4)	509-962-7577																		♦		♦	♦	♦												
Oil, antifreeze, and battery drop-off - Cle Elum	50 - #5 Mine Road Cle Elum WA	Tu-Sa (8-1 and 1:30-4)	509-962-7577																		♦		♦	♦	♦												
Kittitas County Moderate Risk Waste Facility - Ellensburg	925 Industrial Way, Ellensburg WA	By appointment only	509-962-7542																							♦											Separate, labeled boxes for different types of household hazardous waste (e.g., solvents, thinners, mineral spirits, paints, garden chemicals).
Kittitas County Moderate Risk Waste Facility - Cle Elum	50 - #5 Mine Road Cle Elum WA	By appointment only (2 days/mo)	509-962-7542																							♦											Separate, labeled boxes for different types of household hazardous waste (e.g., solvents, thinners, mineral spirits, paints, garden chemicals).
Household battery drop-off	Multiple locations	Varies																							♦												Twelve locations: Bi-mart in Ellensburg, County Court House, Carpenter Library in Cle Elum, Cavallini's Pharmacy in Cle Elum, C.B. General Store and Lodging in Easton, Cle Elum Hardware and Rental, Cle Elum Safeway Grocery, Ellensburg High School, Harper Lumber Co. in Roslyn, Jerrol's Book & Supply in Ellensburg, Kittitas Country Hardware, Inc in Kittitas, Rite Aid Drug store in Ellensburg
Kittitas County Compost Facility	1001 Industrial Way, Ellensburg WA	M-Sa (8-4)	509-962-7542											F																							

Curbside Collection of Recyclables

In Ellensburg, curbside recycling service is available on a subscription basis. Ellensburg recycling is collected in a single-stream system on a bi-weekly basis. The cost of curbside recycling collection is embedded in the garbage fee, and therefore is free to subscribers of regular garbage collection services.

Table 18. Materials Collected in Ellensburg Curbside Collection Program

Material Category	Material Type
Paper	Newspaper
	Cardboard
	Magazines
Metal	Tin Cans
	Aluminum Cans
Glass	Bottles
	Containers
Plastic	PETE
	HDPE

Drop-off at Transfer Stations

Recyclables

The County has drop boxes for residents at each of its transfer stations for the collection of aluminum cans, tin cans, newspapers, magazines, container glass, corrugated cardboard, HDPE plastic milk jugs, and PETE soda bottles. These boxes are monitored and serviced by Waste Management.

Additionally, ferrous and non-ferrous metals, tires, and appliances are accepted for a fee. Accepted appliances include clothes washers and dryers, dishwashers, ranges, refrigerators, freezers, and other similar large household appliances. The County may contract for the processing of refrigerators, freezers, and air conditioners. Refrigerant is recovered for recycling and compressor oil is recovered for secure disposal and/or treatment. The appliances are then processed with other non-refrigerant containing white goods into bales and sold as scrap.

Private Recyclers

Private businesses provide many recycling opportunities to Kittitas County residents and businesses. Please see Table 19 for a current list of these opportunities. Although most recycling businesses accept one or two materials, three accept a range of common recyclable materials. In addition to the opportunities listed here, many large businesses that have branches in the County likely have their own recycling programs to back-haul their recyclables to central locations.

Waste Management Commercial Recycling Collection

Waste Management offers, for a fee, collection of corrugated cardboard to businesses in the County, with the exception of those in Cle Elum where that service is not available.

Cascade Pallet

Cascade Pallet accepts clean wood, clear plastic film, and corrugated cardboard for recycling. While they do pay for some reusable pallets, they may charge for everything other than clean lumber.

Elmview Paper Recycling

Elmview Paper Recycling provides office and institutional recycling for all paper commodities.

Kittitas Valley Recycling and Chem-safe Environmental, Inc.

Kittitas Valley Recycling collects aluminum cans, ferrous and nonferrous metals, and electronics covered under the eCycle Washington program for free. Additionally, Kittitas Valley Recycling accepts lead-acid vehicle batteries, household batteries, fluorescent tubes, and compact fluorescent light bulbs and electronics not covered under the eCycle Washington program for a fee. Chem-safe Environmental also accepts gasoline, used motor oil, and antifreeze for recycling with a fee.

Private Material-Specific Drop-off Locations

Several businesses in Kittitas County specialize in recycling select material types:

Electronics

Implemented in January 2009, E-Cycle Washington provides free recycling of computers, monitors, laptops, and televisions to residents, charitable organizations, small businesses, and small governments. Goodwill and Kittitas Valley Recycling each accept covered electronics for free. Kittitas Valley Recycling also accepts non-covered electronics.

Household Battery, Ink Cartridge, and Cell Phone Collection

In addition to the household battery collection program the County manages, several locations within the County collect ink cartridges and household batteries, including Woods Ace Hardware, Downtown Pharmacy in Ellensburg, and Fred Meyer. The following locations collect ink cartridges and cell phones for recycling: Complete Computer Services, Curves, Ellensburg Adult Activity Center, and Innerspace Design. Ellensburg Chamber of Commerce collects ink cartridges only. Retired Senior Volunteer's Program (RSVP) collects ink cartridges and cell phones at their office and at several of the locations listed above. Valley View Elementary School collects batteries in addition to cell phones and ink cartridges.

Table 19. Private Recyclers

KEY
♦ – accepts material
F - charges for material
$ - pays for material

	Address	Hours	Phone	Aluminum Cans	Building Materials	Newspaper	Office Paper	Magazines	Mixed Waste Paper	Bagged Shredded Paper	Corrugated Cardboard	Yard Waste	Plastic Film	Ferrous Metal	Non-Ferrous Metal	Antifreeze	Gasoline	Used Motor Oil	Lead Acid Batteries	Household Batteries	Covered Electronics	Electronics/Peripherals	Ink Cartridges	Fluorescent Lighting	Cell Phones	Textiles	Waste Cooking Grease	Wood	Comments
Private Recyclers handling multiple materials																													
B&S Recycling	901 W University, Ellensburg, WA	M-F (8:30-4:30)	509-925-1199; 509-312-9377											♦	♦														Aluminum, brass, copper, metal
Burv Enterprises LLC Recycle Service	901 W University Way, Ellensburg, WA		509-925-1199											$	♦														Pays for aluminum, brass, and copper, and collects iron for a fee
Cascade Pallet	916 Falcon, Ellensburg, WA	M-F (8-3:30)	509-962-4213								♦		♦															♦	Customers must call first. Accepts wood (no painted or treated wood. Nails okay.) May pay for some reusable pallets. May charge for everything other than clean lumber.
Chem-Safe Environmental Inc.	400 S Main St, Kittitas, WA	M-F (8-5)	509-968-3973													F	F	F											
Central Washington Biodiesel	1000 N Prospect St		509-899-4956																								♦		Waste cooking oil from households and restaurants to be recycled into biodiesel
Complete Computer Services	720 E University, Ellensburg, WA	M-F (8:30-5:30)	509-933-2929																				♦		♦				Cell phones, ink cartridges, eye glasses
Curves	223 E 4th Ave, Ellensburg, WA	M-Th (5:30-7), Fr (5:30-4)	509-933-4133																				♦		♦				
Downtown Pharmacy	414 N. Pearl St, Ellensburg	M-F (9-6); Sa (9-5)	509-925-1514																	♦			♦						
Ellensburg Adult Activity Center	506 S Pine St, Ellensburg, WA	M-F (8-4)	509-962-7242																				♦		♦				
Ellensburg Chamber of Commerce	609 N Main, Ellensburg, WA	M-F (8-5), Sa (10-4)	509-925-2002																				♦						
Elmview Paper Recycling	Ellensburg	M-F (9-5)	509-925-6124			♦	♦	♦	♦	♦	♦																		Collect all types of paper
Fred Meyer	201 S Water, Ellensburg, WA	M-Su (7-11)	509-962-0507																	♦			♦						
Habitat for Humanity	212 S Railroad, Ellensburg, WA		509-962-5058		♦																								
Innerspace Design	418 E 1st St, Cle Elum, WA		509-674-3974																				♦		♦				
Kittitas Valley Recycling	320 N Railroad, Ellensburg, WA	M-F (8-5)	509-929-4136	♦										♦	♦				F	F	♦	F		F					TVs, Monitors, CPUs, Laptops = free; cell phones and peripherals (printers, mice, keyboards, copy machines) = $0.10/lb.; all metals except steel; all batteries (NiCad, Li-ion, lead acid, etc.) = $.07/lbs; CFL = $1/bulb; and fluorescent tubes =$0.18/ft
RSVP Cartridge and Cell Phone Recycle Program	Multiple locations in Kittitas County; 107 N Pearl, Kittitas, WA	M-F (7-noon, 1-4), pickup	509-962-4311																				♦		♦				Ink cartridges (no toner bottles), cell phones, and cell phone components (i.e. battery charger)
Valley View Elementary School	1508 E Third Ave, Ellensburg, WA	M-F (8-4)	509-925-7316																	♦			♦		♦				
Woods Ace Hardware	310 N Pearl St, Ellensburg, WA	M-Sa (8:30-5:30); Su (11-4)	509-925-2961																	♦			♦						
Thrift Stores																													
Goodwill Industries Retail Store and Donation Center	400 W Washington ave, Ellensburg, WA	M-Sa (9-9), Su (10-7)	509-925-4704																		♦					♦			Computers, laptops, monitors, and TVs
St. Vincent DePaul	1200 Canyon Rd., Ellensburg, WA	M-Sa (9-6); Su (11-5)	509-925-2167; 509-457-5111 Lisa																							♦			Rags, clothing
Private Collection Cervices																													
Waste Management of Ellensburg - Commercial collection	607 N Railroad Ave, Ellensburg, WA	N/A	800-592-9995									F																	Collection fee varies; cardboard recycling available in all of Kittitas County except within Cle Elum city limits

Metal Recycling

B&S Recycling and Kittitas Valley Recycling collect both ferrous and nonferrous metals for free, including aluminum, brass, and copper. Burv Enterprises, located in Ellensburg, pays for aluminum, brass, and copper dropped off for recycling, and collects iron for a fee. Burv Enterprises will pay for iron on a case-by-case basis.

Textiles

The Goodwill and Saint Vincent DePaul recycle textiles that are not of high enough quality to be sold in the stores.

Waste Vegetable Oil

Central Biodiesel accepts waste cooking oil cooking from households and restaurants where it is recycled to make biodiesel.

Recycling Trailer

The County currently owns a trailer for collection of trash and recyclables at special events. This trailer is available to all cities and towns within the County at no charge.

Kittitas County Staffing

County staff includes a recycling coordinator whose duties include management of the moderate risk waste facilities and programs, implementation of compost/yard waste programs, and education and implementation of programs for recycling of marketable commodities. This staff person also serves as a liaison on recycling issues for recycling companies, community groups, schools, businesses, and industry. The position is partially funded by a Coordinated Prevention Grant from Ecology.

3.3.3 NEEDS

Despite current recycling opportunities in the County, the following needs were found:

- Recyclable paper still accounts for approximately 16% of residential MSW and over 20% of commercial MSW.
- Compostable materials from both the residential and commercial waste streams comprise about 40% of each substream's disposed waste.
- Collection of recycling from businesses is limited to corrugated cardboard.
- Paper and other recyclable materials still make up approximately 39% of the commercial MSW stream.
- There is limited technical assistance available to increase recycling at Kittitas County businesses.
- Residents and businesses have little financial incentive to recycle.

- Curbside collection is only available to residents of Ellensburg.
- Materials accepted at drop-off locations do not include office or mixed paper or plastics beyond PETE and HDPE plastic bottles.

3.3.4 OPTIONS

The following options for improving recycling were presented to the SWAC for evaluation.

WRRC.REC.1. Collection and Drop-Off

- Expand residential single-stream curbside collection of recyclables to the remaining incorporated cities within Kittitas County. Materials included in the program would include newspaper, cardboard, magazines, tin cans, aluminum cans, glass bottles and containers, PETE, and HDPE.
- Expand mixed paper recycling collection to Cle Elum.
- In the future, consider adding food waste to yard waste collection County-wide. This would be dependent on permitting the current composting facility to accept pre- and post-consumer food waste.

WRRC.REC.2. Commercial Programs

- Recruit and provide technical assistance to large businesses in Kittitas County to increase recycling. The purpose of providing technical assistance is to set up new recycling programs in larger businesses and work with the haulers or recyclers to efficiently implement these new programs. After a business is recruited, it would receive a waste audit and at least one on-site visit. During the on-site visit, the program staff person would develop waste reduction and recycling recommendations.
- Develop a business recognition program for recycling, composting, and waste reduction for exemplary waste reduction, composting, and recycling activities. Consider modeling the program on the EnviroStars program, which was created in King County and has spread to other Washington counties.
- Target agricultural activities to promote recycling of agricultural-related waste including film plastic, pesticide containers, and compostables.
- Expand paper collection and offer curbside collection of all recyclable paper grades to large businesses in incorporated cities. Also consider collection of low grade and food-contaminated paper, which lack local markets, as a feedstock for the composting facility.

WRRC.REC.3. Large Venue and Special Event Recycling

- In Ellensburg, provide beverage container recycling at special events. As required by state law (Chapter 70.93.093 RCW), communities with curbside recycling must provide

recycling "at every official gathering and at every sports facility by the vendors who sell beverages in single-use aluminum, glass, or plastic bottles or cans."

WRRC.REC.4. Self-Haul

- Evaluate expanding materials accepted at transfer station recycling drop-offs to include office and mixed waste paper and other plastic bottles and containers.

- Consider expanding drop-off opportunities to other locations in the County.

WRRC.REC.5. Rate Structure

- Assess the feasibility of a Variable Can Rate, or Pay-As-You-Throw, in remaining incorporated areas (Ellensburg already adopted this structure). PAYT is a volume-based fee structure, which provides a lower-cost alternative to customers who downsize their garbage container by recycling and composting, may reduce disposal by up to 17%.

- Establish a fee structure that incentivizes recycling through reduced tipping fee for recyclables to ensure that it provides an adequate incentive for source separation of recyclables.

WRRC.REC.6. Recycling Incentives

- Provide public education regarding proper recycling procedures and the economic benefit of clean, source-separated recyclables and green waste. In addition, transfer station personnel can monitor loads delivered by certificated and contract haulers and provide education on proper recycling practices.

- Assist non-profit organizations in applying for Public Participation Grants (PPG) from Ecology. These grants are designed to support organizations that focus on recycling of solid waste as well as moderate risk waste. These businesses can then, in turn, be patronized by the County in order to "complete the loop."

- Encourage the use of the County's recycling trailer, which has been available for use at no charge.

- Educate retailers regarding the use of expanded polystyrene (EPS) containers and plastic bags for packaging material to encourage discontinuation of their use. The education should include available alternatives to EPS, such as using paper cups instead of Styrofoam.

WRRC.REC.7. Evaluation and Monitoring

In order to assess progress in meeting the goals and objectives of the Plan, the SWAC will evaluate the status of all Recycling and Waste Reduction programs annually and formally report their findings to the Board of County Commissioners, along with any recommendations for changes or additions. The annual assessment should address the following, plus any other areas the SWAC chooses to include:

- Status of recyclable materials list.
- Evaluation of what is and isn't marketable and identify opportunities to develop markets for recycled materials.
- Progress toward waste reduction and recycling goals.
- Assessment of public outreach and education programs.
- Assessment of recycling collection and marketing programs.
- Establish an accurate assessment of the County's recycling rate.
- Evaluate the success of waste reduction and recycling programs, and allow for necessary adjustments.
- Identify gaps and needs in implementing the waste reduction and recycling element of the SWMP.

WRRC.REC.8. Identify Funding and Other Non-Monetary Resources

With support and assistance from SWAC, identify and pursue existing and potential funding and non-monetary resources for developing and implementing recycling programs and promotion.

These resources may be local County or city support; state or federal grant programs, contributions or donations from private entities, in-kind contributions, or any other resources, including volunteer activities. These may include, but are not limited to, funds from the USEPA and State Department of Ecology, such as:

- Litter Grants
- Mercury Recycling
- C&D Re-use

WRRC.REC.9. Formal Working Relationships

Encourage the establishment of formal working relationships between the County and other agencies, institutions, and organizations via Memorandums of Understanding, letters of acknowledgment, or other appropriate mechanisms.

WRRC.REC.10. Sustainable Community

Stakeholders can contribute to sustainable communities through promotion of a number of programs:

- Encourage all capital projects to meet minimum green building standards, such as energy efficiency, minimum recycled-content, efficient use of water, formal recycling programs, and green design elements.

- Green building techniques can be used to minimize the impact on the solid waste system due to development projects. The County may elect to require certain green building elements be included in certain projects, including energy efficiency, waste reduction and recycling, and water conservation systems. At a minimum, the County may promote green building techniques be used voluntarily in development projects.

- To estimate the impact the County's solid waste management system has on climate change, the County may elect to establish baselines and greenhouse gas reduction goals.

- To promote a sustainable community, the County may evaluate the efficacy of developing an educational facility to demonstrate green building techniques and systems.

- The County will continue to evaluate the need for new waste prevention programs that focus on certain materials or products, such as expanded polystyrene and plastic bags.

- Provide outreach to food establishments on alternative packaging options to reduce the amount of non-recyclable and non-compostable products used.

WRRC.REC.11. Evaluate Expansion of Programs

- Develop programs that target specific waste generators, including: schools, special events, multi-family dwellings, and select business types.

- Expand curbside recycling service into Cle Elum and Suncadia.

- Expand the list of targeted materials to include all fiber, particularly mixed waste paper and containers, if not already collected.

- Work with Waste Management to selectively route for dry waste commercial loads that would be delivered to Cascade MRF for sorting. Programs like this, with recycling-rich wastestreams, can garner the benefit of recycling without needing to add recycling service to a customer.

- Increase number of recycling drop-off sites and range of materials accepted, particularly clean wood, metals, and other recyclable C&D materials.

WRRC.REC.12. Public Outreach and Education

Continue the existing outreach and education programs, using available resources and materials to promote recycling and waste reduction. Provide recycling guides and brochures with general recommendations for the commercial and residential sectors, in concert with other sections of this chapter.

WRRC.REC.13. White Goods Processing

Continue processing refrigerators, freezers, and air conditioners prior to recycling. Processing entails evacuating coolant from each item, which requires special handling.

3.3.5 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

3.3.6 SELECTED OPTIONS

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

Selected Options - Recycling
WRRC.REC.1. Collection and Drop-Off
WRRC.REC.2. Commercial Programs
WRRC.REC.3. Large Venue and Special Event Recycling
WRRC.REC.4. Self-Haul
WRRC.REC.5. Rate Structure
WRRC.REC.6. Recycling Incentives
WRRC.REC.7. Evaluation and Monitoring
WRRC.REC.8. Identify Funding and Other Non-Monetary Resources
WRRC.REC.9. Formal Working Relationships
WRRC.REC.10. Sustainable Community
WRRC.REC.11. Evaluate Expansion of Programs
WRRC.REC.12. Public Outreach And Education
WRRC.REC.13. White Goods Processing

3.4 COMPOSTING AND YARD WASTE

3.4.1 BACKGROUND

As a waste reduction and recycling strategy, composting is one of the highest priorities for managing solid waste, as established by Chapter 70.95 RCW. Composting transforms organic wastes into valuable products, such as soil amendments and mulch. Almost 29% of overall MSW in Kittitas County is made up of organics, of which approximately 58% is food waste, approximately 24% is yard waste, and about 17% is compostable/soiled paper. If wood waste (categorized under Construction Debris) is also included, over 37% of the total waste stream is organics. This section describes current composting opportunities, composting needs, and options to increase composting in the County.

3.4.2 EXISTING CONDITIONS

Composting Facility

In July 2009, the County began operation of a facility to convert yard waste, agricultural byproducts, and wood waste into compost. The purpose of this facility is to divert organic wastes from disposal and/or burning and to use these materials to produce high quality compost

for sale as a soil amendment.[16] It is located next to the Ellensburg Transfer Station on land leased from the City. The site plan for the facility is included as **Appendix D** of this Plan.

The composting facility is open to the public for drop-off Monday-Saturday from 8am-4pm all year.

The facility will strive to produce compost that meets the Seal of Testing Assurance (STA) as established by the U.S. Composting Council (USCC). At this time, the facility is only permitted to process Type 1 (vegetative) & Type 2 (manures) feedstocks:

- Landscaping and yard trimmings.
- Wood wastes (natural woody debris including land clearing stumps and brush, and clean, unpainted, and untreated dimensional wood).
- Straw and bedding with associated manures (primarily from nearby fairgrounds and small farmers).

Expansion of this feedstock list may be warranted in the future. Some material types can be added without requiring a permit modification.

Operations personnel will visually inspect truck beds as they cross the scale, as well as during unloading activities, to ensure no unacceptable materials are unloaded. Haulers will be directed to keep the unacceptable materials in their vehicles or to re-load them and to remove them from the site for proper disposal. Feedstocks are inspected a final time as the material is being processed. In the event that unacceptable materials are found in the feedstock areas, these materials will be removed from the feedstock piles and disposed of in a dumpster on-site for proper disposal at the adjacent transfer facility[17].

The facility is open Mondays through Saturdays; however, it is expected that the highest volumes received will be between the months of March and August. According to the facility's Operations plan, the facility anticipates accepting and processing up to 6,000 tons of feedstock per year within 5 to 10 years.

Compost produced will be sold to city/County residents at nominal fees to offset the cost of production, with possible customers in the open market. The material handling stages include: Receiving; Bulking; Mixing and Moisture Conditioning; Active Composting in Windrows; Curing; Finishing; and Product Sales and Distribution.

The composting facility incorporates a Turned Windrow method of composting utilizing a tow-behind or straddle windrow turner. In this method, the active stage of composting occurs in the formed windrows on the composting pad which is designed to drain to a leachate collection and re-use system. Depending upon the feedstocks and the ability to maintain optimum conditions

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[16] Operations Plan for Kittitas County Composting Facility, September 2008.

[17] ibid.

for the microbial breakdown of the feedstocks, finished compost has been reported in a windrow system after 10 weeks[18].

The Operations Plan will be reviewed and revised if needed on a yearly basis in conjunction with the solid waste handling permit renewal in order to remain in compliance with the current permit.

Curbside Collection of Yard Waste

In Ellensburg, curbside yard waste collection is available on a subscription basis. Yard waste is collected on a weekly basis from April to October, and on a monthly basis from November through March. Curbside yard waste collection is available for a fee.

Currently, no programs exist for the collection and composting of food waste.

Yard Waste Drop-Off

Clean yard waste may be dropped off by County residents and businesses at the Cle Elum transfer station and at the Ellensburg composting facility. Self-haul customers that segregate clean yard waste qualify for a reduced disposal fee at the transfer station and composting facility.

Composting Workshops

The Kittitas County Solid Waste Department holds backyard composting workshops for residents each year to reduce the amount of yard trimmings that are processed or disposed in the MSW stream. These workshops educate the public on the benefits of composting while emphasizing the importance of waste reduction. The County expanded this program to include the Master Composter program, which certifies participants as Master Composters and asks them to volunteer their time to educate the public at community activity booths, at schools, or by helping maintain a compost demonstration site at locations in both upper and lower Kittitas County.

3.4.3 NEEDS

The County should address the following needs to capture more organic material as a resource rather than a waste.

- Food waste and compostable paper are currently not included in organics programs.
- Yard waste collection service is only available in Ellensburg.
- For self-hauled yard waste, the current rate structure could provide a greater incentive to separate green waste and clean wood.

[18] ibid.

- In the future, the County may need to enact policy measures such as restricting the landfill disposal of yard waste.

3.4.4 OPTIONS

The following options were presented to the SWAC for evaluation.

WRRC.COMP.1. Composting Public Education and Outreach

Continue to develop and distribute educational material outlining the current composting program and its benefits including contributions to greenhouse gas reductions. Examples of outreach include, but are not limited to:

- Promote home composting as a mechanism to divert food waste from the home.
- Inform the public about grasscycling and composting options through educational materials, displays, workshops, and demonstration sites.
- Train volunteers in the "Master Composter" program for outreach to fellow residents.
- Provide coupons to offset purchase price of compost bins at local stores or support a discounted bin distribution event.
- Offer worm composting workshops for elementary school students.
- Expand Master Composter Workshops to provide in-depth information on home composting methods. The amount of training provided could be increased from 15 hours to 40 hours, and the volunteer service requirement to teach other Kittitas County residents should be increased. Different methods for home composting of food scraps should include worm bin composting, green cone composting and other commercially available or homemade designs that are adequately pest-resistant.

WRRC.COMP.2. Compost Facility

- Evaluate feasibility of including pre-consumer food waste and compostable (but non-recyclable) paper to the accepted materials accepted at the County facility in the future.
- Consider alternative processing for food waste, such as "Ag-Bag" system, Gore cover system, or semi-enclosed windrows.
- Encourage the development of new privately-run compost facilities in the County that could accept a wider range of materials than the County facility.

WRRC.COMP.3. Vermicomposting

- Continue to include worm composting as a topic in composting workshops.
- Recruit local schools or facilities to implement small-scale pilot composting projects.

- Evaluate the potential for large-scale commercial vermicomposting facility in-County.

WRRC.COMP.4. Residential Yard Waste Collection Programs

Continue existing green waste collection programs, both curbside and drop-off, and evaluate the potential of increasing curbside service to more customers in the other cities and unincorporated areas of the County.

WRRC.COMP.5. Commercial Collection of Organics

Initiate organics collection for targeted industries, including restaurants, grocery stores, schools, hospitals, and food processing operations. The composting facility's current permit allows for the inclusion of pre-consumer trimmings from grocery stores without requiring a modification to the permit.

This option would be phased in after the permit is expanded for the existing composting facility to accept post-consumer food waste. A feasibility study and plan would be conducted prior to obtaining the expanded permit to gauge the impact to the County's recycling rate due to the expanded material list, and would be based on available funding. As part of this option, the County could provide generators with technical assistance to educate generators' staff on proper separation techniques to ensure a clean/contaminant-free feedstock for the composting facility.

WRRC.COMP.6. Marketing of Finished Compost Products

Evaluate the marketing of finished compost created at the facility as an additional revenue source. In particular, focus on potential markets in central Washington including the rapidly growing wine industry.

WRRC.COMP.7. Tiered Rate Structure for Organics

Review the current reduced transfer station tipping fee for green waste to ensure that it provides an adequate incentive for source separation of green waste and clean wood waste.

Implement a stricter policy regarding delivery of contaminated green waste to the transfer stations. Contaminated green waste would be charged the higher garbage rate and haulers would need to be educated on proper source separation.

WRRC.COMP.8. Yard Waste Disposal Ban

In the future, the County could consider enacting a disposal ban on clean, compostable yard waste. Such bans are found in several states.

3.4.5 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

3.4.6 SELECTED OPTIONS

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

Selected Options - Composting
WRRC.COMP.1. Composting Public Education and Outreach
WRRC.COMP.2. Compost Facility
WRRC.COMP.3. Vermicomposting
WRRC.COMP.4. Residential Yard Waste Collection Programs
WRRC.COMP.5. Commercial Collection of Organics
WRRC.COMP.6. Marketing of Finished Compost Products
WRRC.COMP.7. Tiered Rate Structure for Organics
WRRC.COMP.8. Yard Waste Disposal Ban

Chapter 4

Solid Waste Collection

4 SOLID WASTE COLLECTION

4.1 INTRODUCTION

This chapter provides a discussion of garbage collection in Kittitas County, including background information on how solid waste collection is regulated, the legal authority that counties and municipalities have in managing collection services for garbage and recyclables, and existing conditions for these activities. The chapter concludes with a discussion of the key issues surrounding collection, and presents options for meeting existing and future collection needs in the County.

4.2 BACKGROUND

The Washington Utilities and Transportation Commission (WUTC), the County, and the municipalities regulate garbage collection in Kittitas County. The regulatory authority and jurisdiction of each of these entities is described below.

4.2.1 WUTC AUTHORITY

The WUTC supervises and regulates solid waste collection companies. WUTC authority (Chapter 81.77 RCW and Chapter 480-70 WAC) is limited to private collection companies and does not extend to municipal collection operated by municipalities or their contractors. The Commission requires reports, establishes rates, and regulates service areas and safety practices.

A private solid waste collection company must apply to the WUTC for a certificate of public convenience and necessity to operate in the unincorporated areas of a County or in incorporated areas that choose not to regulate garbage collection. The WUTC grants certificates within a designated service area to an applicant based on cost data, documented need for the service, and, if the district is already served by a certificate holder, the ability or inability of the existing certificate holder to provide service to the satisfaction of the WUTC. The Commission requires annual reports showing the garbage collection company's gross operating revenue. Certificates may have terms and conditions attached and may be revoked or amended after a hearing held by the WUTC.

Commission regulation of solid waste collection companies does not include collecting or transporting of recyclable materials from a drop box or recycling buy-back center. It also does not include collecting or transporting recyclable materials by or on behalf of a commercial or industrial generator of recyclable materials to a recycler for use or reclamation (Chapter 81.77.010(8) RCW). Transportation of these materials is regulated under Chapter 81.80 RCW that governs the regulation of motor freight carriers.

4.2.2 COUNTY AUTHORITY

The rights of the County, in terms of solid waste collection, includes the establishment of solid waste collection districts for the mandatory collection of solid waste (Chapter 36.58.100 RCW). However, solid waste collection districts cannot include incorporated areas without the consent

of the legislative authority of the city or town. To form a solid waste collection district, public hearings must be held and the County legislative authority must determine that mandatory collection is in the public interest. County provision of collection services can be implemented only if the WUTC notifies the County that no qualified haulers are available for a district. Under mandatory collection, a hauler may request that the County collect fees from delinquent customers.

In Kittitas County, all unincorporated areas are covered by a single WUTC certificate holder; there are no solid waste collection districts. Although County authority to collect garbage in the unincorporated areas is limited, counties have the legal authority to assess fees on collection services provided in those areas. Chapter 36.58.045 RCW authorizes counties to assess such fees to fund administration and planning expenses associated with solid waste management.

4.2.3 MUNICIPALITY AUTHORITY

Cities and towns have several options for managing solid waste collection under state law, including:

- The city may choose not to manage or regulate its own garbage collection services. Collection services may then be provided by the certificate hauler(s) with authority for that area under the regulation of WUTC.

- The city may require a private company to obtain a garbage collection license from the city and to conform to all city collection guidelines.

- The city may award contracts to private companies for garbage collection in all or part of the city. The contract hauler does not need to hold a WUTC certificate for that area. Usually contracts are awarded on a competitive basis to the lowest bidder. All requirements contained in RCW 35.01.160 apply when contracting for solid waste collection services.

- The city may decide to manage and maintain its own municipal collection system for all or part of its jurisdiction.

- The WUTC would not have jurisdiction over the last two options (Chapter 81.77.020 RCW). State law also allows municipalities to require residents and businesses to subscribe to designated garbage collection services.

- In 2009, Ecology adopted new rules affecting transporters of recyclable materials and recycling facilities. The rule requires transporters of recyclable material to register with Ecology, transport recyclable materials to material recovery facilities and locations where recycling occurs, and keep records of all activities for two years. In addition, this new rule requires material recovery facilities and recycling facilities to notify Ecology 30 days before the facilities start operations.

None of the municipalities in the County maintain a municipal collection operation; all currently contract for services.

4.3 EXISTING COLLECTION SERVICES

4.3.1 UNINCORPORATED KITTITAS COUNTY

Garbage collection service in the unincorporated portions of Kittitas County is voluntary. All areas of the County are under a certificate granted by the WUTC. Rates for these areas are approved by the WUTC. One hauler is certificated by the WUTC for the County: Waste Management of Washington d.b.a. Waste Management of Ellensburg (G-237) (local address: 607 N. Railroad Ave. Ellensburg, WA 98926). A copy of the service area map is included in this Plan as **Appendix E**.

4.3.2 MUNICIPALITIES

Each municipality has the right to regulate its own solid waste collection services. The following arrangements are in place for the municipalities of Kittitas County:

- The City of Cle Elum contracts for mandatory curbside collection of garbage within its incorporated area. Commercial can and dumpster services also are provided.
- The City of Ellensburg contracts for collection services within its incorporated area, but collection is not mandatory. Curbside recycling is included in the service fee. Curbside yard waste collection is available for an additional fee.
- All other municipalities in the County are served by Waste Management of Ellensburg with voluntary service under the WUTC certificate described in Section 4.3.1. Private recyclers can only collect from within these areas.

A summary of the rates charged for residential garbage collection in the two contract cities is provided in Table 20.

Table 20. Garbage Collection Rates

Jurisdiction	Monthly Rates				
	1 can	2 cans	3 cans	4 cans	mini-can
Ellensburg	35-gal: $11.11 64-gal: $17.57 96-gal: $24.28				
Cle Elum	$13.41	$17.93	$20.14	$22.67	$10.73

4.3.3 EXISTING PROGRAMS FOR SELF-HAULED WASTE

Residents that choose to self-haul their waste utilize either the Cle Elum Transfer Station or the Ellensburg Transfer Station.

4.3.4 COLLECTION OF RECYCLABLES

State legislation allows counties to contract for the collection of source-separated recyclable materials from residences within unincorporated areas. Under this provision, counties can manage, regulate and establish the price of curbside recycling collection services. However, this does not mean the counties are authorized to operate their own solid waste collection systems as municipalities may. If the counties do not elect to contract for the collection of source separated recyclable materials from residences, the WUTC must be notified in writing no later than ninety days following the approval of the solid waste management plan's waste reduction and recycling element. Upon notification, the WUTC would have the responsibility for implementing any mandated curbside recycling or yard waste programs and determining their service levels, as addressed in the waste reduction and recycling element of the solid waste management plan.

Municipalities have the authority to provide or contract for residential curbside recycling services within their boundaries (Chapter 35.21.120 RCW). Additionally, they have the authority to manage, regulate, and fix the price of these services. Municipalities designated as urban are required to provide curbside collection of recyclables, or an equivalent program [Chapter 70.95.090(7)(b)(i) RCW]. Municipalities designated as rural may choose to meet minimum service level requirements either independently or in cooperation with the County.

Counties have the authority to contract with private vendors to provide recycling services to residences. Counties that choose this option assign service areas, establish and enforce service standards, and set rates. The County can consider contracting for residential recycling collection in unincorporated areas where a hauler fails to provide residential recycling established by the minimum service level. In Kittitas County, the only recycling contract with Waste Management of Ellensburg exists in the City of Ellensburg. This is further detailed in Chapter 3.3 of this Plan.

4.3.5 COLLECTION OF ORGANICS

In Ellensburg, curbside yard waste collection is available on a subscription basis. Yard waste is collected on a weekly basis from April to October, and on a monthly basis from November through March. Curbside yard waste collection is available for a fee.

Currently, no programs exist for the collection and composting of food waste.

4.4 NEEDS

Requirements for future solid waste collection will depend upon population growth rates. As required in Chapter 70.95.090(5)(d) RCW, solid waste collection needs must be projected for the next six years. Estimated current population and housing densities for the County incorporated areas are provided in Table 21. Forecasted growth in population for Kittitas County for the years 2010 through 2030 was provided in Figure 4.

Table 21. Estimated Population and Housing Densities for Incorporated Areas, 2009[19]

Jurisdiction	Land Area (sq mi)	Population	Population Density (pop/sq mi)	Housing Units	Housing Density (houses/sq mi)
Cle Elum	3.22	1,870	581	956	297
Ellensburg	7.05	17,230	2,444	6,732	955
Kittitas	0.62	1,150	1,853	510	823
Roslyn	4.30	1,015	236	623	145
South Cle Elum	0.38	575	1,513	224	589

Requirements for future collection services will depend on population growth rates. In 2009, the population of unincorporated Kittitas County was estimated at 18,060 and incorporated Kittitas County was estimated at 21,840. Estimates prepared by the Washington State Office of Financial Management (high series) project the total population to be 48,185 by the year 2015. This is an increase of 8,285 people, or almost a 21% increase. This level of growth will most likely require additional collection routes.

4.5 OPTIONS

The following options for improving collection were presented to the SWAC for evaluation.

COLL.1. Routing of Collected Waste through County Facilities

Continue to require, or to arrange for, all collected MSW to be routed through the Kittitas County owned transfer stations, or private transfer stations in the County, and/or assure collection of program fees for all MSW generated within the County.

COLL.2. Curbside Recycling Collection

The County should evaluate providing curbside recycling (collection of source-separated recyclables) from residences outside City limits. The County could, by ordinance, award a contract to collect source separated recyclable materials from residences within unincorporated areas. The County has complete authority to manage, regulate, and fix the price of the source separated recyclable collection service.

WM's contract with the developer of the Suncadia project in Upper County requires curbside recycling collection once the development contains 100 permanent residents. As new developments in Upper County are built, evaluate the possibility of "piggybacking" onto this requirement so that the new developments can also benefit from a curbside recycling program.

[19] State of Washington Office of Financial Management, April 1 Intercensal Population Estimates for the state, counties, and cities and towns for 1968 to 2000 and Postcensal Population Estimates for 2000 through 2009, State of Washington.

COLL.3. Review Collection Contracts

Periodically review collection contracts to ensure that services being provided are consistent with contractual obligations of the hauler. This review may include complaint and missed pickup resolution procedures, evaluating if service vehicles are adequate for season and terrain, recourse for non-compliance (i.e. liquidated damages), and fees paid are in compliance with contract.

COLL.4. New Development Requirements

The County should require new developments to incorporate solid waste disposal and recycling options and issues within their plans. Any issues and disposal options should be reviewed with Solid Waste prior to adoption within their development plan.

COLL.5. Funding Sources

Identify and procure additional funding sources to meet minimum Level of Service requirements.

4.6 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

4.7 SELECTED OPTIONS

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

Selected Options - Solid Waste Collection
COLL.1. Routing of Collected Waste Through County Facilities
COLL.2. Curbside Recycling Collection
COLL.3. Review Collection Contracts
COLL.5. Funding Sources

Chapter 5

Transfer and Disposal

5 TRANSFER AND DISPOSAL

5.1 TRANSFER STATIONS

Waste transfer stations play an important role in a waste management system, serving as a link between local waste collection programs and the final disposal facility. The primary reason for using a transfer station is to reduce the cost of transporting waste to disposal facilities. Consolidating smaller loads from collection vehicles into larger transfer vehicles enables collection crews to spend less time traveling to and from distant disposal sites and more time collecting waste. Transfer stations reduce overall transportation costs, air emissions, energy use, truck traffic, and road wear and tear.

Solid waste from commercial accounts and households in Kittitas County is presently hauled to either of two County-owned transfer stations: Ellensburg and Upper County:

- The Ellensburg Transfer Station is located off Industrial Way within the City of Ellensburg. The transfer station property is leased from the City of Ellensburg. The main building of the transfer station is approximately 7,500 square feet, with a tipping floor of approximately 6,800 square feet. The facility is designed with a top-loading chute and a drive-through lower transfer trailer bay.

- The Upper County Transfer Station (also known as the Cle Elum Transfer Station) is located between the cities of Roslyn and Cle Elum in the western portion of the County. The transfer station was designed and built in 2003 and includes a 7,300 square foot tipping floor. The station is on 10 acres of County-owned property.

The County operates the scalehouses where loads are weighed and fees are collected. Transfer station operations and hauling activities are provided by a private company under contract to the County. Waste collected at the transfer stations is hauled approximately 80 miles north of the City of Ellensburg to the Greater Wenatchee Landfill located in Douglas County, Washington.

Recent activity at the transfer stations is provided in Table 22.

Table 22. Summary of Deliveries to County Transfer Stations

Deliveries	2007	2008
Tons of municipal solid waste delivered to Ellensburg Transfer Station	25,101	23,814
Tons of municipal solid waste delivered to Upper County Transfer Station	10,539	8,458
Number of customers delivering waste to Ellensburg Transfer Station	58,381	57,309
Number of customers delivering waste to Upper County Transfer Station	29,200	28,500

Tipping fees charged at the transfer stations are summarized in Table 23.

Table 23. Transfer Station Tipping Fees

Material	Tipping Fee
Municipal solid waste	$86.84 per ton, plus garbage tax
Yard waste	$35.92 per ton, plus garbage tax
Construction/demolition waste at the Ellensburg Transfer Station	$47.70 per ton, plus garbage tax
Construction/demolition waste at the Upper County Transfer Station	$57.85 per ton, plus garbage tax
Appliances with CFC Refrigerants	$10.00 each, plus weight
Tires Passenger Other	 $1.75 each varies
Street sweeping waste	$51.75 per ton

5.1.1 NEEDS

As the County continues to grow, improvements and upgrades will be required at the transfer stations to continue to meet the needs of the County in the most cost-effective manner.

5.1.2 OPTIONS

The following options for improving collection were presented to the SWAC for evaluation.

TRD.XFER.1. Hours of Operation

Evaluate extended, or seasonal, hours of operation for the Transfer Stations.

TRD.XFER.2. Use of Transfer Stations

The County, through its transfer stations operations contract, should continue to provide for all collected MSW to be routed through the County-owned transfer stations, or private transfer stations in the County, and/or assure collection of program fees for all MSW generated within the County, including acceptance of self-hauled material.

TRD.XFER.3. Review and Monitoring

Periodically review throughput tonnage and make operational adjustments as necessary. Use of the new composting facility and increases in recycling collection may decrease the amount of material processed at the transfer stations, necessitating operational adjustments to maximize transfer station efficiencies.

TRD.XFER.4. Self-Haul Users

Continue maintenance of transfer stations for self-haul residents. Currently, this method of providing collection/disposal services for the Upper County and other remote areas of the County appears to be a satisfactory option from the residents' point of view.

TRD.XFER.5. Transfer Station Operations

Evaluate converting operation of the transfer stations from a private contractor to County Solid Waste.

5.1.3 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

5.1.4 SELECTED OPTIONS

The following option was selected by the SWAC for recommended implementation:

Selected Option - Transfer
TRD.XFER.2. Use of Transfer Stations

5.2 LANDFILL DISPOSAL

Landfilling is the disposal method whereby solid waste is permanently placed in or on land. Solid waste landfills in the State of Washington are regulated by local health departments and Ecology through minimum statewide standards for all municipal solid waste landfill (MSWLF) (Chapter 173-351 WAC). This section will provide information on landfills regulations, landfill goals, local facilities, and an inventory of present capacity.

A summary of disposal tonnages and locations for the past five years is provided in Table 24.

5.2.1 LANDFILL REGULATIONS

On October 9, 1991, the EPA promulgated the Solid Waste Disposal Facility Criteria, Final Rule (40 CFR Parts 257 and 258). These standards, issued under authority of the Resource Conservation and Recovery Act (RCRA) of 1976, set forth location restrictions, requirements for facility design and operations, groundwater monitoring, corrective action measures, and landfill closure standards. Under law, Congress has assigned primary responsibility for managing solid waste to state and local governments. States are required to incorporate federal standards into current state waste permitting programs. The most significant costs to implement the new federal standards are associated with design requirements, groundwater monitoring, corrective action, and facility closure/post closure costs.

Ecology responded to the new federal standards in November of 1993 with its revised MSWLF (Chapter 173-351 WAC). In general, the MFS standard for municipal solid waste landfills must be at least as strict, in every way, as the federal standards. However, because the federal standards do not establish rules for non-municipal solid waste landfills (i.e. demolition and woodwaste landfills), regulatory requirements for these landfills were developed by the state (Chapter 173-350-400 and -410 WAC).

Table 24. Disposal Summary for Kittitas County

Disposal Site	2004			2005			2006			2007			2008		
	MSW	Other	Total	MSW	Other	Total	MSW	Other	Total	MSW	Other	Total	MSW	Other	Total
Anderson LP LF		700	700		800	800		3,949	3,949		4,320	4,320		2,238	2,238
Columbia Ridge LF (OR)		110	110		112	112			0		214	214			0
Graham Road Recycling & Disposal		43	43		6	6		6	6		15	15		5	5
Greater Wenatchee Regional LF	25,171	2,907	28,078	30,292	3,220	33,512	32,067	251	32,318	35,579	1,157	36,736	32,122	1,707	33,829
Kittitas County LP LF (Ryegrass)[20]		1,976	1,976		4,521	4,521		3,279	3,279		4,743	4,743		4,794	4,794
Roosevelt Regional LF		28	28		2,877	2,877		115	115		4	4			0
Caton LP LF		6,069	6,069			0			0			0		70	70
Total	25,171	11,833	37,004	30,292	11,536	41,828	32,067	7,600	39,667	35,579	10,453	46,032	32,122	8,814	40,936

Note: "Other" includes: demolition, industrial, inert, wood, ash, sewage sludge, asbestos, petroleum contaminated soils, other contaminated soils, tires, medical waste, and other.
Source: Washington Department of Ecology, Solid Waste Disposal Data by County (Landfilled and Incinerated: 1994 - 2007and 2008 data from Ecology.

[20] The quantities for Ryegrass differ from Ecology because some of those reported by Ecology are based on volume, rather than tonnage. The totals presented in this table have all been converted to tons.

5.3 WASTE IMPORT/WASTE EXPORT

5.3.1 WASTE IMPORT

"Waste import" refers to the transfer of waste into Kittitas County from other areas. The County owns and operates the Ryegrass Landfill, which has been permitted as a Limited Purpose Landfill that accepts inert, demolition, debris waste. According to state records, this landfill does not accept waste from other counties; therefore, the importation of waste is non-existent in Kittitas County.

5.3.2 WASTE EXPORT

“Waste export” refers in this section to the transfer of waste from Kittitas County to a landfill located outside the area. There are no active municipal solid waste landfills in Kittitas County. The County’s municipal solid waste is transferred from the Ellensburg Transfer Station and the Upper County Transfer Station to the Greater Wenatchee Landfill.

Landfills used by Kittitas County for disposal include:

Greater Wenatchee Regional Landfill: This landfill is owned by Waste Management of Washington and is located in Douglas County, Washington. The site has been operated as a landfill since the late 1960’s and was purchased by Waste Management in 1987. In 2008, approximately 11 tons of asbestos waste, 408 tons of petroleum contaminated waste, 35,579 tons of municipal solid waste, and 737 tons of other waste were sent to the facility from Kittitas County.

Columbia Ridge Landfill: The Columbia Ridge Landfill is a regional landfill that is owned and operated by Waste Management, Inc. The landfill is situated on a 2,000-acre site located in Arlington, Oregon. The facility is designed to meet both state and federal environmental standards and operates under ODEQ permit #391. The landfill became operational in 1990 and has a life expectancy of at least 80 years. The facility accepts more than 6,000 tons of solid waste per day. Approximately 201 tons of asbestos-containing material and 9 tons of construction and demolition debris were sent to this facility in 2008 by County sources, although not under the direction of the County.

Roosevelt Regional Landfill: The Roosevelt Regional Landfill (RRLF) is located in a remote area of Klickitat County in South Central Washington. The largest private landfill in the state, Roosevelt covers an area of 2,545-acres, has a 120 million ton capacity, and sufficient capacity during the planning period. The landfill is owned and operated by Regional Disposal Company (originally owned by Rabanco, but later purchased by Allied Waste Industries/Republic). Approximately 4 tons of construction and demolition debris was sent for disposal from County sources in 2008, although not under the direction of the County.

Graham Road Limited Purpose Landfill: The Graham Road Facility is owned and operated by Waste Management of Washington, Inc., and is located in Spokane County. Graham Road is a Limited Purpose Landfill that accepts construction and demolition debris, asbestos, tires, wood, concrete, asphalt, special waste, petroleum-contaminated soils, creosote-contaminated wood, and

railroad ties. Graham Road has been in operation since 1991. Waste Management has owned and operated the landfill since 1997. In 2008, approximately 15 tons of construction/demolition waste, asbestos-containing materials, and other waste were sent to the facility from Kittitas County.

Anderson Limited Purpose Landfill: The Anderson Limited Purpose Landfill is a privately-owned facility located in Yakima, Washington. In 2008, approximately 4,320 tons of construction and demolition waste were sent from sources within the County, although not under the direction of the County. This is addressed further in Chapter 6.2 of this Plan.

Caton Limited Purpose Landfill: The Caton Limited Purpose Landfill is a privately-owned facility in Naches, Washington. Canton accepts construction and demolition debris, greenwaste, wood, inert debris, metal, special waste, shredded rubber, textiles and carpet, plastic, glass, paper, furniture, railroad ties, mobile homes, campers, and boats. Caton has been in operation for about 10 years. In 2008, approximately 70 tons of waste was sent to the facility from Kittitas County.

5.3.3 NEEDS

Given current technology and disposal patterns, landfills are and will remain a necessary and important component of waste management. Source reduction and recycling can divert significant portions of the waste stream, but not all components of the waste stream are recyclable. Therefore, Kittitas County will be required to continue to secure out-of-County disposal capacity or create additional capacity within the County. For now, the Greater Wenatchee Landfill has capacity well beyond the timeframe addressed by this plan.

5.3.4 OPTIONS

TRD.DISP.1. Assess development of an in-County MSW landfill, either public or privately owned and operated

The County could elect to site, permit, and develop a new landfill in Kittitas County that meets the regulatory requirements established by Ecology. To be a viable disposal alternative, the landfill should be designed and permitted to accept the daily disposal tonnage needed by the County and should provide a minimum of 20 to 30 years of capacity. Capital costs that need to be considered include land acquisition, environmental studies, engineering design and permitting costs, new cell construction costs, closure construction costs, and post-closure maintenance costs. Landfill operating costs also need to be evaluated for waste placement, compaction, cover, and environmental monitoring and control measures, as well as closure and post-closure care.

Options for this alternative include public ownership and operation, private ownership and operation, or a combination public/private ownership and operation.

TRD.DISP.2. Long-Term Disposal Opportunities

Evaluate other long-term disposal opportunities, such as:

- Contracting with a landfill operator.

- Contracting with a waste-to-energy or conversion technology operator.
- Evaluating the possibility of rail-haul.

TRD.DISP.3. Contractual Arrangements

Investigate contractual arrangements with other landfills to maximize benefit to the County. Renegotiating contracts can result in:

- Lower tipping fees (disposal costs).
- Established tipping fee escalation rate, which will help with future budgeting.
- Can provide the County with more stable, long-term pricing (i.e. 5 year, with renewals).

5.3.5 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

5.3.6 SELECTED OPTIONS

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

Selected Options - Waste Import / Waste Export
TRD.DISP.2. Long-Term Disposal Opportunities
TRD.DISP.3. Contractual Arrangements

5.4 ALTERNATIVE DISPOSAL TECHNOLOGIES

Not since the 1970s has the municipal sector expressed such high interest in various waste conversion technologies, including organics diversion and processing, waste to energy (WTE), and bio-fuels. Driven by emerging state and federal incentives programs for renewable forms of energy and the dynamic, but ever increasing price of petroleum-derived energy, technology vendors have been literally inundating every major municipality in the country with information on their systems.

There are more than 650 WTE plants operating around the world, mainly in Europe, South East Asia, Japan, and the United States. In the United States, 98 WTE plants generate about 2,500 megawatts of electricity to meet the power needs of nearly 2 million homes, and the facilities serve the garbage disposal needs of more than 36 million people. Further, WTE facilities have been implemented for solid waste management generated on islands throughout the world including Bermuda, Canary Islands, Hawaii, Japan, Ireland, and Taiwan.

This section provides an overview of some of the emerging technologies and other new programs and policies that are being planned and implemented that increase solid waste diversion and decrease disposal.

Conversion technologies include an array of emerging technologies that are capable of converting post-recycling residual solid waste into useful products and chemicals, including ethanol and biodiesel, and energy. The technologies may be thermal, chemical or biological. These technologies have been used successfully to manage MSW in Europe and Asia, but not all have progressed to commercial development in the United States.

5.4.1 OVERVIEW OF TECHNOLOGIES

Technologies appearing amenable for converting organic and other materials into energy, ethanol, and other products include hydrolysis, gasification, anaerobic digestion, and plasma arc. The following sections briefly describe these technologies.

Hydrolysis

Hydrolysis is a chemical decomposition process that uses water to split chemical bonds of substances. There are two types of hydrolysis, acid and enzymatic. Feedstock that may be appropriate for acid or enzymatic hydrolysis typically are plant-based materials containing cellulose. These include forest material and sawmill residue, agricultural residue, urban waste, and waste paper.

Gasification

Gasification is a process that uses heat, pressure, and steam to convert materials directly into a gas composed primarily of carbon monoxide and hydrogen. Various gasification technologies differ in many aspects, but all rely on four key engineering factors:

- Gasification reactor atmosphere (level of oxygen or air content).
- Reactor design.
- Internal and external heating.
- Operating temperature.

Typical raw materials used in gasification are coal, petroleum-based materials, and organic materials. The feedstock is prepared and fed, in either dry or slurried form, into a sealed reactor chamber called a gasifier. The feedstock is subjected to high heat, pressure, and either an oxygen rich or oxygen-starved environment within the gasifier. Most commercial gasification technologies do not use oxygen. All require an energy source to generate heat and begin processing.

There are three primary products from gasification:

- Hydrocarbon gases (also called syngas).
- Hydrocarbon liquids (oils).
- Char (carbon black and ash).

Syngas is primarily carbon monoxide and hydrogen (more than 85% by volume) and smaller quantities of carbon dioxide and methane. Syngas can be used as a fuel to generate electricity or

steam, or as a basic chemical building block for a multitude of uses. When mixed with air, syngas can be used in gasoline or diesel engines with few modifications to the engine.

Anaerobic Digestion

Anaerobic digestion is the bacterial breakdown of organic materials in the absence of oxygen. This biological process produces a gas, sometimes called biogas, principally composed of methane and carbon dioxide. This gas is produced from feedstock such as biosolids, livestock manure, and wet organic materials, and has been used in the wastewater treatment field for decades.

The anaerobic digestion process occurs in three steps:

1. Decomposition of plant or animal matter by bacteria into molecules such as sugar.
2. Conversion of decomposed matter to organic acids.
3. Organic acid conversion to methane gas.

Anaerobic processes can occur naturally or in a controlled environment such as a biogas plant. In controlled environments, organic materials such as biosolids and other relatively wet organic materials, along with various types of bacteria, are put in an airtight container called a digester where the process occurs. Depending on the waste feedstock and the system design, biogas is typically 55 to 75% pure methane.

Plasma Arc

Plasma arc technology is a non-incineration thermal process that uses extremely high temperatures in an oxygen-starved environment to completely decompose waste into very simple molecules. Plasma arc technology has been used for many years for metals processing. The heat source is a plasma arc torch, a device that produces a very high temperature plasma gas. A plasma gas is the hottest, sustainable heat source available, with temperatures ranging from 2,700 to 12,000 degrees Fahrenheit. A plasma arc system is designed specifically for the type, size and quantity of waste material to be processed. The very high temperature profile of the plasma gas provides an optimal processing zone with the reactor vessel through which all input material is forced to pass. The reactor vessel operates at atmospheric pressure.

The feedstock can be almost completely gasified, while non-combustible material, including glass and metal, is reduced to an inert slag. The product gas typically has a heating value approximately 1/4 to 1/3 the heating value of natural gas (natural gas has a value of approximately 1000 BTU/standard cubic foot); therefore, it may be used as an efficient fuel source for industrial processes, including the generation of electricity, and the production of methanol and ethanol. The slag can be used in the construction industry or for road paving. All other byproducts, such as scrubber water and cyclone catch material, can be recycled into the process for reprocessing to alleviate disposal requirements.

5.4.2 COMPARATIVE ASPECTS OF TECHNOLOGIES

Some of these technologies are relatively new, while others have been known for many years. Their application to the solid waste industry is, however, more recent and not as well developed.

Some of the anticipated benefits include the ability to manage excess biomass and organic wastes, ability to maintain local control over disposal, ability to locally produce renewable energy and green fuels, and promotion of energy independence from foreign oil.

Table 25 provides a very general comparative overview of these technologies.

Table 25. General Overview of Conversion Technologies

Process	Pre-Processing	By-Product	Product	Commercial Readiness
Pyrolysis	High	Char/Ash/Tar/Oil	Syngas	Yes
Gasification	Medium	Ash/Slag	Syngas	Yes
Anaerobic Digestion	Medium/High	Filtrate Water	Biogas, Compost	Yes
Hydrolysis	High	Wastewater, Ash	Ethanol	No
Aerobic Digestion	Medium/High	None	Compost	Yes
Plasma Gasification	Claims Low	Slag/Blowdown	Syngas	No

There are currently a number of municipalities considering alternative disposal technologies. For purposes of this Plan, a list of projects under consideration is not included as this list will remain dynamic during the planning period. An updated list of projects can be provided separately from this Plan.

5.4.3 CONSIDERATIONS

The risks associated with conversion technologies can be substantial. As such, these technologies are not recommended at this time for Kittitas County. However, the County may want to track the progress of pilot studies and those plants that have been or will soon be operating. Technologies that may be particularly of interest to the County would be anaerobic digestion and hydrolysis. These technologies have been proven to be successful in the processing of municipal solid waste and organics, and particularly in the case of biosolids.

The following criteria can be used by the County in the future to assess a particular conversion technology:

- **Degree and Scale of Operating Experience:** Some technologies have only been proven in pilot or laboratory operations, or with raw materials other than municipal solid waste. Other technologies have only been commercially operated in small facilities and the scale up to larger sized plants may result in unforeseen problems.

- **Reliability to Dispose of Municipal Solid Waste:** The technology selected must be able to dispose of solid waste in a reliable manner without frequent downtime resulting in diversion of such waste to landfills.

- **Energy and Material Market Compatibility:** The technology must be capable of recovering energy and materials for which markets are available.

- **Environmental Acceptance:** The technology must meet all permitted environmental requirements established by regulatory agencies.

- **Cost to the County:** The technology must dispose of the County's solid waste at a price the County can afford and be comparable in cost and benefits to alternative means of disposal.

5.4.4 OPTIONS

TRD.ALT.1. Future Consideration and Feasibility

Maintain energy recovery and incineration as an option for study and consideration if future needs and conditions support its use.

Review the feasibility of developing a new waste to energy facility in the County, if under consideration. This review would include appropriate technologies for further consideration, based on potential feedstock; advantages and disadvantages of those technologies compared to landfilling; ability to maintain local control over disposal; ability to locally produce renewable energy and green fuels; capital and operational costs; by-product characteristics and uses; impacts on diversion goals; environmental considerations; social considerations; permitting requirements; land ownership; cultural resources; and site selection.

TRD.ALT.2. Alternative Energy Technologies

Track advancements in alternative technologies and support the review of feasibility for energy recovery in the future. These include biofuel, anaerobic digestion, and pyrolysis.

5.4.5 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

5.4.6 SELECTED OPTIONS

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

Selected Options - Waste Import / Waste Export
TRD.ALT.1. Future Consideration and Feasibility
TRD.ALT.2. Alternative Energy Technologies

Chapter 6

Special Waste

6 SPECIAL WASTE

6.1 INTRODUCTION

This chapter includes discussions of various waste types generated in Kittitas County that are categorized, processed, handled, or otherwise addressed separately or differently than the wastes that are addressed in the other sections of this plan. Waste types examined in this section include: construction and demolition debris, agricultural waste; asbestos; biomedical waste; petroleum contaminated soils; electronics; and tires. Each strategy for the management and handling of these miscellaneous waste types is designed to be consistent with policies and programs for other waste types, as well as with the general solid waste management goals expressed in this Plan. The analysis of each miscellaneous waste type includes a description of existing practices, needs, and options.

Each of the options presented in the following sections was assessed by SWAC members. In general, the criteria below will be used to manage the special waste presented in the following sections of this chapter:

- **Promotes utilization.** This measures the extent to which this alternative will explore and encourage utilization versus disposal.
- **Regulatory compliance.** This criterion measures the extent to which this alternative will ensure that special waste is utilized or disposed in a manner that meets or exceeds federal, state, and local regulations
- **Environmental protection.** This criterion evaluates the ability of this alternative to provide an environmentally sound handling, utilization and/or disposal option.
- **Cost-effectiveness.** This measures the cost relative to effectiveness in handling special waste.
- **Capacity.** The degree to which this alternative will provide adequate capacity for the utilization and/or disposal of waste as needed during the planning period is evaluated.

6.1.1 BACKGROUND

Under the Washington State Dangerous Waste Regulations (WAC 173-303-073), certain hazardous wastes may be classified as “special wastes” if they pose a relatively low risk to human health and the environment. These special wastes are exempt from some of the provisions of the Dangerous Waste Regulations and may be handled with a level of protection that is intermediate between regulated hazardous waste and nonhazardous waste. Under certain conditions, these special wastes may be handled through municipal solid waste transfer stations and landfills.

To qualify as “special waste” under the Dangerous Waste Regulations, the waste must be in a solid form only and must not be regulated by the EPA as a hazardous waste. Certain corrosive or

low-toxicity wastes (for instance, ash from operations involving wood burning) may qualify as special wastes. Special wastes are typically not accepted at municipal solid waste facilities. For example, when landfilled, asbestos requires special permitting provisions.

6.1.2 EXISTING CONDITIONS

Under Washington State law, any generator wishing to manage hazardous wastes as special wastes should consult with Ecology and, as appropriate, solicit the services of qualified waste management contractors for handling and managing the wastes. Hazardous wastes are not accepted at municipal solid waste facilities unless they are household hazardous waste or from small waste generators, and in those cases, the waste is collected at the Kittitas County Moderate Risk Waste Facility.

6.1.3 NEEDS

No additional needs were identified for this waste stream.

6.2 CONSTRUCTION AND DEMOLITION DEBRIS

6.2.1 BACKGROUND

Construction and demolition (C&D) waste is defined in the Washington Administrative Code (WAC 480-70-041) as follows:

> *"Construction debris" or "construction waste" means solid waste resulting from the building or renovation of buildings, roads, and other man-made structures. Construction debris includes, but is not limited to, materials such as plasterboard, cement, dirt, wood, and brush.*
>
> *"Demolition waste" or "demolition debris" means solid waste resulting from the demolition or razing of buildings, roads, and other man-made structures. Demolition waste includes, but is not limited to, concrete, brick, bituminous concrete, wood and masonry, composition roofing and roofing paper, steel, and minor amounts of other metals like copper.*

6.2.2 EXISTING CONDITIONS

In Kittitas County, C&D waste is disposed at the two transfer stations and at Ryegrass Landfill, a limited purpose landfill. The Washington Administrative Code (WAC 173-350-100) defines limited purpose landfills as follows:

> *"Limited purpose landfill" means a landfill which is not regulated or permitted by other state or federal environmental regulations that receives solid wastes limited by type or source. Limited purpose landfills include, but are not limited to, landfills that receive segregated industrial solid waste, construction, demolition and land clearing debris, wood waste, ash (other than special incinerator ash), and dredged material.*

Due to the downturn in the economy and its effect on new construction in the Kittitas Valley, C&D disposal has declined from over 9,000 tons in 2007 to slightly more than 7,000 tons in 2008. Additional evidence of this slowdown and the associated decrease in C&D waste generation is reflected in the number of building permits issued by Kittitas County. The average number of building permits issued per month declined from 125 per month in 2007 to slightly less than 70 per month during the first three quarters of 2009.

Of the approximately 7,000 tons of C&D waste from Kittitas County disposed in landfills during 2008, about 775 tons were delivered to the two County transfer stations as part of the MSW stream, and about 4,000 tons were delivered directly to Ryegrass Landfill. The remainder was exported out of the County to Anderson Rock & Demolition Pit, outside of the County's control. Each of these disposal options is further described below.

Disposal

Disposal at Transfer Stations

Construction and demolition debris from both the northern part of Kittitas County and the Ellensburg area is handled in the same way. Residents of unincorporated Kittitas County and incorporated cities bring C&D waste directly to the Cle Elm or Ellensburg transfer stations. If the C&D debris contains no putrescible materials, the customer is charged a reduced fee. The "clean" C&D waste is then hauled by the transfer station operations contractor to Ryegrass Limited Purpose Landfill for final disposal.

Disposal at Ryegrass Landfill

Licensed contractors and other businesses with customer accounts haul C&D waste directly to Ryegrass Landfill. The landfill does not accept cash customers. The transfer station operations contractor and contracted/certificated haulers (such as Waste Management) also haul C&D waste directly to Ryegrass. Ryegrass Landfill accepts the following C&D materials for disposal:

- Asphalt
- Bath tubs
- Bricks
- Concrete
- Culverts
- Doors
- Fencing material
- Insulation
- Metal piping
- PVC and Other Plastics
- Roofing material
- Sheet rock
- Sinks
- Tables
- Tile
- Toilets
- Windows
- Wiring
- Wood beams
- Wood debris from housing
- Wood pallets
- Mixed C&D Debris

Disposal at Anderson Rock and Demolition Pit

Anderson Rock and Demolition Pit is a privately owned facility located in Yakima County north and west of the City of Yakima. Although the disposal site is located approximately 35 miles from the City of Ellensburg, low tipping fees provide an incentive for some commercial construction firms working within the County to travel that distance to dispose of waste at this facility and circumvent the County solid waste transfer system infrastructure. Beginning in 2006, this site has seen an increase in material delivered from County sources.

Recycling and Diversion

Currently no C&D processing or recycling facilities are located in Kittitas County. However, Ecology reports that limited amounts of C&D waste from Kittitas County are diverted. These materials include asphalt/concrete (2,416 tons in 2008) and mixed C&D loads (5 tons in 2008).

6.2.3 NEEDS

Based on waste characterization data, mixed C&D debris composes about 18% of Kittitas County's total disposed waste. The recoverable portions of the C&D waste stream were composed of clean wood (42.3%), metals (2.6%), and other recyclable C&D (19.9%), shown in Figure 14. Much of the C&D debris that arrives at the two County transfer stations is from self-haul loads, which contain 15-20% of clean wood and other recyclable C&D materials, on average.

To capitalize on this significant opportunity to divert materials from landfill disposal, the County could:

- Increase the capacity for segregating recoverable and mixed C&D loads at both transfer stations and at Ryegrass Landfill, focusing on the self-haul sector.
- Develop the capability or enter into partnerships to process mixed C&D loads.
- Provide for or support materials exchange and reuse opportunities for construction materials.
- Provide greater financial incentives for separating C&D debris from mixed putrescible solid waste.

With a large amount of material being delivered to the Anderson Limited Purpose Landfill outside the County's control in 2008, the County may need to address the implication this activity has on the amount of waste processed at the two transfer stations and the revenues received from transfer station operations. This matter can be addressed through incentives or flow control ordinances. When solid waste leaves the County and is processed through a non-County owned and operated facility, it results in a significance loss of revenue to the system. This impacts the County's ability to offer solid waste services such as recycling, education and hazardous waste management.

6.2.4 OPTIONS

The following options were presented to the Kittitas County SWAC for evaluation.

SPC.CD.1. Recovery of C&D Debris

Evaluate the feasibility of recovering C&D debris at Ryegrass Landfill and at the two transfer stations, potentially through a contract with private recyclers. Targeted materials would include recoverable wood, metals, concrete/asphalt and other inert materials, gypsum board, composition shingles, and potentially reusable items.

SPC.CD.2. Impose a Surcharge on Recoverable C&D

Consider increasing tip fees at the two transfer stations and at Ryegrass Landfill for loads that contain a significant quantity of recoverable C&D loads. Some counties and cities have begun to impose surcharges on mixed C&D and yard waste loads to encourage higher levels of recycling. These surcharges provide a strong economic incentive that:

- Encourages source separation of loads composed mainly of recoverable materials.
- Diverts mixed C&D loads to processing facilities.

If the County chooses to impose surcharges, either the County or its contractors would need to provide recycling bins and processing capabilities.

SPC.CD.3. Acquire Processing Capabilities

Consider acquiring a facility to process mixed C&D loads and recover wood, metals, inert waste, and other marketable materials. The County could either construct this facility or select a private contractor to design, build, and operate the facility. The facility could potentially be located at one of the transfer station sites or at Ryegrass Landfill. The County or its contractor also would be responsible for marketing and transporting materials to processors or end-users.

SPC.CD.4. Enact a C&D Ordinance

C&D policies have been successfully used in a number of cities and states across the country to divert substantial amounts of C&D wastes. These policies and ordinances require developers and contractors, as a condition of their building permits, to recycle a predetermined amount of demolition and construction waste from project sites. Performance bonds are often required, and the contractor must provide evidence that the required proportion of C&D wastes is actually recycled. To meet these requirements, contractors may either source-separate and recycle materials such as wood and inert waste or they may haul mixed C&D loads to certified processors that achieve the desired level of recovery.

SPC.CD.5. Ban Disposal of Clean Wood and Inerts

Under this option, the County would no longer accept loads at the two transfer stations or at Ryegrass Landfill that contain more than 10% by volume of clean, recoverable wood or reusable inert waste such as concrete and asphalt.

SPC.CD.6. Materials Exchange Program

Continue to work with non-profit organizations, such as Iron Straw, Northwest Ecobuilding Guild, Habitat for Humanity, and any others that are established to promote a materials exchange program or reuse store for C&D materials.

SPC.CD.7. Evaluate Incentives for Local Management

In order to further promote the use of the County's Ryegrass Landfill, the County could consider modifying the revenue structure to provide a financial incentive to haulers and contractors to use this facility instead of exporting the material out of County.

SPC.CD.8. Evaluate Flow Control Measures

A flow control ordinance would require all solid waste generated in unincorporated areas and within the corporate limits of cities and towns of Kittitas County to be disposed of at a Kittitas County solid waste facility. Enforcement of the ordinance could be through local law enforcement.

The U.S. Supreme Court has ruled that implementing flow control measures does not violate the Commerce Clause of the US Constitution because the processing facilities are owned and operated by a public entity, and that there is a greater benefit to the public from ensuring the sound financing of the system[21].

6.2.5 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

6.2.6 SELECTED OPTIONS

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

Selected Options - Construction and Demolition Debris
SPC.CD.1. Recovery of C&D Debris
SPC.CD.6. Materials Exchange Program
SPC.CD.8. Evaluate Flow Control Measures

6.3 AGRICULTURAL WASTE

Agricultural wastes are by-products of farming and ranching that include crop harvesting waste and manure. As shown in the land use map provided as Figure 3, most of the commercial agriculture in Kittitas County is practiced in the lower part of the County.

[21] *United Haulers Assn., Inc. v. Oneida-Herkimer Solid Waste Management Authority*, 550 U.S. ____ - 05-1345 (2007).

6.3.1 EXISTING CONDITIONS

According to the 2007 Census of Agriculture, the number of farms in Kittitas County is increasing; up 11% from 931 in 2002 to 1,038 farms in 2007.[22] The total acreage in farms, however, has decreased 17% from 230,646 acres in 2002 to 191,087 acres in 2007. The average farm size has decreased 26%; averaging 248 acres in 2002 down to 184 acres in 2007.

A rural waste characterization study conducted for Ecology attempted to quantify and characterize the types of waste disposed, recycled, or reused for four agricultural groups (field crops, orchards, vegetables, and livestock). The study found that less than 1% of the waste generated by these agricultural groups was landfilled. The primary means of handling waste generated by agriculture was through beneficial use, such as replenishment of soil nutrients.

Given the rural nature of Kittitas County, the potential exists for the generation of significant amounts of biomass that could be used in the production of one of the above-mentioned products. In 2005, a biomass inventory and bioenergy assessment was completed for Washington State. The goal of the study was to inventory Washington's bioresources as a first essential step to implement the state's Beyond Waste strategy for reduction of organic residuals in solid waste. This inventory also is seen as a first step toward a sustainable energy policy and vision within the state.[23]

The project geographically identified 45 potential biomass sources in Washington at a County level. The biomass inventory was then converted to potential energy production using anaerobic digestion (for non-woody plants) and simple combustion (for woody plants) as representative conversion technologies. Electrical energy production was the calculated product for this study; however, the report notes the need for additional study for other products such as fuels and chemical byproducts.

The study results show that Kittitas County has an annual production of almost 75,000 tons of underutilized dry biomass (primarily barley straw and cattle manure) that is capable of producing, via assumed combustion and anaerobic digestion, over 50 million kWh of electrical energy. Kittitas County could further investigate the generation and availability of these feedstocks, and the potential for beneficial reuse of biomass within the County.

6.3.2 NEEDS

There are options for beneficial reuse of biomass within the County and investigating the feasibility of developing a facility for the production of biofuels, biopower, or bioproducts. Biomass is any sort of vegetation - trees; grasses; and plant parts such as leaves, stems, and twigs. During photosynthesis, plants combine carbon dioxide from the air with water to form

[22] 2007 Census of Agriculture, Kittitas County, United States Department of Agriculture, Washington Agricultural Statistics Service.

[23] Washington State University and Washington State Department of Ecology, Biomass Inventory and Bioenergy Assessment: An Evaluation of Organic Material Resources for Bioenergy Production in Washington State, December 2005.

carbohydrates, which form the building blocks of biomass. Biomass can produce electricity, heat, liquid fuels, gaseous fuels, and a variety of useful chemicals, including those currently manufactured from fossil fuels. Currently, biomass can be used for:

- Biofuels: Liquid fuels for transportation, such as ethanol and biodiesel:
    - Ethanol is an alcohol that is made using a process similar to brewing beer where starch crops (such as corn) are converted into sugars, the sugars are fermented into ethanol, and then the ethanol is distilled into its final form. Ethanol made from cellulosic or hemi cellulosic biomass materials (such as agricultural and forestry residues) instead of traditional feedstocks (starch crops) is called bioethanol.
    - Biodiesel is manufactured from vegetables oils, animal fats, and recycled restaurant greases.
- Biopower: The use of biomass feedstocks instead of conventional fossil fuels (natural gas or coal) to generate electricity or industrial process heat and steam. Biomass is burned and the resultant heat is used to turn water into steam, which is then used to turn turbines that are connected to electric generators.
- Bioproduct: A chemical, material, or other product derived from renewable biomass resources.

6.3.3 OPTION

SPC.AG.1. Evaluate Opportunities for Beneficial Reuse of Biomass

Maintain biomass use as an option for study and consideration if future needs and conditions support its use and monitor other projects within the state.

Review the feasibility of developing biomass facilities in the County, if under consideration. This review would include appropriate technologies for further consideration, based on potential feedstock; advantages and disadvantages of those technologies compared to landfilling; ability to maintain local control over disposal; ability to locally produce renewable energy and green fuels; capital and operational costs; by-product characteristics and uses; impacts on diversion goals; environmental considerations; social considerations; permitting requirements; land ownership; cultural resources; and site selection.

6.3.4 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

6.3.5 SELECTED OPTION

The following option was selected by the SWAC for recommended implementation:

Selected Option - Agricultural Waste
SPC.AG.1. Evaluate Opportunities for Beneficial Reuse of Biomass

6.4 TIRES

The term "tires" refers to tires from automobiles, trucks, tractors, or any other use. They are formed from rubber and usually reinforced with cords of nylon, fiberglass, or steel. Tires do not include the metal wheel to which they are usually fastened.

Refuse tires are an inevitable by-product of normal vehicle use. A tire becomes refuse when it wears out and is not retreaded or used in some other way. With its useful life over, it must be stored (temporarily) or disposed of. Tire dealerships remove most old tires in the process of selling new ones. Individuals may also accumulate old tires. When vehicles are junked, the tires on the vehicle, spares, and snow tires may be stored by the owner or wrecking yard.

General statutory nuisance regulations and the Solid Waste Handling Standards (Chapter 173-350 WAC) provide standards for the regulation and storage of tires. The state requirements call for tires to be stacked in piles a maximum of 10 feet high, with each pile having a maximum area of 5,000 square feet. A clear space of 40 feet between piles allows fire truck access. There is also a requirement that the pile be fenced to prevent indiscriminate dumping and vandalism.

The Solid Waste Management and Reduction and Recycling Act (Chapter 70.95.500 RCW, et seq.) addresses the storage and handling of tires. The law requires haulers (more than five tires) to obtain a license and post a $10,000 bond, and storage pile owners (800 or more tires) to obtain a solid waste handling permit and obtain a financial assurance mechanism for closure of the site. Penalties for unlicensed haulers and site owners are a misdemeanor charge with a maximum one-year in jail and a $5,000 fine.

6.4.1 EXISTING CONDITIONS

In 2008, the County collected and recycled just over 135 tons of tires. The County's transfer stations accept tires for a fee. The assigned fee schedule is:

Type	Price
Passenger	$ 1.75/tire
Semi/Large truck	$ 5.00/tire
Tractor	$ 10.00/tire
Heavy Equipment	$ 50.00/tire

Additionally, passenger and various other tires may be taken to local participating tire retailers throughout the County for legal disposal. Most tire retailers contract with a tire collector for transport away from their site and legal disposal/recycling. The majority of tires are transported out of the County or state.

6.4.2 NEEDS

The illegal disposal of tires represents a significant impact to public health and safety and the environment. Chapter 70.95.510 RCW was amended to reinstate the tire fee, effective July 1, 2005. The original tire fee, which had expired in 1994, had been used to clean up tire dumps, fund a 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. The fee is expected to raise $4.4 million per year and will expire in 2010. Other amendments provide for stricter licensing requirements and make tire transporters (licensed or not) liable for the cost of cleaning up illegally stored or dumped tires. The amendments also directed Ecology to conduct a study of unauthorized tire piles.

In 2007-2008, five sites in the County with tire piles (724 tons of tires) were cleaned up at a cost of $173,254. There are two more sites requiring clean up (estimated 150 tons of tires) at an estimated cost of $28,273.[24]

Tires will continue to be accepted at the transfer stations for offsite disposal at a permitted facility. All tires generated within the County should be transported for disposal at a licensed, permitted disposal site, or for reuse or recycling at a fully licensed, permitted processing facility.

6.4.3 OPTIONS

SPC.TIR.1. Public Education Programs for Tires

In addition to public disposal options, provide the public with a list of local private facilities throughout the County that accept old tires for a small fee, to eliminate illegal dumping or tire piles. Consumers may also be educated on tire maintenance, tire repair, and lifecycle costs to encourage purchase of longer-life tires. One specific target for educational materials are companies that operate commercial fleets.

SPC.TIR.2. Implement Public Education and Cleanup Program for Abandoned and Stockpiled Automobiles

Residents can be educated on the need for removal of abandoned vehicles to prevent stockpiling. If the problem persists, the County could implement enforcement measures to require the removal of vehicles from property that pose a risk to public health and safety.

SPC.TIR.3. Evaluate Diversion Options for Tires

Scrap tires can be used in a number of productive and environmentally safe applications. The three most common uses are:

[24] Washington Department of Ecology, 2008 Report to the Legislature, Tire Recycling and Reuse in 2007, Tire Pile Cleanup Status for 2008.

- Civil Engineering Applications: Scrap tire material replaces some other material currently used in construction, such as lightweight fill materials that include expanded shale or polystyrene insulation blocks, drainage aggregate, or even soil or clean fill. Some of the applications include: sub grade fill and embankments, backfill for wall and bridge abutments, sub grade insulation for roads, and septic system drain fields.

- Ground Rubber Applications: Tires are processed to a small particle size and the finished product, crumb rubber, can be used in a variety of applications, from loose fill (e.g., playground cover) to molded products to rubberized asphalt.

- Tire Derived Fuel: Scrap tires are used as fuel because of their high heating value. Using scrap tires is not recycling, but is considered a beneficial use. Typical tire derived fuel users include the cement industry, the pulp and paper industry, electric utilities, and certain industrial boilers.

SPC.TIR.4. Continue Current System

Tires are banned from landfills and it may be necessary to re-evaluate the County's program, should it become necessary. If additional needs and/or opportunities arise, the SWAC will evaluate options for managing waste tires and make a recommendation to the Board of County Commissioners. Upon approval by the Board, this recommendation may become part of this Plan.

6.4.4 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

6.4.5 SELECTED OPTIONS

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

Selected Options - Tires
SPC.TIR.1. Public Education Programs for Tires
SPC.TIR.3. Evaluate Diversion Options for Tires
SPC.TIR.4. Continue Current System

6.5 BIOMEDICAL WASTES

Medical treatment and research facilities generate a wide range of special wastes that require handling and disposal. Because of the variety of waste streams, several different regulatory agencies at the local, regional, state, and federal level have regulations pertaining to best management practices, and apply their own definitions to waste types. For the purpose of this Plan, biomedical waste means, and is limited to the following types of waste in accordance with Chapter 70.95K.010 RCW:

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

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

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

- **Human Blood and Blood Products:** Discarded waste human blood and blood components, and materials containing free-flowing blood and blood products.

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

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

The handling, transport, treatment, and disposal of infectious waste are regulated in some fashion by the following entities:

- US Environmental Protection Agency.
- Washington Department of Ecology.
- Washington Department of Health.
- Washington Department of Transportation.
- Washington Utilities and Transportation Commission (WUTC).
- Kittitas Health Department.
- National Hospital Certification Association.

Under the Medical Waste Tracking Act of 1988 (MWTA), the EPA gives states the responsibility of permitting infectious waste treatment technologies. Treatment technologies must be consistent with the requirements of Title V of the Federal Clean Air Amendments.

Washington State agencies most directly involved in this process are Ecology, the Department of Health, and the WUTC. Ecology administers permits for the following biomedical wastes treatment alternatives:

- Incineration.
- Autoclaving.
- Chemical disinfection.
- Microwaving.
- Macrowaving (for off-site treatment only).
- Gas vapor and irradiation sterilization.

6.5.1 EXISTING CONDITIONS

One franchise hauler, Stericycle, has a certificate granted by the WUTC (certificate G-244) to collect biomedical throughout the state. The collection service is provided on an on-call and regular basis.

The State of Washington has developed a product stewardship program for pharmaceuticals.

6.5.2 NEEDS

While medical and disposal facilities and emergency responders are informed about proper management of biomedical wastes, residential household generators may not be informed about proper management for sharps or pharmaceuticals. Pharmaceutical wastes present both wastewater and solid waste management issues. Often, residents flush unwanted pharmaceuticals down toilets or pour them down drains, leading to potential contamination of surface waters, ground waters, and biosolids. Proper disposal is also an issue for solid waste collection workers who must handle the waste.

6.5.3 OPTIONS

The following options were presented to the SWAC for evaluation.

SPC.BIO.1. Develop and Distribute Education Materials for Correct Management of Residential Medical Waste

Educational materials have been developed by the County regarding proper disposal of sharps, which includes information about how to properly store and dispose of them. Information should be developed and distributed explaining the environmental and health consequences of disposing of pharmaceuticals through the wastewater system. Outreach and education should be coordinated with the Health Department regarding the proper disposal of sharps and pharmaceuticals. Brochures at medical clinics and pharmacies would help educate the public about proper disposal.

- Work with home healthcare professionals, clinics, and hospitals to jointly provide information regarding the proper disposal of medical waste and County Ordinance 1999-01.

- Implement a wider distribution of information already published by Solid Waste Programs to include clinics, hospitals, doctor’s offices, pharmacies and nursing homes.

SPC.BIO.2. Monitoring of Solid Waste Programs for Biomedical Waste

The Health Department should continue to monitor those working within the solid waste program, in addition to the waste stream itself to ascertain if there is a problem with current practices, and if so, work with Solid Waste for a solution.

SPC.BIO.3. Pharmaceutical Waste

- Evaluate options for managing pharmaceutical waste and packaging, including establishing drop-off sites and promoting mail-back options.
- Support private efforts to take-back medical waste, including hospital and law enforcement programs.

6.5.4 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

6.5.5 SELECTED OPTIONS

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

Selected Options - Biomedical Waste	
SPC.BIO.1.	Develop and Distribute Education Materials for Correct Management of Residential Medical Waste
SPC.BIO.2.	Monitoring of Solid Waste Programs for Biomedical Waste
SPC.BIO.3.	Pharmaceutical Waste

6.6 VETERINARY WASTES

6.6.1 BACKGROUND

Veterinary wastes pose some of the same hazards in the waste stream as untreated medical wastes pose. Like medical offices, untreated surgical wastes, specimen cultures, syringes, and blades can enter the waste stream from veterinary offices. Such wastes, when incinerated or properly sterilized by autoclave or chemical methods, are considered treated wastes and do not fall within the definition of biomedical or biohazards wastes.

The large farming, cattle, bison and sheep ranches within the County require more than the normal need of veterinarians. Because of this it is important to address this waste stream separately.

6.6.2 EXISTING CONDITIONS

Disposal practices for veterinary waste, including sharps and dead small animals, generally is similar to those of medical facilities. Washington State is currently formulating a new policy for animal carcasses that will comprise disposal requirements for three classes.

There is a need to support viable options for the proper handling of large animal carcasses, as there is currently no facility to handle them inside of the County. The County currently provides specific guidelines for proper disposal of large animals on its website, however due to the high water table in much of the County; burial of large animals is difficult. There is one private company, Northwest Rendering, which handles large animals for a flat fee of approximately $320 per animal which includes pick up and drop-off of the carcass. The animals are then disposed of via state guidelines in Grant County.

6.6.3 NEEDS

There is a need for ongoing support of viable options regarding the proper handling and disposal of large animal carcasses, as there is currently no County facility to handle them.

Although the current system is adequate to meet the County's needs at this time; there may be circumstances that could require an exploration by SWAC of additional or other options for dealing with veterinary wastes. If such analysis or exploration is required, the SWAC will evaluate and recommend alternatives for inclusion in this Plan to the Board of County Commissioners, and thus may be eligible for funding.

6.6.4 OPTIONS

The following options were presented to the SWAC for evaluation.

SPC.VET.1. Large Animal Disposal

Support viable statewide, neighboring County, and privately developed programs for long-term alternatives for large animal disposal.

SPC.VET.2. Education and Outreach - Large Animal

- Provide information to the public on options within the County for the legal removal and/or disposal of large animals, such as current contact information for rendering and burial service companies.

- Since disposal on private property is no longer permitted (KCHD 1999-01, p. 19), on-site composting is a viable alternative. The County may provide information on proper composting techniques to minimize the impact to environmental health and groundwater.

6.6.5 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

6.6.6 SELECTED OPTIONS

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

Selected Options - Veterinary Waste
SPC.VET.1. Large Animal Disposal
SPC.VET.2. Education and Outreach - Large Animal

6.7 PETROLEUM-CONTAMINATED SOILS

Petroleum-contaminated soils (PCS) are soils that have been contaminated by a petroleum product through leaks from petroleum product storage tanks or spills. Some PCS can be contaminated with lead, benzene, solvents, and PCBs and therefore may be considered hazardous. This section discusses only non-hazardous PCS.

PCS requires clean up when hydrocarbon contamination levels exceed those specified in Ecology's Model Toxics Control Act Cleanup Regulation (MTCA) (WAC 173-340). Under the MTCA, there are separate cleanup levels for industrial verses non-industrial zoned land along with maximum allowable levels for each individual constituent. PCS above MTCA cleanup levels can be treated in-situ, in place, or excavated and treated onsite or at an approved treatment facility.

6.7.1 EXISTING CONDITIONS

PCS generated in Kittitas County may be disposed of in several ways. One option is for the generator to remediate and dispose of the soil on site. Another option is to haul the PCS to the Graham Road facility in Spokane, the Roosevelt Landfill in Klickitat County, or the Greater Wenatchee Regional Landfill in Douglas County. The amount of PCS disposed annually varies widely, primarily dependent on the number of projects that include remediation of sites such as gasoline stations. Over the past five years, the average annual PCS has ranged from a high of 5,860 tons in 2005 to a low of 163 tons in 2006. In 2008, 746 tons were disposed.

6.7.2 NEEDS

Proper disposal of PCS is largely the responsibility of the generator. Generators have several options, including treating their soils onsite, disposing of them at a regional treatment center, or disposing of them at a permitted landfill. The generator must select a method approved by Ecology and will use cost to make the final selection of disposal method. Generators with PCS designated as dangerous wastes must find other methods of appropriately disposing of their wastes that complies with all local, state, and federal regulations.

Volumes of PCS that are generated and require disposal are highly variable and dependent on the number and size of remedial activities taking place. However, most efforts to remove and upgrade aging gasoline or fuel tanks have been accomplished and volumes of PCS originating from these activities are expected to decrease.

6.7.3 OPTIONS

The following options were presented to the SWAC for evaluation.

SPC.PCS.1. In-County PCS Site

Support the development of a site within the County to which soil can be taken for remediation into a useful product. The remediated soil can then be used as daily cover at the Ryegrass Landfill CDL facility.

SPC.PCS.2. Street Sweepings Management

Evaluate management solutions for street sweeping debris, which can be used as cover at the Ryegrass CDL facility.

SPC.PCS.3. Feasibility Study for PCS Management

Study the feasibility of other options to effectively handle PCS, based on available funding.

SPC.PCS.4. Import PCS

Explore options related to importing PCS that, once treated, would be used as cover material at the Ryegrass Landfill. This option would be considered upon approval by the Board of County Commissioners.

6.7.4 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

6.7.5 SELECTED OPTIONS

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

Selected Options - PCS
SPC.PCS.1. In-County PCS Site
SPC.PCS.2. Street Sweepings Management
SPC.PCS.3. Feasibility Study for PCS Management
SPC.PCS.4. Import PCS

6.8 ASBESTOS

Asbestos waste is any waste that contains more than 1% asbestos by weight (40 CFR Part 763, Appendix A, Subpart F). A Waste Shipment Record that meets EPA guidelines must accompany all asbestos-containing waste. In a November 1990 amendment, the National Emission Standards for Hazardous Air Pollutants (NESHAP) established record-keeping and operational requirements for disposal facilities accepting asbestos waste.

Asbestos containing materials (ACM) can only be disposed of in approved waste disposal sites and must be sealed in leak-tight containers while wet, or put into leak-tight wrappings. Labels are required on all ACM containers and must contain name and location of generation. Transport vehicles must be marked and accompanied by a waste shipment record to be provided to the disposal site owner or operator upon receipt. Asbestos contractors are licensed by the Washington State Department of Labor and Industries.

6.8.1 EXISTING CONDITIONS

Municipal solid waste landfills can accept non-friable asbestos wastes if acceptance and disposal procedures are in compliance with federal, state, and local regulations. Asbestos waste generators can haul their waste to either the Columbia Ridge Landfill, the Roosevelt Regional Landfill, the Greater Wenatchee Regional Landfill, or the Graham Road facility for disposal. All of these sites have approved programs for asbestos waste disposal. In 2008, approximately 217 tons of asbestos was disposed from Kittitas County, the majority of this waste was sent to Columbia Ridge.

6.8.2 NEEDS

Asbestos containing materials can be disposed of in solid waste landfills if they are encapsulated, packaged, and covered for disposal in accordance with the local, state, and federal asbestos regulations described previously. Acceptance of asbestos at a landfill facility requires special handling of the material, additional paper work, and additional training of personnel. These requirements increase asbestos waste disposal costs. Current disposal options for asbestos are adequate, so no additional options were evaluated.

6.8.3 OPTIONS

The following options were presented to the SWAC for evaluation.

SPC.ACM.1. Public Education on ACM

Allow current private solid waste hauler to inform the public on proper handling of ACM.

SPC.ACM.2. Feasibility Study for ACM Management

Study the feasibility of an in-County management solution.

6.8.4 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

6.8.5 SELECTED OPTIONS

The following option was selected by the SWAC for recommended implementation:

Selected Option - Asbestos
SPC.ACM.1. Public Education on ACM

6.9 LIQUID WASTES

6.9.1 BACKGROUND

In March and April 1995, two 300,000 gallon liquid waste evaporation lagoons (LWELs) were built on a portion of the Ryegrass Landfill property owned by Kittitas County Solid Waste. In May of 1995, Kittitas County Solid Waste began accepting liquid waste (septage) from residents and businesses within the County who were not serviced by city-owned treatment plants or lagoons.

6.9.2 EXISTING CONDITIONS

The current LWELs are constructed in accordance with WAC 173-350 Solid Waste Handling Standards, which reflects that a thirty mil reinforced artificial liner, placed on top of a structurally stable foundation to support the liner be utilized. The lagoons are designed to be used in tandem. Only one lagoon at a time is used, when that lagoon has reached capacity, the contents are allowed to evaporate while the second lagoon is put into use. According to the Operations Plan, sludge is dried to a semi-liquid state, mixed with lime to stabilize the pH, and then land-applied at the Ryegrass facility in accordance with the permit. The County LWELs are owned and operated by Kittitas County Solid Waste.

Under the current permit, liquid wastes entering the LWEL from any possible source of moderate risk or hazardous wastes must be tested for such constituents prior to acceptance at the LWEL. Records, including source of the wastes, amount in gallons and date accepted are kept by Kittitas County Solid Waste.

In 1997 a Waste Water Discharge Permit was issued by Ecology's Central Regional Office Water Quality Section which "grandfathered" in the County's current liquid waste evaporation lagoon.

There is also a wastewater lagoon that accepts only leachate from the transfer station, Pautzke bait leachate, and other approved liquid waste. The closed landfill at Ryegrass has one leachate lagoon and currently has the capacity to expand.

6.9.3 NEEDS

Considering the current population trends and the current rate of generation of liquid waste, the need for additional lagoons is well substantiated. The amount of liquid waste going into the lagoons currently exceeds the capacity. There is a need for additional, larger liquid waste lagoons to keep up with the current demand. Another screen is needed for the second pond to assure recognizables do not surface.

A decanting facility is needed to handle the liquid from catch basins that is contaminated with petroleum hydrocarbons, as well as street sweeping runoff.

6.9.4 OPTION

The following options were presented to the SWAC for evaluation.

SPC.LIQ.1. Catch Basin Liquids

Evaluate the feasibility of a new lagoon to handle liquid from catch basins. This facility would decant the liquids to a new pond; the solids could go to a PCS facility for processing and disposal.

6.9.5 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

6.9.6 SELECTED OPTIONS

The following option was selected by the SWAC for recommended implementation:

Selected Option - Liquid Waste
SPC.LIQ.1. Catch Basin Liquids

6.10 ELECTRONIC WASTE

Electronic waste refers to discarded computers, monitors, printers, fax machines, cell phones, electronic cables, and other electronic products. In 2006, the Washington State Legislature passed Engrossed Substitute Senate Bill 6428, which established the Washington State Electronics Product Recycling Law. The law requires manufacturers of electronic products sold in Washington State to finance and implement electronics collection, transportation, and recycling programs in Washington State no later than January 1, 2009. This program is available to households, small governments, small businesses, and charities. Ecology oversees this program. Electronic products that are covered in the legislation include cathode ray tube (CRT) and flat panel computer monitors having a viewable area greater than 4 inches when measured diagonally, desktop computers, laptops, and portable computers.

6.10.1 EXISTING CONDITIONS

Implemented in January 2009, E-Cycle Washington provides free recycling of computers, monitors, laptops, and televisions to residents, charitable organizations, small businesses, and small governments. The Washington Materials Management & Financing Authority (WMMFA) is the organization that sets up and runs the recycling program on behalf of the 200 member manufacturers that sell their computers and TVs in Washington State. The WMMFA submitted a recycling plan to Ecology providing the details of the program. The WMMFA has negotiated with collection sites throughout the state to provide recycling services. Collection sites are required, at a minimum, in every County and every city with a population of 10,000 or more. About 220 sites have signed up to provide collection services for the program throughout the state.[25]

Goodwill and Kittitas Valley Recycling each accept covered electronics for free. Although not covered by E-Cycle Washington, other electronics and peripherals are collected at Kittitas Valley Recycling.

6.10.2 NEEDS

Local governments do not need to set up collection sites or pay for the recycling program. Recycling plans submitted by the WMMFA include collection service throughout the County.

6.10.3 OPTIONS

The following options were presented to the SWAC for evaluation.

SPC.EWA.1. Monitor and Evaluate E-Waste Program

The County should continue to monitor the current E-Cycle program for effectiveness. Beginning in 2010, local governments and local communities are encouraged to submit an annual "Satisfaction Report" to Ecology by March 1. The entity responsible for preparing the solid waste management plan for an area is responsible for submitting the Satisfaction Report. The report must use a template Ecology provides that will include information on:

- Accessibility and convenience of services and how they are working in their community.
- What services aren't working and why.
- Suggestions for improvements to services plans provide.
- Description of public outreach and education.
- Any other relevant information.

Ecology will use information in these reports when evaluating recycling plan service levels and revisions.

[25] E-Cycle Washington Local Government Toolkit, Electronic Product Recycling Public Outreach Campaign Workgroup, February 25, 2009, p. 2.

SPC.EWA.2. E-Waste Education

Local governments are required by Ecology to provide their citizens with information about the E-Cycle program through existing educational methods typically used by local government. This includes listing locations and hours of operation of local collection sites and services. Ecology has developed a Local Government Toolkit, to promote E-Cycle Washington. This toolkit is now available on the Ecology web site.

This public education program will promote the existing drop-off locations in Kittitas, Ellensburg, and Cle Elum that are part of the state program.

6.10.4 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

6.10.5 SELECTED OPTIONS

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

Selected Options - E-Waste
SPC.EWA.1. Monitor and Evaluate E-Waste Program
SPC.EWA.2. E-Waste Education

Chapter 7

Moderate Risk Waste

7 MODERATE RISK WASTE

7.1 INTRODUCTION AND BACKGROUND

This section constitutes the 2010 Moderate Risk Waste/Local Hazardous Waste Management (MRW Plan) for Kittitas County. This Plan replaces the previous plan, prepared in 1992.

The purpose of this plan is to improve the management of moderate risk wastes in Kittitas County, thereby promoting better regional protection of human health and the environment. The document will direct and guide the management of these wastes over the twenty year planning period, from 2010 to 2030. The recommendations included in this Plan are based on existing conditions and forecasts of future conditions in the County.

In Kittitas County, the local governments have worked together to produce a MRW Plan for the County. Participants include Kittitas County, the cities of Kittitas, Cle Elum, Ellensburg, Roslyn, and the town of South Cle Elum. The Kittitas County Solid Waste department was responsible for overseeing all aspects of the plan's development. Solid Waste will also implement specific plan recommendations and coordinate the involvement of other agencies. The Plan was prepared with input from the Solid Waste Advisory Committee (SWAC) during the 2010 Solid Waste Management Plan update process. A list of the SWAC members and the meeting dates, along with information on where minutes from those meetings are archived, is included in Chapter 8.1.1 of this document.

Kittitas County is largely rural in nature, with sparse population over the majority of its area. Urban development is located primarily in Ellensburg, and to a lesser degree in the towns of Cle Elum, Roslyn, South Cle Elum, and Kittitas. In 2009, the County population was estimated to be 39,900, with 45% of the population residing in the unincorporated area. Between 2000 and 2009, the County experienced an overall growth rate of 20%. The OFM high series estimates that the County's population will reach 60,322 by the year 2030.

In Ellensburg, commercial development is found in the central business district and near I-90 along Canyon Road. Central Washington University, which has an enrollment of about 8,000 students, is located in Ellensburg on a 350 acre campus. Forests cover approximately 65 percent of the County, primarily at the higher elevations of the County in the west and north. Agricultural and urban development tends to be located in the lower elevations along river valleys and accounts for more than 30 percent of the County's land use. An exception to this pattern is recreational development near Snoqualmie Pass. Recreational, retirement, and second or summer homes have developed near Cle Elum and Roslyn.

Construction is the primary industry in the County, followed by the retail trade. Information on major industry sectors in the County is provided in Section 1.4.5 of the Plan. Major employers in the County include Central Washington University, Ellensburg School District, Kittitas County government, the Kittitas Valley Community Hospital, Shoemaker Manufacturing, and Twin City Foods, Inc.

7.2 ANALYSIS OF CURRENT CONDITIONS

7.2.1 MODERATE RISK WASTE

Moderate risk wastes are hazardous wastes produced by households, and by businesses and institutions in small quantities. Commercial and institutional generators of hazardous waste are conditionally exempt from full regulation under the HWMA, provided that they do not produce or accumulate hazardous waste above specified quantities defined by Ecology (quantity exclusion limits). These "small quantity generators" produce hazardous wastes in quantities that do not exceed the following State regulatory limits:

- 220 pounds (100 kg) of dangerous waste per month or per batch.
- 2.2 pounds (1 kg) of acute or extremely hazardous waste per month or per batch.

In addition, to maintain its status as a small quantity generator, a business or institution may not accumulate more than 2,200 pounds of dangerous waste or more than 2.2 pounds of acute or extremely hazardous waste at one time.

Drop boxes located at the Upper County Transfer Station in Cle Elum and at the Moderate Risk Waste Facility in Ellensburg are used to collect used motor oil, antifreeze, lead-acid vehicle batteries, and household batteries for recycling on an appointment basis only. Residents are instructed to collect all of the waste in a box, and to categorize the waste as much as possible (i.e., solvents, thinners, mineral spirits together in one box, paints in another box, garden products in another, etc.). Residents are further instructed not to mix products, and to keep the products in their original containers or to label products that are not in their original containers. When residents arrive at the facility, a waste specialist directs them into the HHW facility, and unloads the waste from the resident's vehicle.

The Kittitas County Moderate Risk Waste Facility (MRWF) offers an opportunity for local businesses to dispose of their hazardous wastes for a fee to cover disposal cost. This opportunity is offered to pre-registered businesses that are classified under the Small Quantity Generator status. Hazardous wastes generated from Regulated Businesses (businesses that exceed the above definition) cannot be accepted. Business owners classified as Small Quantity Generators must contact Solid Waste to schedule an appointment for the waste specialist to inventory the waste, estimate the disposal cost, and complete the requisite paperwork. Following the inventory, the business brings the waste to the MRWF facility, where it is unloaded by a solid waste specialist.

Usage information for the Moderate Risk Waste Facilities is provided in Table 26.

Table 26. Moderate Risk Waste Facilities Usage

Year	Number of Users	Material Collected			
		Batteries (tons)	Oil (gallons)	Antifreeze (gallons)	Household Hazardous Waste (pounds)
2004	368	126	4,890	735	36,792
2005	421	3	17,382	935	17,382
2006	512	45	12,249	1,109	55,480
2007	470	31	14,935	1,058	62,265
2008	515	21	11,950	555	74,285

In addition to the MRW facilities, there is an extensive in-County network of locations that accept batteries for proper handling:

- Cle Elum
  - Carpenter Library, 302 Pennsylvania Ave.
  - Cavallini's Pharmacy, 106 E. First St.
  - Cle Elum Safeway Grocery, 804 W First St.
- Easton
  - C.B. General Store and Lodging
- Ellensburg
  - Bi-Mart, 608 E Mountain View Ave.
  - Downtown Pharmacy, 414 N Pearl St. Ave.
  - Ellensburg High School, 1300 E 3rd Ave.
  - Fred Meyer, 201 S Water St.
  - Jerrol's Book and Supply, 111 E. University Way
  - Kittitas County Solid Waste, 925 Industrial Way
  - Rite Aid Pharmacy, 700 S. Main
  - Valley View Elementary School, 1508 E. Third Ave.
  - Woods Ace Hardware, 310 N Pearl
- Kittitas
  - Country Hardware, 117 N Main St.
- Roslyn
  - Harper Lumber Company, 18 Pennsylvania

The Solid Waste Department is responsible for collecting the batteries from fifteen point-of-sale collection sites, storing, and labeling them for shipment to a treatment storage and disposal firm contracted by the County.

Waste oil can be recycled at three self-serve recycling tanks:

- **Solid Waste Department**
  925 Industrial Way
  Ellensburg, WA

Monday - Saturday, 8:00 am - 4:00 pm

- **Cle Elum Transfer Station**
  50 - #5 Mine Road
  Cle Elum, WA
  Tuesday - Saturday, 8:00 am - 1:00 pm and 1:30 pm - 4:00 pm
- **Cle Elum Hardware & Rental**
  811 W. Davis Street (S.W. of Safeway Grocery)
  Cle Elum, WA
  Monday - Saturday, 7:00 am - 6:00 pm; Sunday, 8:00 am - 5:00 pm

7.2.2 HAZARDOUS WASTE

Businesses or institutions producing or accumulating hazardous waste above the quantity exclusion limits are required to meet a stringent set of regulations when storing, handling, and disposing of their hazardous wastes. In addition, these fully regulated hazardous waste generators must comply with extensive waste tracking and reporting requirements. Small-quantity generators must meet certain requirements for identifying and managing their hazardous wastes, but are exempt from portions of the waste tracking and reporting requirements.

Within the County's jurisdictions, certain zones are eligible for the management of hazardous waste. Eligible zones and uses are as follows:

- Cle Elum
  - Conditional Use in Industrial District (listed as chemical storage and treatment, not hazardous)
- Ellensburg
  - Conditional Use in Tourist Commercial Zone (onsite storage and treatment)
  - Conditional Use in Commercial Highway Zone (onsite storage and treatment)
  - Conditional Use in Central Commercial (CBD) Zone (onsite storage and treatment)
  - Conditional Use in Central Commercial 2 Zone (onsite storage and treatment)
  - Conditional Use in Light Industrial Zone (onsite and offsite storage and treatment)
  - Conditional Use in Heavy Industrial Zone (onsite and offsite storage and treatment)
- Kittitas
  - Accessory Use in Industrial Zone (onsite storage, treatment, sales, and distribution)
- Roslyn
  - None
- South Cle Elum
  - None
- Unincorporated County
  - Conditional Use in Light Industrial Zone
  - Conditional Use in General Industrial Zone

7.2.3 DANGEROUS WASTE GENERATORS

Businesses in the County that have an EPA/State identification number issued under Chapter 173-303-WAC, are included in Table 27.

Table 27. Regulated Waste Generators, 2009

Generator ID	Company Name	Location
WAH000032789	Arco AM PM Thorp	Thorp
WAD980835631	Central Washington University	Ellensburg
WAH000017335	Chem Safe Environmental Inc	Kittitas
WAH000008169	Chem Safe Environmental Inc Transporter	Kittitas
WA0000712489	Chevron #95012	Ellensburg
WAD988489738	CHEVRON #95179	Ellensburg
WAH000000778	Circle K Stores #2701136	Ellensburg
WAD988510285	D & M Motors & Towing	Ellensburg
WAH000035491	Kittitas County Hospital District 2	Cle Elum
WAH000036214	Kittitas Valley Community Hospital	Ellensburg
WAR000006486	PSE Kittitas Service Center	Thorp
WAH000014415	Rental Service Corporation #559	Ellensburg
WA0001013267	Rite Aid #5299	Ellensburg
WA0000712968	Sportland Yamaha	Cle Elum
WAD988503561	Texaco Station #120695	Ellensburg
WAD019201771	University Auto Center	Ellensburg
WA0000380246	UPS Ellensburg	Ellensburg
WA0000189589	US DOE BPA Schultz Maintenance HQ	Ellensburg
WAH000008342	WA AGR Kittitas 2	Ellensburg
WAH000017954	WA AGR Kittitas 3	Ellensburg
WAR000002352	WA Parks Lake Easton State Park	Easton
WAD004865382	Ward Rugh Inc	Ellensburg
WAD980738256	Waste Management of Ellensburg	Ellensburg

7.2.4 HAZARDOUS WASTE SITES

Ecology publishes the Hazardous Sites List as required by WAC 173-340-330. The list is updated twice per year. It includes all sites that have been assessed and ranked using the Washington Ranking Method. Also listed are National Priorities List (NPL) sites. Sites on the Hazardous Sites List (excluding NPL and TSP sites) have undergone a preliminary study called a Site Hazard Assessment (SHA). The list of Kittitas County as of September 15, 2010 is included herein as Table 28.

An SHA provides Ecology with basic information about a site. Ecology then uses the Washington Ranking Method (WARM) to estimate the potential threat the site poses, if not cleaned up, to human health and the environment. The estimate is based on the amount of contaminants, how toxic they are, and how easily they can come in contact with people and the

environment. Sites are ranked relative to each other on a scale of one to five. A rank of one represents the highest level of concern relative to other sites, and a rank of five the lowest. Hazard ranking helps Ecology target where to spend cleanup funds. However, a site's actual impact on human health and the environment, public concern, a need for an immediate response, and available cleanup staff and funding also affect which sites get first priority for cleanup. A site may be removed from the list only if the site is cleaned up. In some cases, long-term monitoring and periodic reviews may be required to ensure the cleanup is adequate to protect the public and the environment.

Table 28. Hazardous Waste Sites

FS ID	Site Name	City	Rank	Status
387	115 Mini Mart	Kittitas	3	Awaiting Cleanup
386	Big B Mini Mart	Ellensburg	3	Awaiting Cleanup
388	Bingo Fuel Stop	Thorp	2	Cleanup Complete - Active O&M/Monitoring Ongoing
64886528	CB General Store & Services	Easton	5	Awaiting Cleanup
390	Cle Elum City	Cle Elum	3	Awaiting Cleanup
398	Devere Bulk Plant	Cle Elum	5	Cleanup Started
8473478	Faltus & Thomas Properties	Ellensburg	5	Awaiting Cleanup
394	Flying J Truck Stop Broadway	Ellensburg	4	Cleanup Started
3892	Kens Auto Wash II	Ellensburg	2	Cleanup Started
382	Ryegrass Landfill	Ellensburg	4	Cleanup Started
92387155	Simpsons Texaco	Cle Elum	5	Cleanup Started
12832256	Smith Kem Ellensburg Inc.	Ellensburg	3	Awaiting Cleanup
401	Storey Gas Station	Cle Elum	1	Cleanup Complete - Active O&M/Monitoring Ongoing
25139	Wondrack Ellensburg	Ellensburg	2	Cleanup Complete - Active O&M/Monitoring Ongoing

7.2.5 TRANSPORTERS AND FACILITIES

All transporters of hazardous waste require a common carrier permit issued by WUTC under RCW 81.80. Hazardous waste transportation companies that are registered with Ecology which can service businesses in Kittitas County are included in Table 29. This is a partial list, and does not constitute a recommendation. There are no treatment facilities in the County. Chem-Safe Environmental, located in Kittitas, provides site cleanup, hazardous waste remediation, and disposal services to business and institutions.

Table 29. Hazardous Waste Transporters

Name	Location
ARCOM Oil	Tacoma
Able Cleanup Technologies	Spokane
Big Sky Industrial	Spokane
Bulk Service Transport	Spokane
Chem-Safe Environmental	Kittitas

Emerald Services	Seattle
Phoenix Environmental Services	Tacoma
PSC	Seattle
Regional Disposal (RABANCO)	Seattle

7.3 LEGAL AUTHORITY FOR PROGRAM

7.3.1 STATE AUTHORITY

Ecology derives its regulatory authority from the Hazardous Waste Management Act (HWMA) Chapter 70-105.020 through 145 RCW, the Dangerous Waste Regulations (Chapter 173-303, Washington Administrative code [WAC]) and the Solid Waste handling Standards (Chapter 173-350 WAC). The Beyond Waste Plan, published in 2004, establishes five initiatives as starting points for reducing wastes and toxic substances in Washington. Initiative #2 is Reducing Small-Volume hazardous materials and wastes. The goal of this initiative

> *"…is to accelerate progress toward eliminating the risks associated with products containing hazardous substances."*

Specifically, the initiative encompasses products and substances commonly used in households and in relative small quantities by businesses.

In 2009, Ecology updated the MRW Planning Guidelines, and in 2010, Ecology updated the Guidelines for the Preparation of Solid Waste Management Plans. Included in the new guidelines are new requirements for a combined Solid Waste and MRW Plan. This section has been prepared to meet the requirements for a combined Solid Waste and MRW Plan.

7.3.2 LOCAL AUTHORITY

Local governments are required by the HWMA to address moderate risk waste management in their jurisdictions. In 1991, Chapter 70.951.020 RCW was added requiring local governments to amend their local hazardous waste plans to include the Used Oil Recycling Act, for the management of used oil as part of MRW management. Local governments have specific authority to adopt ordinances and regulations under RCW 70.95.160 to manage MRW and implement the plan. In addition, jurisdictional health districts may choose to use Chapters 70.05.060 and .070 RCW when appropriate.

The Kittitas County Public Health Department works with the public, cities, County, and state agencies to develop and implement plans for the safe storage, collection, transportation, and final disposal of solid waste. The Public Health Department works to assure compliance with Chapters 70.95 and 70.105 RCW, and WAC Chapters 173-303, 173-304, 173-340, and the Kittitas County Board of Health Ordinance Number 1999-01, Solid Waste Regulations. The Public Health Department also permits solid waste handling facilities, including the landfill, transfer station, moderate risk waste facility and materials recovery facilities. The department also issues orders of abatement to facilities or individuals dumping waste illegally, and licenses private contractors to pump and haul septic tank wastes.

Waste Acceptance Control Program

The Kittitas County Health Ordinance includes a waste screening requirement. In accordance with the ordinance, all solid waste must be designated as required by WAC 173-303-070 to prevent the disposal of dangerous waste at a facility not permitted to accept dangerous waste. All solid waste which is designated as dangerous waste must be managed in a manner consistent with these regulations and Chapter 173-303 WAC.

The screening process may involve analytical testing, a disclosure of the waste constituents and waste generation process, and other additional information necessary to determine if the waste is dangerous. The Health Officer may establish a schedule for compliance as part of the screening process. Based on the results of the required screening, the Health Officer may require the generator or transporter to direct the waste to a facility permitted to handle such waste.

Mandatory Disposal

The County Health Ordinance stipulates the following:

> *The owner, operator or occupant of any premise, business establishment or industry shall be responsible for the satisfactory and legal handling and/or disposal of all solid waste generated by them or accumulated on the property. Single-family residences and single-family farms are prohibited from dumping or depositing solid waste onto or under the surface of land owned or leased by them.*

In addition as listed below to the quantity exclusion limits (QELs) contained in WAC 173-303-070(8), MRW, used oil, and hazardous substances shall not be accumulated in quantities that, in the opinion of the Health Officer, present a demonstrable threat to public health or the environment. Small Quantity Generators (SQG) shall not accumulate wastes in excess of the Quantity Exclusion Limit for the wastes generated by their business per WAC 173-303-070, 070-100, and 170(1). Large Quantity (Regulated) Generators shall not accumulate wastes on site in excess of their monthly accumulation limit for waste in accordance with WAC 173-303-200(1)(c), (1)(d). Used oil shall not be accumulated in quantities in excess of 300 gallons at any one site, home or business. The Health Officer at his discretion may restrict the amount of used oil accumulated if potential public health and safety are at risk.

7.4 FINANCING

Kittitas County's MRW program is funded from a number of sources, including revenue from the recycling of some materials, and grant funding. Costs for the program include labor and operations. Costs exceed funding. The County continues to attempt to identify additional revenue sources to offset the costs of the program, including from Ecology and the US Environmental Protection Agency.

The 2009 costs and revenue for the Kittitas County MRW program are presented in Table 30.

Table 30. MRW Program Costs and Revenue (2009)

Activity	$

COSTS	
Disposal and Supplies	$ 62,412.38
Labor and education	27,813.36
Total Costs	**$ 90,225.74**
REVENUES	
Used Oil	$ 3,443.39
Batteries	4,392.22
Electronics	0.00
Total Revenue	**$ 7,835.61**

7.5 GOVERNANCE

The legal authority for decisions regarding the implementation of the MRW plan is the responsibility of the Kittitas County Solid Waste Department.

7.6 PROGRAM PHILOSOPHY

The following are the goals and objectives of the Kittitas County MRW program

- Protect the natural resources and public health in Kittitas County by eliminating the discharge of moderate risk wastes into solid waste systems, wastewater treatment systems, and the environment through indiscriminate disposal.
- Manage moderate risk waste in a manner that promotes, in order of priority: waste reduction; recycling; physical, chemical and biological treatment; incineration; solidification and stabilization; and landfill.
- Increase public awareness of the importance of proper disposal and available alternatives to disposal of moderate risk wastes.
- Improve opportunities for the safe disposal of moderate risk wastes by citizens and businesses within Kittitas County.
- Reduce the health threats presented to workers coming in contact with MRW that may be disposed in the solid waste stream or in wastewater treatment systems.
- Coordinate improved systems for MRW management with existing and planned systems for waste reduction, recycling, and other programs for solid waste management within Kittitas County.
- Encourage cooperation and coordination among all levels of government, citizens and the private sector in managing MRW.
- Emphasize local responsibility for solving problems associated with MRW, rather than relying upon the state or federal government to provide solutions.

- Comply with the requirement of the RCW and WAC requirements for MRW and hazardous waste.

7.7 PROGRAM OPTIONS

The County is considering a number of options for household hazardous waste collection, public education, and business technical assistance, as described below:

MRW.1. MRW Facilities

- Expand the existing MRW facilities to accommodate more waste types and extended hours of operation.

- Evaluate the feasibility of assigning regular business hours to the MRW facility in Ellensburg and Cle Elum and remove "appointment only" status to increase participation in MRW recycling.

MRW.2. Residential Outreach

- Promote other options for non County-operated MRW facilities to the residential community.

MRW.3. Commercial Outreach, Education, and Technical Assistance

The commercial program will include a set of outreach, education, and assistance components integrated with Waste Reduction Programs.

MRW.4. Funding for MRW Programs

The County will explore additional funding sources through Ecology, as well as other potential revenue sources, such as charging for proper handling or disposal.

MRW.5. Small Business Collection Assistance

The County will continue the existing program of offering businesses the opportunity to bring their wastes to the MRW facility for proper handling and disposal.

MRW.6. Enforcement Efforts

The County has a waste screening program in place at the two transfer stations for ensuring that MRW does not enter the municipal solid waste stream. Furthermore, the Health Ordinance requirements for proper handling and disposal of MRW and hazardous waste at residences and businesses provide the enforcement mechanism for reducing the potential for illegal handling and disposal of MRW and hazardous waste.

7.8 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

7.9 SELECTED OPTIONS

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

Selected Options - MRW
MRW.1. MRW Facilities
MRW.3. Commercial Outreach, Education, and Technical Assistance
MRW.4. Funding for MRW Programs
MRW.5. Small Business Collection Assistance

7.10 PROCESS FOR UPDATING IMPLEMENTATION PLAN

The County and SWAC will review the MRW Plan on a regular basis to identify any necessary changes to the goals, objectives, and implementation plan. Changes may be deemed necessary due to changes in State law, conditions in the County, budgets, and/or others issues. If changes are identified, the County and SWAC will work together to develop the changes, for review and approval by the County and local jurisdictions.

7.11 IMPLEMENTATION PLAN

The implementation schedule for the Kittitas County MRW/LHWMP is included with the Solid Waste portion of the Plan in Section 9.4.

The County's budget for the implementation of the MRW Plan is included in Section 9.4. Actual budgets to carry out the Plan will vary from year to year as specific programs are defined, and will depend upon availability of grant funding and budget approved by local governments.

Chapter 8

Administration and Enforcement

8 ADMINISTRATION AND ENFORCEMENT

8.1 INTRODUCTION

The Washington State Solid Waste Management Act, Chapter 70.95 RCW, assigns local government the primary responsibility for managing solid waste, although State agencies have jurisdiction over solid waste issues as well. This chapter describes the administrative and enforcement structure for solid waste management in Kittitas County.

8.1.1 EXISTING CONDITIONS

Administration and enforcement responsibilities for solid waste management in Kittitas County are divided among several agencies and jurisdictions. The administrative and enforcement responsibilities of each organization are described below.

Kittitas County Solid Waste Department

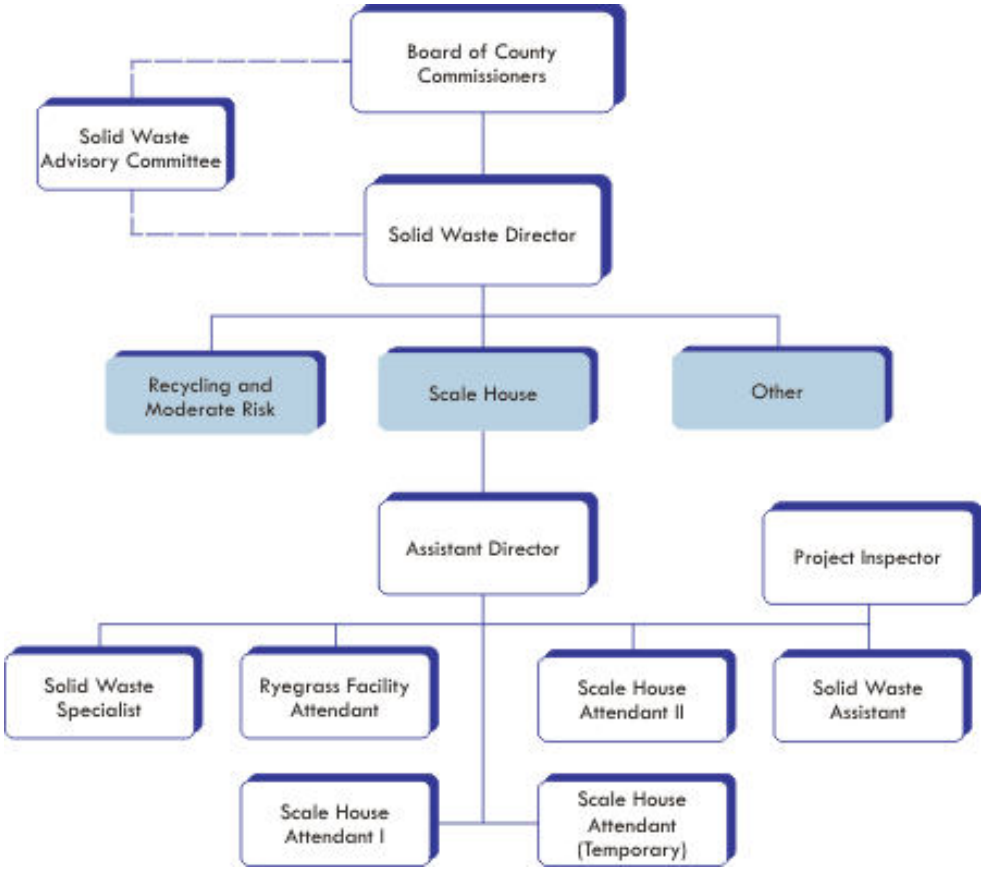
Chapter 36.58 RCW authorizes Kittitas County to develop, own, and operate solid waste handling facilities in unincorporated areas of the County, or to accomplish these activities by contracting with private firms. The County also has the authority and responsibility to prepare comprehensive solid waste management plans for unincorporated areas and for jurisdictions that agree to participate with the County in the planning process.

The County has entered into interlocal agreements with all of the incorporated cities within the County for the purpose of establishing an integrated and coordinated solid waste management program. Interlocal Agreements are developed in accordance with Chapter 39.34 RCW, Interlocal Cooperation Act, for the purpose of permitting local governments to cooperate with one another in the performance of tasks, thus achieving economies of scale and reducing duplication of effort. An Interlocal Agreement is signed by the authorized officials of the local governments involved, and specifies the services and/or facilities to be provided and any compensation between the local governments for such services and/or facilities. The Solid Waste Interlocal Agreement, entered into on March 19, 1979, is provided in **Appendix A**.

Kittitas County exercises its solid waste responsibilities through the Kittitas County Solid Waste Department. The Solid Waste Department has the responsibility for developing and implementing the solid waste management plan, formulating interlocal agreements, administering public education programs, and providing staff support for the SWAC.

An organization chart for the solid waste department is provided in Figure 14.

Figure 14. Kittitas County Solid Waste Department Organization Chart



Incorporated Cities

Under Chapter 35.21.152 RCW cities are allowed to develop, own, and operate solid waste handling systems and to provide for solid waste collection services within their jurisdictions. Cities and counties have the authority to establish solid waste programs, pass ordinances, and provide resources to monitor compliance and take corrective action where necessary. The cities are also responsible for enforcing local ordinances covering zoning, land use, illegal dumping, and littering. There are five incorporated cities and towns in Kittitas County. All of the cities and towns contract with a hauler for solid waste collection or use the existing franchise.

Solid Waste Advisory Committee

The State requires that counties establish a Solid Waste Advisory Committee (SWAC) to assist in the development of programs and policies concerning solid waste handling and disposal (Chapter 70.95 RCW). The Kittitas County SWAC is an advisory board to the Kittitas County Board of Commissioners and makes recommendations to the Commissioners on matters relative to the development of solid waste handling programs and policies. One of its main functions is to provide a forum within the community for the expression of opinions regarding solid waste handling and disposal plans, ordinances, resolutions, and programs prior to adoption. The members of the SWAC represent citizens, public interest groups, business, the waste

management industry, and local government. The SWAC has a significant role in developing and updating Kittitas County's Solid Waste Management Plan. A list of current members is provided in Table 31. Each representative is appointed for an indefinite term. The SWAC met regularly during the planning process and meeting minutes are kept at the Solid Waste Department office.

Table 31. Solid Waste Advisory Committee

Name	Segment Represented
John Akers	Municipal government
Val Bosch	Municipal government
George Bottcher	Municipal government
Paul Jewell	Municipal government
Aaron Kelly	Solid waste industry
Shari Murray	Municipal government
Margaret Nover	General public
Warren Perry	Municipal government
Greg Poe	Commercial/institutional
Jane Stiger	Municipal government

Additionally, representatives from the regulatory community attend SWAC meetings and provide guidance with respect to solid waste issues. The current representatives are listed in Table 32 and their roles are described in the following sections.

Table 32. Advisors to SWAC

Title	Affiliation
Environmental Health Representative	Environmental Health
Ecology Representative	Department of Ecology

Kittitas County Public Health Department

The Kittitas County Health Department is the lead agency for permitting waste handling facilities in the County, and for enforcing violations of waste disposal ordinances. State law gives local health departments responsibility for:

> *"ordinances governing solid waste handling implementing the comprehensive solid waste management plan covering storage, collection, transportation, treatment, utilization, processing and final disposal including but not limited to the issuance of permits and establishment of minimum levels and types of service for any aspect of solid waste handling." (Chapter 70.95.160 RCW)*

In addition, RCW 70.95.160 states that:

> *"such…ordinances shall assure that solid waste storage and disposal facilities are located, maintained, and operated in a manner so as properly to protect the public*

health, prevent air and water pollution, are consistent with the priorities established in Chapter 70.95.010 RCW and avoid the creation of nuisances."

Falling under the definition of "solid waste handling facilities" are landfills, wood and tire piles, construction and demolition debris sites, compost and recycling facilities, transfer stations, and landfills.

The Kittitas County Public Health Department works with the public, cities, County, and state agencies to develop and implement plans for the safe storage, collection, transportation, and final disposal of solid waste. The Public Health Department works to assure compliance with Chapter 70.95 RCW and WAC 173-304 - Minimum Functional Standards for Solid Waste Facilities.

The Department is responsible for the following:

- Permitting all new solid waste facilities operating in Kittitas County.
- Assure that permits are consistent with the Solid Waste Management Plan, local ordinances and appropriate Washington State and Federal regulations.
- Oversight of existing permitted facilities:
    - The Ryegrass Landfill
    - The Ellensburg Transfer Station
    - The Cle Elum / Upper County Transfer Station
- Responding to complaints regarding improper storage and disposal of solid waste.
- Investigating illegal dumping and non-permitted dump sites.

Washington Department of Ecology

Ecology has the primary authority for solid waste at the state level and acts as an advisor to the SWAC. Ecology assists local governments in the planning process by reviewing, providing comments, and approving preliminary and final drafts of solid waste management plans. This review is to ensure that local plans conform to applicable state laws and regulations. In its Guidelines for the Development of Local Solid Waste Management Plans and Plan Revisions, Ecology offers recommendations on the preparation of solid waste management plans. Ecology also makes recommendations and comments on reviews of solid waste handling and disposal permits to ensure that the proposed site or facility conforms to applicable laws and regulations.

Although primary enforcement for solid waste management is through jurisdictional health departments, Ecology has a range of enforcement authorities under various statutes to address existing or potential sources of pollution, including those which result from improper solid waste handling and management. For instance, Ecology has broad authority to take enforcement actions under the State Water Pollution Control Act, the Hazardous Waste Management Act, and the Model Toxics Control Act. Collectively, these laws allow Ecology to issue orders and impose penalties for noncompliance. Under some circumstances, Ecology may also take direct action to remedy threats to public health and the environment, and seek to recover costs from potentially liable parties.

In some instances, Ecology may assume the duties and responsibilities of jurisdictional health departments. Chapter 70.95.163 RCW authorizes local health departments to enter into an

agreement with Ecology to assume some, or all, of their solid waste regulatory responsibilities and authorities, such as biosolids and septage permitting and enforcement.

Washington Utilities and Transportation Commission

The Washington Utilities and Transportation Commission (WUTC) regulates solid waste collection activities under Chapter 81.77 RCW, through the issuance of certificates entitling private companies to provide solid waste collection services within specified geographic areas of the state. Chapter 70.95.096 RCW also grants the WUTC the authority to review solid waste management plans to assess solid waste collection cost impacts on rates charged by collection companies regulated under Chapter 81.77 RCW and to advise the County and Ecology of the probable effects of the Plan's recommendations on those rates.

The WUTC regulates the collection of solid waste in unincorporated areas of the County. The WUTC's enforcement mechanisms include fines and revocation of the right of private collectors to collect solid waste. The WUTC also enforces against companies that illegally collect solid waste without a certificate.

Emergency Contacts

In the event of an emergency, the following organizations may be contacted.

Organization	Phone Number
Fire Department	911
Kittitas County Haz Mat	911
Ambulance	911
Police	911
Police non-emergency	509-962-7280
Kitcom/Dispatch	509-925-8534
Bomb Squad	911
Department of Ecology Spill Response (24 hours)	800-253-5990
Kittitas County Sheriff	
Kittitas Valley Community Hospital	509-962-9841

The following persons are to be notified in any emergency situation.

Person	Ofc Phone	Home Phone	Cell Number
Solid Waste Director	509-962-7070	509-962-4002	509-929-0022
Solid Waste Specialist	509-962-7577		509-899-5908
Solid Waste Assistant Director	509-962-7514	509-968-4282	509-856-7399
City Fire Marshall	509-962-7273		After hrs 509-962-7270

The following government agencies are to be notified in any emergency situation.

Organization	Phone Number	Note
Kittitas County Health Department	509-962-7698	Red Phone 509-899-3833
Poison Control Center	800-572-5842	
Washington State Department of Ecology	509-575-2490	
Environmental Protection Agency	206-553-1900	Call if explosives are found
Hazardous Substance Hotline	800-633-7585	Call for questions on chemicals

8.2 ENFORCEMENT

8.2.1 REGULATIONS PERTINENT TO SOLID WASTE

- **RCW 35.21.** Cities & Towns Miscellaneous Provisions
- **RCW 36.58.** Solid Waste Disposal
- **RCW 70.93.** Waste Reduction, Recycling, and Model Litter Control Act
- **RCW 70.93.093.** Public Events Recycling Law
- **RCW 70.95.** Solid Waste Management - Reduction and Recycling
- **RCW 70.95A.** Pollution Control - Municipal Bonding Authority
- **RCW 70.95C.** Waste Reduction
- **WAC 173-345.** Registration of recyclable material transporters
- **WAC 173-350.** Solid Waste Handling Standards
- **WAC 173-351.** Criteria for Municipal Solid Waste Landfills
- **WAC 173-900.** Electronic Product Recycling Program
- Solid waste regulations adopted by local health authorities
- Local nuisance laws

8.2.2 REGULATIONS PERTINENT TO COORDINATED PREVENTION GRANT (CPG) FUNDING

The rules that govern the CPG program are Chapters 173-312 WAC and 173-313 WAC. WAC 173-312-040(3) states:

> *". . . counties whose solid waste plans are adopted and approved by Ecology as required by Chapter 70.95 RCW are eligible to apply for coordinated prevention grants to help pay for the implementation of waste reduction and recycling projects in the most recently approved and adopted (solid waste) plan . . . "*

WAC 173-312-040(5) also states:

> *"Local governments with Department-approved local hazardous waste plans as required by Chapter 70.105 RCW are eligible to apply for coordinated prevention grants to help pay for the implementation of projects in the plan . . ."*

8.2.3 PERMITTING

Solid waste facility permits are required under Ordinance 1999-01, in accordance with Chapters 173-303, 173-350, and 173-351 WAC. Facilities are required to obtain solid waste handling permits from the Health Department. The County's covered load law is also included in Ordinance 1999-01.

The State Environmental Policy Act (SEPA), Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. In order to determine if an EIS is necessary, an environmental checklist must be completed. For this planning document, a SEPA checklist has been completed and is included as **Appendix G**.

Applicants applying for new solid waste permits within Kittitas County will notify Kittitas County Health Department. The applicant will submit a permit application (provided by the Health Department) and a SEPA Application to the Health Department. The Health Department will forward such applications to the Kittitas County Solid Waste Department (Solid Waste). Solid Waste will request a meeting of the SWAC for the purpose of reviewing the permit application for conformance to the Kittitas County Solid Waste Management Plan.

SWAC will review the documents for thoroughness in conforming to the Kittitas County Solid Waste Management Plan.

SWAC will return their findings to the Health Department who will consider and include those findings in their final decision. The Health Department will forward such findings and comments along with the SEPA and Application, on to the Kittitas County Board of Health. Final approval or disapproval of the application shall rest with Kittitas County Health Department, which shall issue its approval/disapproval of the application within 90 days after its receipt pursuant to Chapter 70.95.180 RCW.

8.2.4 ILLEGAL DUMPING

The Health Department is responsible for undertaking investigations and enforcement action against littering and illegal dumping throughout the County.

The following ordinances are in effect to cover illegal dumping (both hazardous and non-hazardous wastes and substances):

> *KCC 8.20.010 Permitted areas. It is unlawful for any person to throw, drop, or to leave any discarded object, debris, or any waste, upon any public or private property in this County, or in any waste waters in this County, unless:*
>
> 1. *Such property is designated by the federal government, state, County or city/town within Kittitas County for the disposal of garbage and refuse, and such person is authorized to use such property for such purpose.*

2. *Into a litter receptacle or container installed on such property by any governmental agencies described in subsection (1) of this section or installed with their consent.*

3. *He is the owner or a tenant in lawful possession of such property.*

KCC 8.20.020 Penalty for violation. Any person violating any of the provisions of this chapter shall be punished by a fine not more than one thousand dollars or by imprisonment in the County jail for a period not exceeding ninety days.

KCC 9.50.155 Dumping in water prohibited. No person shall pollute, or in any way contaminate by dumping or otherwise depositing therein any waste or refuse of any nature, kind or description, including human or bodily waste, in any stream, river, lake or other body of water running in, through, or adjacent to any Kittitas County park area.

Environmental Health first investigates calls from the general public regarding perceived illegal dumping. If such reports are substantiated, they are then given to the Kittitas County Code Enforcement Officer for enforcement action. Title 18 of the County Code identifies code enforcement, applicable penalties, and how proceeds from penalties are distributed.

It is also the County Code Enforcement Officer's responsibility to "enforce" the planning codes, building codes and the environmental health codes (illegal dumping) within the County. The Code Enforcement Officer is shared with Buildings, and Planning Departments and the Environmental Health Division of the Public Health Department.

8.3 ORDINANCES

Solid waste handling standards are regulated under WAC 173-350, adopted in January 2003. County Ordinance 1999-01 was adopted on July 15, 1999 (**Appendix C**). This ordinance does the following, through the authority of Chapters 70.05 and 70.95 RCW:

- On-Site Solid Waste Management Standards.
- Solid Waste Collection Service Standards.
- Solid Waste Handling Facility Standards.

8.3.1 NEEDS

Responsibilities for implementing the Solid Waste Management Plan are assigned to various local agencies. Since responsibilities for specific tasks are assigned to more than one agency, each of the jurisdictions needs to recognize the importance of carrying out all tasks in a manner that ensures efficient use of resources (by avoiding duplication of effort), avoids gaps in program activities, and avoids conflicts or inconsistencies.

Enforcement activities within Kittitas County generally are focused on compliance with permit conditions and regulatory standards, littering, and illegal dumping. Response often comes from law enforcement agencies for littering. One key issue is to ensure adequate staffing and funding for the agencies responsible for enforcement.

A second key enforcement issue pertains to illegal dumping. Washington's Model Litter Control and Recycling Act (Chapter 70.93 RCW) prohibits the deposit of garbage on any property not properly designated as a disposal site. Revisions (Chapter 70.93.060 RCW) provide stiffer penalties for littering and illegal dumping in rural areas including classification as a misdemeanor, punishable by specific penalties. Illegal dumping can be addressed through enhanced enforcement activities and education.

8.3.2 OPTIONS

The following options were presented to the SWAC for evaluation.

ADM.ORD.1. Staffing and Resources

The different agencies and jurisdictions responsible for solid waste management in Kittitas County make adequate staffing and interagency cooperation essential. This can be achieved through commitments on the part of each entity to participate on the advisory committee(s), and coordinating committee meetings between the County and municipalities to facilitate the exchange of information, and to provide adequate staff/resources to perform necessary functions. In addition, coordination can be achieved if technical staff works closely with their counterparts in the other jurisdictions performing similar or related functions.

A cooperative approach to program evaluation is also essential to ensure that the goals and objectives of solid waste management are being met, and to monitor changes that take place in solid waste generation and disposal. Once Kittitas County and the municipalities have adopted the Plan, mechanisms will need to be developed to ensure that the Plan is effectively implemented. One method for evaluating programs is to continue to utilize the SWAC to review the success of individual program components and the Plan as a whole. Methods of review could include tracking waste quantities, participation rates, expenses, income, and implementation problems. Reviews could occur periodically to make necessary adjustments once the Plan is implemented.

ADM.ORD.2. Funding

As the County continues to grow, additional staffing and resources will be needed. Additional funding sources will need to be explored in order to finance the additional resources, including grant opportunities.

ADM.ORD.3. Other Long-Term Needs

If alternative solutions to the current needs become available, the SWAC will evaluate and make recommendations to the Board of County Commissioners. Upon approval by The Board of County Commissioners, this recommendation may become part of this plan.

ADM.ORD.4. New Regulations and Ordinance Requirements

The County Health Department should work with Solid Waste to review and monitor implementation of the updates to the Solid Waste Ordinance to reflect changes to the regulations.

ADM.ORD.5. Permit Procedures, Policies and Fee Structures

The County Health Department should continue to implement permit procedures and policies and fee structures for all solid waste facilities and advertise such process and policies in a fashion similar to the "Food Handling Permits, Sewage Permits," etc.

ADM.ORD.6. Permit Review

Solid Waste Advisory Committee should continue to be included in the review of all new solid waste facility permit requests within the County, although final approval shall continue to reside with the jurisdictional Health Department. Such requests, after review by the SWAC, will be forwarded to the Health Department with SWAC's comments. This review will assure adherence to the Solid Waste Management Plan, Chapter 70.95 (165) and (180) RCW.

8.3.3 DISCUSSION

Each of the options was assessed by SWAC members using the approved criteria. Once the ratings were completed, the options were screened for groupings or clusters to determine which options would be included in the Plan. The results of this activity are shown below.

8.3.4 SELECTED OPTIONS

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

Selected Options - Administration and Enforcement
ADM.ORD.1. Staffing and Resources
ADM.ORD.2. Funding
ADM.ORD.3. Other Long-Term Needs
ADM.ORD.4. New Regulations and Ordinance Requirements
ADM.ORD.5. Permit Procedures, Policies and Fee Structures
ADM.ORD.6. Permit Review

Chapter 9

Implementation

9 IMPLEMENTATION

This section contains the proposed implementation strategy for the Plan. It includes: funding, the list of recommended action, implementation schedule, and proposed expenditures for each action.

Priorities, funding and expenses for this Plan are intended as guidelines which will and can be reassessed and revisited as developments occur. With this thought in mind, recommendations throughout this Plan reflect yearly reviews of programs and recommendations by the SWAC.

Implementation of the recommendations made in this Plan will take place on a continuous basis. The time required to implement recommendations vary from a few weeks or months for single events, to ongoing programs that take place over many years.

9.1 FUNDING

Priorities and funding in this plan cover six years (2010 - 2016). Actual budgets to carry out the recommendations will vary from year to year as specific programs are defined, and will depend upon annual budgets approved by the Board of County Commissioners.

In Kittitas County there are two primary sources of funds for implementation of the solid waste programs: one source is derived from a portion of the tipping fees, the other source of funds is derived from grants obtained through Ecology. Table 33 details current revenues and is consistent with table 4.1.3 of the Cost Assessment Questionnaire in **Appendix F**.

9.1.1 GRANTS

Chapter 70.95 RCWoutlines the intent and requirements for funding derived from the Solid Waste Management Account and established with the State Treasury. It is from this account that funding is administered, and appropriated by the Washington State Department of Ecology in the form of the Coordinated Prevention Grant (CPG). This funding is allocated to the County after application is made to the Department of Ecology and requires a 25% match on the part of Solid Waste Programs.

Funding available from the CPG has changed over the years, and will do so in the future, depending on legislative requirements. In the event that grant funding is reduced or eliminated, programs that are funded by these grants will need to be re-evaluated and either eliminated, curtailed, or if continued, funded using alternative methods, such as an increase in tipping fees or other revenue sources.

9.1.2 TIPPING FEES

Tipping fees are the fees charged for waste hauled to the transfer stations. A portion of these fees are set aside for the grant matches, administrative costs, operation, maintenance, testing, equipment and fees to Environmental Health.

9.1.3 OTHER METHODS OF FUNDING

Chapter 36.58A RCW provides for the creation of Solid Waste Collection Districts in counties and cities within the State of Washington. The establishment of such districts can also be used to finance all aspects of solid waste disposal and disposal activities and is deemed the only certain way to establish a solid base of fees from which to operate in the future.

The only prerequisite for the establishment of Solid Waste Collection Districts in the County is an approved Solid Waste Management Plan. Although the statute does not say that the Plan must refer to Districts; inclusion of Districts in the Plan as a recommendation would assure that, should the County choose in the future to create Collection Districts, reviews of the ordinance by WUTC and others would be less costly and take place in a more timely fashion.

Table 33. Estimated Program Revenues, 2010

Revenue Source	Total
Tipping Fees	$ 2,500,000
Grant Funding	88,000
Investment Interest/Leases	12,000
Total	**2,600,000**

9.2 IMPLEMENTATION STRATEGIES

In order to implement the recommendations outlined within the Plan with the current staff, there will be a need to establish strong working relationships with the Central Washington University, the local waste haulers, recycling firms, non-profit groups and organizations within the County; a need to maintain adequate funding levels, and to continue to fully utilize funding available through grants, most especially the CPG. SWAC recommendations also reflect the need to maintain adequate funding for implementation of all solid waste programs.

9.3 SWAC RECOMMENDED ACTIONS

The SWAC has developed a set of recommended actions in keeping with the solid waste goals, policies and objectives outlined in this document. These recommendations form an integrated program of waste management for Kittitas County through the year 2016. An overview of the selected options is included in Table 34. An implementation schedule is included in Section 9.4 and the budget for program implementation is included in Section 9.5.

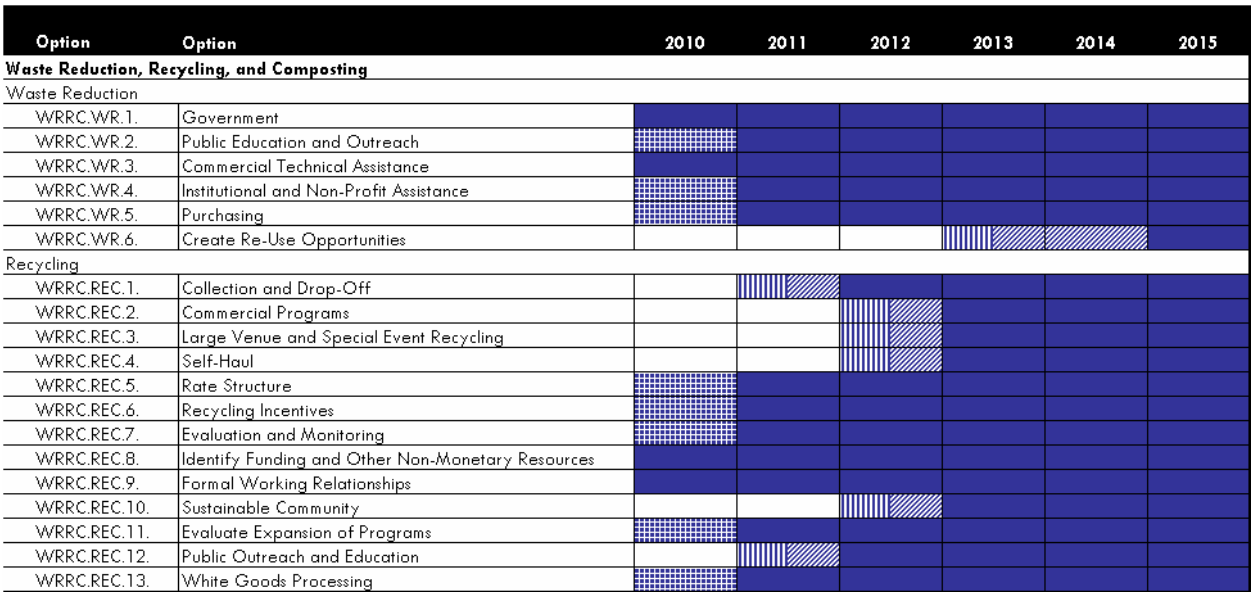
Table 34. SWAC Recommended Actions

No.	Option	Existing Option	Revised Option	New Option	SWMP Page No.
WRRC.WR.1.	Government	X			3-4
WRRC.WR.2.	Public Education and Outreach		X		3-4
WRRC.WR.3.	Commercial Technical Assistance	X			3-6
WRRC.WR.4.	Institutional and Non-Profit Assistance		X		3-6

No.	Option	Existing Option	Revised Option	New Option	SWMP Page No.
WRRC.WR.5.	Purchasing		X		3-6
WRRC.WR.6.	Create Re-Use Opportunities			X	3-7
WRRC.REC.1.	Collection and Drop-Off			X	3-16
WRRC.REC.2.	Commercial Programs			X	3-16
WRRC.REC.3.	Large Venue and Special Event Recycling			X	3-16
WRRC.REC.4.	Self-Haul			X	3-17
WRRC.REC.5.	Rate Structure		X		3-17
WRRC.REC.6.	Recycling Incentives		X		3-17
WRRC.REC.7.	Evaluation and Monitoring		X		3-17
WRRC.REC.8.	Identify Funding and Other Non-Monetary Resources	X			3-18
WRRC.REC.9.	Formal Working Relationships	X			3-18
WRRC.REC.10.	Sustainable Community			X	3-18
WRRC.REC.11.	Evaluate Expansion of Programs		X		3-19
WRRC.REC.12.	Public Outreach and Education			X	3-19
WRRC.REC.13.	White Goods Processing			X	3-19
WRRC.COMP.1.	Composting Public Education and Outreach		X		3-23
WRRC.COMP.2.	Compost Facility			X	3-23
WRRC.COMP.3.	Vermicomposting			X	3-23
WRRC.COMP.4.	Residential Yard Waste Collection Programs	X			3-24
WRRC.COMP.5.	Commercial Collection of Organics			X	3-24
WRRC.COMP.6.	Marketing of Finished Compost Products			X	3-24
WRRC.COMP.7.	Tiered Rate Structure for Organics			X	3-24
WRRC.COMP.8.	Yard Waste Disposal Ban			X	3-24
COLL.1.	Routing of Collected Waste through County Facilities	X			4-5
COLL.2.	Curbside Recycling Collection		X		4-5
COLL.3.	Review Collection Contracts	X			4-6
COLL.5.	Funding Sources	X			4-6
TRD.XFER.2.	Use of Transfer Stations		X		5-2
TRD.DISP.2.	Long-Term Disposal Opportunities	X			5-6
TRD.DISP.3.	Contractual Arrangements	X			5-7
TRD.ALT.1.	Future Consideration and Feasibility	X			5-11
TRD.ALT.2.	Alternative Energy Technologies	X			5-11
SPC.CD.1.	Recovery of C&D Debris		X		6-4
SPC.CD.6.	Materials Exchange Program		X		6-5
SPC.CD.8.	Evaluate Flow Control Measures			X	6-6
SPC.AG.1.	Evaluate Opportunities for Beneficial Reuse of Biomass			X	6-8
SPC.TIR.1.	Public Education Programs for Tires			X	6-10
SPC.TIR.3.	Evaluate Diversion Options for Tires		X		6-10
SPC.TIR.4.	Continue Current System	X			6-11
SPC.BIO.1.	Develop and Distribute Education Materials for Correct Management of Residential Medical Waste		X		6-13
SPC.BIO.2.	Monitoring of Solid Waste Programs for Biomedical Waste	X			6-14

No.	Option	Existing Option	Revised Option	New Option	SWMP Page No.
SPC.BIO.3.	Pharmaceutical Waste			X	6-14
SPC.VET.1.	Large Animal Disposal	X			6-15
SPC.VET.2.	Education and Outreach - Large Animal		X		6-15
SPC.PCS.1.	In-County PCS Site		X		6-17
SPC.PCS.2.	Street Sweepings Management			X	6-17
SPC.PCS.3.	Feasibility Study for PCS Management			X	6-17
SPC.PCS.4.	Import PCS	X			6-17
SPC.ACM.1.	Public Education on ACM			X	6-18
SPC.LIQ.1.	Catch Basin Liquids		X		6-20
SPC.EWA.1.	Monitor and Evaluate E-Waste Program			X	6-21
SPC.EWA.2.	E-Waste Education			X	6-22
MRW.1.	MRW Facilities		X		7-10
MRW.3.	Commercial Outreach, Education, and Technical Assistance	X			7-10
MRW.4.	Funding for MRW Programs	X			7-10
MRW.5.	Small Business Collection Assistance			X	7-10
ADM.ORD.1.	Staffing and Resources		X		8-9
ADM.ORD.2.	Funding	X			8-9
ADM.ORD.3.	Other Long-Term Needs	X			8-9
ADM.ORD.4.	New Regulations and Ordinance Requirements	X			8-9
ADM.ORD.5.	Permit Procedures, Policies and Fee Structures	X			8-10
ADM.ORD.6.	Permit Review	X			8-10

9.4 IMPLEMENTATION SCHEDULE



Option	Option	2010	2011	2012	2013	2014	2015
Waste Reduction, Recycling, and Composting							
Composting							
WRRC.COMP.1.	Composting Public Education and Outreach						
WRRC.COMP.2.	Compost Facility						
WRRC.COMP.3.	Vermicomposting						
WRRC.COMP.4.	Residential Yard Waste Collection Programs						
WRRC.COMP.5.	Commercial Collection of Organics						
WRRC.COMP.6.	Marketing of Finished Compost Products						
WRRC.COMP.7.	Tiered Rate Structure for Organics						
WRRC.COMP.8.	Yard Waste Disposal Ban						
Solid Waste Collection							
COLL.1.	Routing of Collected Waste through County Facilities						
COLL.2.	Curbside Recycling Collection						
COLL.3.	Review Collection Contracts						
COLL.5.	Funding Sources						
Transfer and Disposal							
Transfer Stations							
TRD.XFER.2.	Use of Transfer Stations						
Waste Import / Waste Export							
TRD.DISP.2.	Long-Term Disposal Opportunities						
TRD.DISP.3.	Contractual Arrangements						
Alternative Disposal Technologies							
TRD.ALT.1.	Future Consideration and Feasibility						
TRD.ALT.2.	Alternative Energy Technologies						
Special Waste							
Construction and Demolition Debris							
SPC.CD.1.	Recovery of C&D Debris						
SPC.CD.6.	Materials Exchange Program						
SPC.CD.8.	Evaluate Flow Control Measures						
Agricultural Waste							
SPC.AG.1.	Evaluate Opportunities for Beneficial Reuse of Biomass						
Tires							
SPC.TIR.1.	Public Education Programs for Tires						
SPC.TIR.3.	Evaluate Diversion Options for Tires						
SPC.TIR.4.	Continue Current System						
Biomedical Waste							
SPC.BIO.1.	Outreach for Management of Residential Medical Waste						
SPC.BIO.2.	Monitoring of SW Programs for Biomedical Waste						
SPC.BIO.3.	Pharmaceutical Waste						
Veterinary Wastes							
SPC.VET.1.	Large Animal Disposal						
SPC.VET.2.	Education and Outreach - Large Animal						
Petroleum-Contaminated Soils							
SPC.PCS.1.	In-County PCS Site						
SPC.PCS.2.	Street Sweepings Management						
SPC.PCS.3.	Feasibility Study for PCS Management						
SPC.PCS.4.	Import PCS						
Asbestos							
SPC.ACM.1.	Public Education on ACM						
Liquid Wastes							
SPC.LIQ.1.	Catch Basin Liquids						
Electronic Waste							
SPC.EWA.1.	Monitor and Evaluate E-Waste Program						
SPC.EWA.2.	E-Waste Education						
Moderate Risk Waste							
MRW.1.	MRW Facilities						
MRW.3.	Commercial Outreach, Education, and Technical Assistance						
MRW.4.	Funding for MRW Programs						
MRW.5.	Small Business Collection Assistance						
Administration and Enforcement							
ADM.ORD.1.	Staffing and Resources						
ADM.ORD.2.	Funding						
ADM.ORD.3.	Other Long-Term Needs						
ADM.ORD.4.	New Regulations and Ordinance Requirements						
ADM.ORD.5.	Permit Procedures, Policies and Fee Structures						
ADM.ORD.6.	Permit Review						

Planning Period **Implementation Period**

Prior Version of Program **Continued Option**

9.5 IMPLEMENTATION BUDGET

Six Year Capital and Operational Financing

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Waste Reduction, Recycling, and Composting										
Waste Reduction										
Existing Programs	41,143	35,102	29,272	27,675	24,844	25,092	25,343	24,097	24,353	24,611
New Programs	0	0	0	0	0	0	0	1,500	1,500	1,500
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Waste Reduction	*41,143*	*35,102*	*29,272*	*27,675*	*24,844*	*25,092*	*25,343*	*25,597*	*25,853*	*26,111*
Recycling										
Existing Programs	77,830	77,415	75,106	75,670	52,508	48,033	43,513	38,948	34,338	29,681
New Programs	13,000	13,000	20,450	21,500	16,000	21,160	26,372	31,635	36,952	42,321
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Recycling	*90,830*	*90,415*	*95,556*	*97,170*	*68,508*	*69,193*	*69,885*	*70,584*	*71,289*	*72,002*
Composting										
Existing Programs*	39,965	40,000	94,438	27,000	16,090	113,494	114,629	110,775	106,883	102,951
New Programs	0	0	499,144	239,282	158,634	160,220	161,823	168,441	175,125	181,876
Capital Expenditures	0	0	530,400	860,000	96,280	0	0	0	0	0
Subtotal, Composting	*39,965*	*40,000*	*1,123,982*	*1,126,282*	*271,004*	*273,714*	*276,451*	*279,216*	*282,008*	*284,828*
Waste Reduction, Recycling, and Composting	***171,938***	***165,517***	***1,248,810***	***1,251,127***	***364,356***	***367,999***	***371,679***	***375,396***	***379,150***	***382,941***
Solid Waste Collection										
Existing Programs	7,643	7,643	7,099	7,108	6,500	6,565	6,630	6,697	6,764	6,831
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Solid Waste Collection	***7,643***	***7,643***	***7,099***	***7,108***	***6,500***	***6,565***	***6,630***	***6,697***	***6,764***	***6,831***
Transfer and Disposal										
Transfer Stations										
Existing Programs	174,253	179,558	230,801	236,673	209,964	343,616	347,052	350,523	354,028	357,568
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	117,000	81,375	81,000	80,625	130,250	0	0	0	0	0
Subtotal, Transfer Stations	*291,253*	*260,933*	*311,801*	*317,298*	*340,214*	*343,616*	*347,052*	*350,523*	*354,028*	*357,568*
Waste Import / Waste Export										
Existing Programs	1,269,500	1,322,100	1,575,000	1,508,947	1,400,976	1,414,986	1,429,136	1,443,427	1,457,861	1,472,440
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Waste Import / Waste Export	*1,269,500*	*1,322,100*	*1,575,000*	*1,508,947*	*1,400,976*	*1,414,986*	*1,429,136*	*1,443,427*	*1,457,861*	*1,472,440*
Alternative Disposal Technologies										
Existing Programs	4,826	3,316	2,247	1,841	1,568	1,584	1,600	1,616	1,632	1,648
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Alternative Disposal Technologies	*4,826*	*3,316*	*2,247*	*1,841*	*1,568*	*1,584*	*1,600*	*1,616*	*1,632*	*1,648*
Subtotal, Transfer and Disposal	***1,565,579***	***1,586,349***	***1,889,048***	***1,828,086***	***1,742,758***	***1,760,186***	***1,777,788***	***1,795,566***	***1,813,521***	***1,831,656***

* The increase from 2010-2011 reflects a shift from capital to operational expense for the composting facility.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Special Waste										
Construction and Demolition Debris										
Existing Programs	206,372	231,425	302,916	333,421	216,471	218,636	220,822	219,530	225,261	227,513
New Programs	0	0	0	0	0	0	0	3,500	0	0
Capital Expenditures	0	323,000	125,000	115,000	0	0	0	0	0	0
Subtotal, Construction and Demolition Debris	*206,372*	*554,425*	*427,916*	*448,421*	*216,471*	*218,636*	*220,822*	*223,030*	*225,261*	*227,513*
Agricultural Waste										
Existing Programs	4,826	3,316	2,247	1,841	1,568	1,584	1,600	1,116	1,632	1,648
New Programs	0	0	0	0	0	0	0	500	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Agricultural Waste	*4,826*	*3,316*	*2,247*	*1,841*	*1,568*	*1,584*	*1,600*	*1,616*	*1,632*	*1,648*
Tires										
Existing Programs	10,000	14,000	15,000	15,000	15,000	15,150	14,802	14,955	15,109	15,265
New Programs	0	0	0	0	0	0	500	500	500	500
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Tires	*10,000*	*14,000*	*15,000*	*15,000*	*15,000*	*15,150*	*15,302*	*15,455*	*15,609*	*15,765*
Biomedical Waste										
Existing Programs	5,459	5,459	5,071	5,077	4,643	4,689	4,236	4,283	4,331	4,380
New Programs	0	0	0	0	0	0	500	500	500	500
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Biomedical Waste	*5,459*	*5,459*	*5,071*	*5,077*	*4,643*	*4,689*	*4,736*	*4,783*	*4,831*	*4,880*
Veterinary Wastes										
Existing Programs	5,459	5,459	5,071	5,077	4,643	4,689	4,736	4,783	4,831	4,880
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Veterinary Wastes	*5,459*	*5,459*	*5,071*	*5,077*	*4,643*	*4,689*	*4,736*	*4,783*	*4,831*	*4,880*
Petroleum-Contaminated Soils										
Existing Programs	42,000	46,000	51,700	51,700	50,000	50,500	51,005	51,515	47,030	47,551
New Programs	0	0	0	0	0	0	0	0	5,000	5,000
Capital Expenditures	0	0	125,000	0	0	0	0	0	0	0
Subtotal, Petroleum-Contaminated Soils	*42,000*	*46,000*	*176,700*	*51,700*	*50,000*	*50,500*	*51,005*	*51,515*	*52,030*	*52,551*
Asbestos										
Existing Programs	4,826	3,316	2,247	1,841	1,568	1,584	1,600	1,616	1,632	1,648
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Asbestos	*4,826*	*3,316*	*2,247*	*1,841*	*1,568*	*1,584*	*1,600*	*1,616*	*1,632*	*1,648*
Liquid Wastes										
Existing Programs	84,338	108,337	103,420	103,069	73,169	73,901	74,640	75,386	76,140	76,901
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	445,000	0	0	0	0	0	0	0	0	0
Subtotal, Liquid Wastes	*529,338*	*108,337*	*103,420*	*103,069*	*73,169*	*73,901*	*74,640*	*75,386*	*76,140*	*76,901*
Electronic Waste										
Existing Programs	5,459	5,459	5,071	5,077	4,643	3,689	3,736	3,783	3,831	3,880
New Programs	0	0	0	0	0	1,000	1,000	1,000	1,000	1,000
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Electronic Waste	*5,459*	*5,459*	*5,071*	*5,077*	*4,643*	*4,689*	*4,736*	*4,783*	*4,831*	*4,880*
Subtotal, Special Waste	***813,741***	***745,773***	***742,743***	***637,105***	***371,705***	***375,422***	***379,176***	***382,968***	***386,797***	***390,665***

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Moderate Risk Waste										
Existing Programs	38,400	42,150	114,232	108,340	65,165	64,817	65,475	66,140	66,811	67,489
New Programs	0	0	0	0	0	1,000	1,000	1,000	1,000	1,000
Capital Expenditures	300,000	300,000	300,000	300,000	0	0	0	0	0	0
Subtotal, Moderate Risk Waste	***338,400***	***342,150***	***414,232***	***408,340***	***65,165***	***65,817***	***66,475***	***67,140***	***67,811***	***68,489***
Administration and Enforcement										
Existing Programs	237,821	252,995	343,239	448,006	386,374	918,973	928,162	937,444	946,818	956,287
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	20,000	25,000	0	0	523,500	0	0	0	0	0
Subtotal, Administration and Enforcement	***257,821***	***277,995***	***343,239***	***448,006***	***909,874***	***918,973***	***928,162***	***937,444***	***946,818***	***956,287***
Other										
Existing Programs	256,422	245,852	237,746	234,917	18,406	18,590	18,776	18,964	19,153	19,345
New Programs	0	0	0	0	0	0	0	0	0	0
Capital Expenditures	0	0	0	0	0	0	0	0	0	0
Subtotal, Other	***256,422***	***245,852***	***237,746***	***234,917***	***18,406***	***18,590***	***18,776***	***18,964***	***19,153***	***19,345***
Grand Total	**3,411,544**	**3,371,279**	**4,882,917**	**4,814,690**	**3,478,763**	**3,513,551**	**3,548,686**	**3,584,173**	**3,620,015**	**3,656,215**

Appendix A

Interlocal Agreements

JOINT SOLID WASTE DISPOSAL SYSTEM

This Agreement, made and entered into on this 12th day of March, 1979, is by and between Kittitas County (hereinafter referred to as "COUNTY") and the following additional governmental entities (hereinafter referred to as "CITIES"):

1. City of Ellensburg, a municipal corporation
2. City of Roslyn, a municipal corporation
3. City of Cle Elum, a municipal corporation
4. Town of South Cle Elum, a municipal corporation
5. City of Kittitas, a municipal corporation

WHEREAS, the parties hereto recognize the mandate imposed by Chapter 70.95 of the Revised Code of Washington requiring the parties individually or collectively to prepare and adopt a solid waste management plan for the proper and appropriate collection and disposal of solid wastes of every description; and

WHEREAS, the parties hereto have already agreed among themselves by actions of the governing authorities of the respective parties that there should be only one solid waste management plan to encompass the entirety of Kittitas County; and

WHEREAS, the Board of County Commissioners acting for Kittitas County desires and is willing to provide for, operate and maintain such a solid waste disposal system in accordance with applicable state laws and regulations.

NOW, THEREFORE, in consideration of the premises and in further consideration of the mutual agreements and covenants herein contained, the parties agree as follows:

Section 1. AUTHORITY

The parties to this Agreement jointly have and possess the power and authorization under Chapter 39.34 of the laws of the State of Washington, being entitled the "Interlocal Corporation Act", to acquire or lease land for solid waste disposal purposes; to acquire and construct facilities, and to operate and maintain such facilities for the collection and disposal of solid wastes and do jointly agree that a countywide solid waste management system can best be achieved by cooperative action of the parties to this Agreement operating through authorization bestowed by said Chapter 39.34, Revised Code of Washington.

Section 2. PURPOSE

The purpose of this intergovernmental agreement is to provide for the economic and sanitary disposal of solid wastes produced or generated within each member municipality and within the unincorporated areas of the COUNTY.

Section 3. POWERS

The parties hereto delegate, and the COUNTY hereby assumes both the power and obligation to do each of the following:

a. To provide solid waste disposal facilities and service to all participating parties hereto.

b. To establish a schedule of fees to be collected from all users of the disposal facilities to cover current operating expenses, equipment and facility rental expense, provided, however, that any such future rates shall not be set nor revenues used for the purpose of satisfying any indebtedness incurred prior to the effective date of this agreement.

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c. To purchase, lease, receive as gifts or donations or otherwise acquire all land, buildings, equipment or supplies needed to provide a solid waste disposal system.

d. To make or cause to be made studies and surveys necessary to carry out the functions of countywide solid waste management.

e. To propose and recommend to participating parties to this agreement such local ordinances governing collection and disposal of solid waste as might be deemed desirable.

f. To provide for a system of budgeting, accounting and auditing of all funds associated with the solid waste system.

g. To accept grants or loans of money or property from the United States, the State of Washington or any person and to enter into any agreement in connection therewith, and to hold, use and dispose of such money or property in accordance with the terms of the gift, loan or grant.

h. To do such other things that are reasonably necessary to accomplish the purpose as stated in Section 2 of this Agreement.

Section 4. ORGANIZATION

a. The Commissioners or their designated agent shall be in charge of managing the solid waste disposal operation for the benefit of all citizens residing in Kittitas County.

b. The COUNTY shall require any solid waste contractor to operate the solid waste disposal facilities in accordance with such Joint Solid Waste Management Plan as shall be approved by all the parties hereto and by the Washington State Department of Ecology.

c. The Kittitas County Health Officer or his designated agent shall have the responsibility on behalf of the parties hereto to enforce appropriate health regulations with respect to solid waste and to issue to qualified parties such permits and licenses as might be necessary and it is further agreed that this responsibility shall be exercised for the benefit of all citizens residing in Kittitas County.

d. Each of the cities shall adopt as soon as practicable an ordinance which shall require a private collector of solid waste to obtain a permit to collect said solid waste within the city. Said ordinance and the permit issued thereunder shall provide that all solid waste collected by any permittee shall be deposited only at a disposal site to be designated by a Joint Solid Waste Management Plan of the County and Cities herein.

e. The City of Cle Elum presently contracts with a private solid waste collector to provide for the collection of solid waste in the City of Cle Elum at city expense. It is understood that the City of Cle Elum, or any other city contracting with a private collector, instead of adopting an ordinance as above provided, shall provide in the contract with its private collector, that said collector shall deposit all solid waste collected under said contract only at a disposal site to be designated by a Joint Solid Waste Management Plan of the County and Cities herein.

f. The CITIES agree that they each have the power to, and shall as soon as practicable, amend their own respective existing permits and contracts to provide that the present private collector within their respective cities shall deposit all solid waste collected under said existing permits or existing contracts only

at a disposal site to be designated by a Joint Solid Waste Management Plat of the County and Cities herein.

Section 5. FINANCING

a. The COUNTY shall be solely responsible for providing and paying for capital facilities and equipment acquired by the County for the Countywide system.

Section 6. ACCOUNTING AND AUDITS

a. The COUNTY shall maintain books of account for the solid waste disposal operation in accordance with the requirements of the Washington State Auditor.

b. Authorized representatives of any party hereto shall have the right to inspect said books of account at any time.

Section 7. PROPERTY RIGHTS

a. CITIES will retain their financial share in the existing capital facilities and each shall be reimbursed for their respective shares of the then current value of any cooperatively funded asset when and in the event it is sold.

b. In the event of termination of this Agreement, the facilities and any funds in the possession of the COUNTY at such time shall be distributed in kind or sold, as may be agreed upon by the parties, and the proceeds thereof distributed to the parties as their interests appear on the books of the COUNTY.

Section 8. TERM

This Agreement shall continue until rescinded, or terminated as herein provided.

Section 9. RECISION OR TERMINATION

This Agreement may be rescinded and all obligations herein terminated only by written consent of all the parties hereto. This Agreement hereby replaces and supersedes all previous agreements between the named parties on the subject of solid waste.

Section 10. ADMISSION OF NEW PARTIES

a. It is recognized that public entities other than the original parties hereto may wish to hereafter join in this Agreement.

b. Additional public entities may be added upon such terms and conditions as the then participating parties shall unanimously agree upon.

c. The terms of and conditions upon the admission of such additional parties shall be evidenced by a written addendum to this Agreement signed by the then participating parties and the additional party.

Section 11. AMENDMENTS

Amendments to this Agreement shall only be made by written agreement of all the parties hereto.

IN TESTIMONY WHEREOF, the parties hereto have caused this agreement to be executed by their duly authorized governing authorities as of the day and year first above written.

(1) ATTEST:

Town Clerk

TOWN OF SOUTH CLE ELUM

Mayor

(2) ATTEST:

City Clerk

CITY OF ROSLYN

Mayor

(3) ATTEST:

City Clerk

CITY OF KITTITAS

Mayor

(4) ATTEST:

City Clerk

CITY OF CLE ELUM

Mayor

(5) ATTEST:

City Clerk

CITY OF ELLENSBURG

Mayor

(6) ATTEST:

County Auditor

KITTITAS COUNTY

Commissioner

Commissioner

Commissioner

Resolution Adopting the 1979 Update to the
Kittitas County Countywide Solid Waste Management Plan
RESOLUTION NO. 79-3

WHEREAS, the Board of Kittitas County Commissioners have acted to update and revise the countywide solid waste management plat to reflect the designation of the Ryegrass site in Section 16, Township 17 N., Range 21 E.W.M. as the designated countywide landfill site after closure of the interim East Kittitas site; and

WHEREAS, the Board of Kittitas County Commissioners have acted to plan for installation of a baling system at the Ellensburg Transfer Station as a means of improving the quality of solid waste handling in Kittitas County; and

WHEREAS, these changes have been included in the updated solid waste management plan titled, 1979 Update: Cooperative Countywide Solid Waste Management Plan,

THEREFORE, Be It Hereby Resolved,

That the parties adopt the 1979 Update: Cooperative Countywide Solid Waste Management Plan for Kittitas County and the incorporated municipalities as the approved solid waste management plan for Kittitas County.

Signed this 12th day of March, 1979.

Attest: _____ City Clerk
_____ City of Ellensburg - Mayor

Attest: _____ City Clerk
_____ City of Cle Elum - Mayor

Attest: _____ Town Clerk
_____ Town of South Cle Elum - Mayor

Attest: _____ Town Clerk
_____ Town of Kittitas - Mayor

Attest: _____ City Clerk
_____ City of Roslyn - Mayor

Attest: _____ County Auditor
_____ County of Kittitas
Chairman, Board of County Commissioners

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Appendix B

SWAC Bylaws

KITTITAS COUNTY SOLID WASTE ADVISORY COMMITTEE BYLAWS AND MEETINGS PROCEDURES

I. STATEMENT OF PURPOSE

The Kittitas County Solid Waste Advisory Committee (SWAC) has been appointed by the Board of County Commissioners in accordance with Chapter 70.95 (165) RCW. The statute requires the SWAC to "assist in the development of solid waste handling programs and policies concerning solid waste handling and disposal, and review and comment on proposed rules, policies or ordinances prior to their adoption…" These Bylaws will become a part of the County Solid Waste Plan by reference and will define the SWAC function and rules.

The scope and duties of the Kittitas County Solid Waste Advisory Committee shall be to:

A. Advise Kittitas County on all aspects of solid waste management planning.
B. Assist Kittitas County in the development of programs and policies concerning solid waste management.
C. Review and comment on proposed solid waste management rules, policies, or ordinances prior to their adoption.

II. MEMBERSHIP AND TERMS

A. Members. The SWAC shall be composed of a minimum of nine and no more than twelve members representing balance of interests among the following groups: citizens; public interest groups; business; the waste management industry; and local elected public officials. Members shall provide on-going public input, coordination and information exchange between the groups. Five of the members shall be representatives of the cities and towns of the county and shall be recommended by their respective councils.

B. Ex-Officio Members. The Kittitas County Board of Commissioners may appoint non-voting ex-officio members to the SWAC, who will serve at the board of commissioner's discretion.

C. Appointment. Members shall be appointed by motion of the County Board of Commissioners.

D. Terms. Members shall serve a term of three (3) years or until their successor is appointed and confirmed as provided in the SWAC by-laws. The terms of office shall be staggered. Members may be reappointed to serve consecutive terms but no member shall serve more than three consecutive terms. Reappointment shall be subject to confirmation by motion of the County Board of Commissioners.

E. Vacancies. Vacancies shall be filled for the remainder of the term of the vacant position in the manner described in the initial appointment.

F. Participation. Members of the Committee are needed to advise on matters of public policy formulation and their regular attendance is essential. The Chair may recommend to the Board of County Commissioners replacement of a member if three consecutive meetings are missed, or if half the meetings in a given year are missed.

G. Training. Members should make themselves available to participate in training workshops pertinent to current solid waste issues as they become available.

H. Substitution. An appointed member may have a person, representing the absent member's interest, attend meetings and vote in the member's place for two meetings per year.

III. MEETINGS

A. Official Action. The committee shall adopt no recommendation, except in a meeting open to the public and then only at a meeting, the date of which public notice has been given by notifying press and radio in the county, and by such other means as may now or hereafter be provided. The committee may adopt recommendations and take other actions as necessary, by a majority vote of the members present at the meeting.

B. Regular Meetings. The committee shall hold at least on regular meeting each month. The time and place of the regular meetings shall be set by the Chair in a manner acceptable to the Committee. Regular meetings will alternate between Lower and Upper Kittitas County Locations. The Chair may cancel a regular meeting. SWAC is to be an ongoing committee, with meetings to be held at least four times per year during development of a comprehensive plan, and at least twice a year at other times. The regular meeting schedule may be expanded during major plan review and other such meetings as needed to carry out the duties of the SWAC.

C. Special Meetings. The Chair, or in the Chair's absence the Vice Chair, may call a special meeting for one or more specific purposes, provided that proper notice is provided to each member and other interested parties describing the purposes at least twenty-four hours prior to the time scheduled for the Special Meeting.

IV. CHAIR AND VICE CHAIR

A. Chair. A majority of the committee shall elect one of its members as Chair. The term of the Chair shall be for one (1) year. The Chair shall be elected at the first meeting in January and shall serve for a term of one year. The election year and the term of the chair will begin at the first meeting in January of each year.

B. Vice Chair. A majority of the Committee shall elect one of its members as Vice Chair. The term of Vice Chair shall be for one (1) year. The election year and the term of the Vice Chair will begin at the first meeting in January of each year.

STAFF
The SWAC shall be staffed by the Kittitas County Solid Waste Division, as necessary, to provide support to the SWAC.

VI. CONDUCT OF MEETINGS

A. Robert Rules of Order. The parliamentary rules known as Roberts Rules of Order shall apply to and govern the procedures of all meetings of the Committee. Provided that the chair may elect to allow a more informal discussion format so long as business is conducted in good order and participation of all members is assured. Consensus of the members is the preferred means to resolve all questions before the Committee. Consensus is hereby defined as the absence of any no votes by members.

B. Minutes/Agendas. Minutes of all meetings shall be kept by staff and distributed to the members within one week after a meeting. Meeting minutes will be approved by a majority vote of members present. Agendas will be prepared by staff, with verbal approval of the Chair, and distributed to the members at least seven days in advance of any regularly scheduled meeting.

C. Public Access. All meeting shall be open to the public. Provision shall be made for public comment at each meeting. Approved meeting minutes shall be available to the public on request. The County's ADA policies will be adhered to.

VII. WAIVER OF THE RULES
Any of the above rules or procedures may be waived by the majority vote of the Committee provided further that the reason therefore be included in each motion for waiver.

VIII. AMENDMENTS
To the extent that such an amendment would not conflict with the purpose for which the Committee was established, any of these by-laws may be amended or repealed, and new by-laws may be adopted, by majority vote of the entire SWAC. Members will be provided with proposes amendments at least two weeks before action is taken to amend these by-laws.

IX. TOPICS OF REVIEW
A. County Solid Waste Plan. Formulation of the Plan, including major updates, recommendations, amendments and addenda to the Plan.

B. Moderate Risk Waste Plan. Formulation of the Plan, including major updates, recommendations, amendments and addenda to the Plan.

C. Legislative proposals. Regulations adopted by the Board of Health, and by the Board of County Commissioners affecting solid waste management and related issues will be assigned to the Committee for review and comment prior to their adoption.

D. Other Issues. Additional questions pertaining to the Kittitas County's waste management program may be addressed to the Committee by the Board of Commissioners as deemed appropriate.

Appendix C

Kittitas County Solid Waste Ordinance 1999-01

KITTITAS COUNTY BOARD OF HEALTH
ORDINANCE NUMBER 1999-01

SOLID WASTE REGULATIONS

July 15, 1999

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KITTITAS COUNTY BOARD OF HEALTH

ORDINANCE 1999

SOLID WASTE REGULATIONS

SECTION I. AUTHORITY AND PURPOSE

These solid waste rules and regulations are promulgated under the authority of Chapters 70.05 and 70.95 revised Code of Washington to protect the public peace, health, safety and welfare of the citizens and environment of Kittitas County. All regulations pertinent to solid waste are listed and hereby adopted as noted in Appendix A. These rules and regulations govern the handling, storage, collection, transportation, treatment, utilization, processing and final disposal of all solid waste within Kittitas County, including the issuance of permits and enforcement. Kittitas County has developed a Solid Waste Management Plan, Moderate Risk Waste Plan, and Used Oil Amendment that provides framework to address solid waste issues. All provisions shall be liberally construed for the accomplishment of these purposes.
It is expressly the purpose of these rules, regulations, and plans to provide for and promote the health of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of these rules and regulations.

It is the specific intent of these rules, regulations, and plans to place the obligation of complying with its requirements upon waste generators, haulers, and/or operators of disposal sites, and no provision of, nor term used in these rules and regulations is intended to impose any duty whatsoever upon the Health Department nor any of its officers or employees, for whom the implementation or enforcement of these rules and regulations shall be discretionary and not mandatory.

Nothing contained in these rules, regulations and plans is intended to be, nor shall be construed to create or form the basis for any liability on the part of the Health Department or its officers, employees or agents, for any injury or damage resulting from the failure of any person subject to these rules and regulations to comply with these rules and regulations, or by reason or in consequence of any act or omission in connection with the implementation or enforcement of these rules and regulations on the part of the Health Department.

SECTION II. APPLICABILITY

These regulations apply to solid waste and hazardous substances as those terms are defined in Section III of these regulations. These regulations shall not apply to the following solid wastes:

A. Overburden from mining operations intended for return to the mine;

B. Liquid wastes whose discharge or potential discharge is regulated under federal, state or local water pollution permits;

C. Woodwaste used for ornamental, animal bedding, mulch and plant bedding or road building purposes;

D. Agricultural wastes, limited to manures and crop residues, returned to the soils at rates which do not exceed agronomic rates;

E. Clean soils and clean dredge spoils as defined in Section III of these regulations or as otherwise regulated by Section 404 of the Federal Clean Water Act (PL 95-217);

F. Septage taken to a sewage treatment plant permitted under Chapter 90.48 RCW;

G. Radioactive wastes, defined by Chapters 246-220 and 246-232 WAC; and

H. Wood debris resulting from the harvesting of timber and whose disposal is permitted under Chapter 76.04 RCW, the State Forest Practices Act.

SECTION III. DEFINITIONS

When used in this regulation, the following terms have the meanings given below. Chapter 173-351,173-303, and 173-304 WAC and (NESHAP) National Emission Standards for Hazardous Air Pollutants 40 CFR Part 61 are hereby adopted by reference.

Active Area: That portion of a facility where solid waste recycling, reuse, treatment, storage or disposal operations are being, are proposed to be, or have been conducted. Buffer zones shall not be considered part of the active area of a facility.

Acute hazardous waste: Dangerous waste sources (listed in WAC 173-303-9004) F020, F021, F022, F023, F026 or F027, and discarded chemical products (listed in WAC 173-303-9903) that are identified with a dangerous waste number beginning with a "P", including those wastes mixed with source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954. The abbreviation 'AHW" will be used in this ordinance to refer to those dangerous and mixed wastes which are acute hazardous wastes. Note – the terms acute and acutely are used interchangeably.

Agricultural Wastes: Wastes on farms resulting from the production of agricultural products including, but not limited to, manures and carcasses of dead animals weighing each or collectively in excess of fifteen (15) pounds.

Aquifer: A geologic formation, group of formations or part of a formation capable of yielding a significant amount of ground water to wells or springs.

Asbestos: Is a product that contains greater than 1% friable asbestos fibers by volume or weight.(Document 11 of EPA Policy Compendium) "Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered."(WAC 196-62-77)

Asbestos Containing Material (ACM): Any waste that contains asbestos. This term includes asbestos waste from control devices, materials used to enclose the work area during an asbestos project, asbestos containing material(s) collected for disposal, or asbestos contaminated waste, debris, containers, bags, protective clothing, or HEPA filters. Asbestos containing flooring or roofing materials shall not be considered ACM if:

1. The asbestos-containing flooring or roofing material is in good condition and is not peeling, cracking, or crumbling; and

2. The binder is petroleum based, the asbestos fibers are suspended in that base, and individual fibers are still encapsulated; and

3. The asbestos-containing flooring or roofing material does not have a friable asbestos backing or friable asbestos layers in between layers of petroleum based binder; and

4. The building, vessel, or structure containing the asbestos-containing flooring or roofing material, regardless of the condition of the material, will not be demolished by burning.

Ashes: The residue, including any air pollution flue dusts, from combustion or incineration of material including solid wastes.

Batch: Any dangerous waste which is generated less frequently than once per month.

Biomedical Waste: Biomedical waste means, and is limited to, the following types of waste:

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

2. "Biosafety level 4 disease waste" is the 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 Centers for Disease Control, National Institute of Health, and Biosafety in Microbiological and Biomedical Laboratories, current edition.

3. "Cultures and stocks" are 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, inoculate, and mix cultures.

4. "Human blood and blood products" are waste human blood and blood components, and materials containing free-flowing blood and blood products.

5. "Pathological waste" is human source biopsy materials, tissues, and anatomical parts that emanate from surgery, obstetrical procedures, and autopsy. "Pathological waste" does not include teeth, human corpses, remains, and anatomical parts that are intended for internment or cremation.

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

Biosolids: Municipal sewage, sludge, and septage is no longer considered a solid waste but a beneficial use product and are therefore not found in these regulations. Refer to Chapter 173-308 WAC.

Buffer Zone: That part of a facility that lies between the active area and the property boundary.

Bulky Waste: Large items of refuse, such as appliances, furniture, junk vehicles, and other oversize wastes which would typically not fit into reusable or disposable containers.

Closure: Those actions taken by the owner or operator of a MSWLF or facility to cease waste handling/disposal operations and to ensure that all MSWLF unit or facility is closed in conformance with applicable regulations at the time of such closures and to prepare the site for the post-closure period. Closure is considered part of operation. See definition of operation.

Commercial Waste: All types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Compliance Schedule: A written schedule of required measures in a permit, including an enforceable sequence leading to compliance with these regulations.

Composting: The controlled degradation of organic solid waste yielding a product for use as a soil conditioner.

Container: A device used for the collection, storage and/or transportation of solid waste including, but not limited to, reusable containers, disposable containers, detachable containers and tanks, fixed or detachable.

Contaminate: To allow to discharge a substance into soils, surface or ground water that would cause:

1. The concentration of that substance in the surface or ground water to exceed the standards or levels specified in Chapter 173-200 WAC, or

2. A statistically significant increase in the concentration of that substance in the surface or ground water where the existing concentration of that substance exceeds the maximum contaminant level specified in Chapter 173-200 WAC, or

3. A statistically significant increase above background in the concentration of a substance which:

    a. Is not specified in Chapter 173-200 WAC; and

    b. Is present in the solid waste; and

    c. Has been determined to present a substantial risk to human health or the environment in the concentrations found at the point of compliance by the jurisdictional health department in consultation with Ecology and the Department of Health.

Cover Material: Soil or other suitable material that has been approved by the Health Officer as cover for wastes.

Dangerous Waste: Means those solid wastes designated in WAC 173-303-070 through 173-303-100 as dangerous, or extremely hazardous or mixed waste. As used in this ordinance, the words “dangerous waste” will refer to the full universe of wastes regulated by this chapter. The abbreviation “DW” will refer only to that part of the regulated universe which is not extremely hazardous waste.

Demolition Waste: Solid waste, largely inert waste, resulting from the demolition or razing of buildings, roads and other man-made structures. Demolition waste consists of, but is not limited to: Concrete, brick, bituminous concrete, wood and masonry, composition roofing and roofing paper, steel, and minor amounts of other metals like copper. Plaster (i.e., sheet rock or plaster board), or any other material, other than wood that are likely to produce gases or leachate during the decomposition process and asbestos waste are not considered to be demolition waste for the purposes of this definition.

Detachable Containers: Reusable containers that are mechanically loaded or handled such as a "dumpster" or drop box.

Disposable Containers: Containers that are used once to handle solid waste such as plastic bags, cardboard boxes and paper bags.

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

Disposal Site: The location where any final treatment, utilization, processing or deposition of solid waste occurs. See also the definition of interim solid waste handling site.

Drop Box Facility: A facility used for the placement of a detachable container, including the area adjacent for necessary entrance and exit roads, unloading and turnaround areas. Drop box facilities normally serve the general public with loose loads and receive waste from off-site. Drop box facilities may also include containers for separated recyclables.

Ecology: The Washington State Department of Ecology.

Emission: The release of air contaminants from solid waste into the outdoor atmosphere.

Energy Recovery: The recovery of energy in a usable form from mass burning or refuse derived fuel incineration, pyrolysis or any other means of using the heat of combustion of solid waste that involves high temperature (above 1,200 degrees Fahrenheit) processing.

EPA: The United States Environmental Protection Agency.

Existing Facility: A facility which is owned or leased, and in operation, or for which construction has begun, on or before the effective date of Chapter 173-304 WAC and the owner or operator has obtained permits or approvals necessary under federal, state and local statutes, regulations and ordinances. A facility has commenced construction if either:

1. A continuous on-site physical construction program has begun; or

2. The owner or operator has entered into contractual obligations which cannot be canceled or modified without substantial financial loss for physical construction of the facility to be completed within a reasonable time.

Lateral extensions of a landfill's active area on land purchased and permitted by the Health Department for the purpose of landfilling before the effective date of Chapter 173-304 WAC shall be considered existing facilities.

Expanded Facility: A facility adjacent to an existing facility for which the land is purchased and approved by the Health Officer after the effective date of Chapter 173-304 WAC. A vertical expansion approved and permitted by the Health Department after the effective date of Chapter 173-304 WAC shall also be considered an expanded facility.

Extremely Hazardous Waste: Those dangerous and mixed wastes designated in WAC 173-303-100 as extremely hazardous. The abbreviation “EHW” will be used in this ordinance to refer to those dangerous and mixed wastes which are extremely hazardous

Facility: All contiguous land (including buffer zones) and structures, other appurtenances, and improvements on the land used for solid waste handling.

Facility Structures: Buildings, sheds, utility lines and drainage systems on the facility.

Final Treatment: The act of processing or preparing solid waste for disposal, utilization, reclamation or other approved method of use.

Garbage: Unwanted animal and vegetable wastes and animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of food, swill and carcasses of dead animals, and of such a character and proportion as to be capable of attracting or providing food for vectors, except sewage and sewage sludge.

Ground Water: That part of the subsurface water which is in the zone of saturation.

Hazardous Substance: Any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical or biological properties described in WAC 173-303-090 or WAC 173-303-100.

Hazardous Waste: Those solid wastes designated by 40CFR Part 261, and regulated as hazardous and/or mixed waste by the United States EPA. This term will never be abbreviated in this ordinance to avoid confusion with the abbreviations "DW" and "EHW". (See "dangerous waste" and "extremely hazardous waste" definitions.)

Health Department: The Kittitas County Health Department.

Health Officer: The Health Officer or the Health Officer's representative of the Kittitas County Health Department.

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

Industrial Solid Wastes: Solid waste or waste by-products generated by manufacturing or industrial processes such as scraps, trimmings, packing, pallets, and other discarded materials not otherwise designated as dangerous waste under Chapter 173-303 WAC. This term does not include commercial, inert, construction and demolition waste, woodwaste, mining waste, or oil and gas waste but does include lunchroom, office, or other similar waste generated by employees at the industrial facility.

Inert Wastes: Noncombustible, nondangerous solid wastes that are likely to retain their physical and chemical structure under expected conditions of disposal, including resistance to biological attack and chemical attack from acidic rainwater.

Junk Vehicle: A vehicle certified under RCW 46.55.230 as meeting at least three of following requirements:

1. Three (3) years old or older;

2. Extensively damaged, such damage including but not limited to the following: a broken window or windshield, or missing wheels, tires, motor, or transmission;

3. Apparently inoperable;

4. Has approximate fair market value equal only to the approximate value of the scrap in it.

Laboratory: A room or building equipped for scientific experimentation, research, testing or clinical studies of specimens, fluids, tissues, cultures or stocks of etiologic agents and associated biologicals or other biologically active agents.

Land Clearing Waste: Waste resulting from site clearing operations including, but not limited to, stumps, tree trunks, brush, sod and other vegetation and plant waste, and associated rocks, mud, sand, and other mineral waste.

Landfill: A disposal facility or part of a facility at which solid waste is permanently placed in or on land and which is not a landspreading disposal facility.

Leachate: A liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

Liquid: A substance that flows readily and assumes the form of its container, but retains its independent volume.

Liquid Waste: Any waste material that is determined to contain free liquids as defined by Method 9095 (Paint Filter Liquids Test), as described in U.S. Environmental Protection Agency publication SW-846, "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods".

Local Fire Control Agency: A public or private agency or corporation providing fire protection such as a local fire department, the Washington Department of Natural Resources or the United States Forest Service.

Lower Explosive Limits (LEL): The lowest percentage by volume of a mixture of explosive gases which will propagate a flame in air at twenty-five (25) degrees Centigrade and atmospheric pressure.

Manifest: The shipping document, which is used to identify the quantity, composition, origin, routing, and destination of a waste while it is being transported to a point of transfer, disposal, treatment, or storage.

Medical Waste: All infectious and injurious waste originating from a medical, veterinary or intermediate care facility.

Minimum Functional Standards (MFS): Chapter 173-304 WAC, the Minimum Functional Standards for Solid Waste Handling.

Mixed Waste: A dangerous, extremely hazardous, or acutely hazardous waste that contains both a nonradioactive hazardous component and, as defined by 10 CFR 20.1003, source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954 (42 USC 2011 et seq.).

Moderate Risk Waste (MRW): Means any waste that exhibits any of the properties of hazardous waste but is exempt from regulation under Chapter 70.105 RCW solely because the waste is generated in quantities below the threshold for regulation and any household wastes which are generated from the disposal of substances identified by Ecology as hazardous household substances."

Moderate Risk Waste Collection Facility: A dedicated site that is specifically built at a permanent or interim fixed location to collect, treat, recycle, exchange, store, and/or transfer moderate risk waste.

Moderate Risk Waste Fixed Facility (MRWFF): A staffed, dedicated site provided with secondary waste containment that is specifically built or set up at a permanent or interim fixed location to collect, treat, recycle, exchange, store, and/or transfer Moderate Risk Waste.

Moderate Risk Waste Limited Facility (MRWLF): A facility provided with secondary waste containment that is specifically built or set up at a fixed location to collect and store only one or a selected few MRW types.

Municipal Solid Waste Landfill Unit (MSWLF Unit): A discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under Chapter 173-304 WAC, the Minimum Functional Standards for Solid Waste Handling, or Chapter 173-218 WAC, Underground Injection Control Program. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nondangerous sludge, and

industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit, or a lateral expansion.

New Facility: A facility which begins operation or construction after the effective date of Chapter 173-304 WAC (see also definition of "Existing Facility").

Nonconforming Site: A solid waste handling facility which does not currently comply with the facility requirements of WAC 173-304-400, but does comply with a compliance schedule issued in a solid waste permit by the Health Officer.

Nuisance: Consists in unlawfully doing an act, or omitting to perform a duty, which act or omission either annoys, injures or endangers the comfort, repose, health or safety of others; or unlawfully interferes with, obstructs or tends to obstruct, any lake or navigable river, bay, stream, canal or basin, or any public park, square, street or highway; or in any way renders other persons insecure in life, or in the use of property.

One-Hundred Year Floodplain: Any land area which is subject to one percent or greater chance of flooding in any given year from any source.

Operation: Means those actions taken by an owner or operator of a facility or MSWLF unit beginning with waste acceptance at a facility or MSWLF unit up to and including closure of the facility or MSWLF unit.

Permit: An authorization issued by the Health Officer which allows a person to perform solid waste handling activities at a specific location and which includes specific conditions for such facility operations.

Person: An individual, firm, association, copartnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever.

Pesticide: Means, but is not limited to: Any substance or mixture of substances intended to prevent, destroy, control, repel, or mitigate any insect, rodent, nematode, mollusk, fungus, weed, and any other form of plant or animal life, or virus (except virus on or in living man or other animal which is normally considered to be a pest or which the department of agriculture may declare to be a pest; any substance or mixture of substances intended to be used as a plant regulator, defoliant, or desiccant; any substance or mixture of substances intended to be used as spray adjuvant; and, any other substance intended for such use as may be named by the department of agriculture by regulation. Herbicides, fungicides, insecticides, and rodenticides are pesticides for the purposes of this ordinance.

Pile: Any non-containerized accumulation of solid waste that is used for treatment or storage.

Plan of Operation: The written plan developed by an owner or operator of a facility, and approved by the Health Department and Ecology, detailing how a facility is to be operated during its active life and during closure and post-closure.

Point of Compliance: That part of ground water that lies beneath the perimeter of a solid waste facility's active area as that active area would exist at closure of the facility.

Post-Closure: The requirements placed upon disposal facilities after closure to ensure their environmental safety for a thiry-year period or until the site becomes stabilized (i.e., little or no settlement, gas production, or leachate generation). Post-closure includes the development of a written plan which complies with the requirements of Chapter 173-303 WAC, Chapter 173-304 WAC, Chapter 173-351 WAC, and the Solid Waste

Handling Permit issued by the Health Department. The post-closure plan is approved by the Health Department and Ecology and implemented by an owner or operator of a facility or MSWLF unit after closure.

Premises: A tract or parcel of land with or without habitable buildings.

Processing: An operation to convert a solid waste into a useful product or to prepare it for disposal.

Putrescible Waste: Solid waste which contains material capable of being decomposed by microorganisms.

Pyrolysis: The process in which solid wastes are heated in an enclosed device in an oxygen-deficient environment to vaporization, producing a hydrocarbon-rich gas capable of being burned for recovery of energy.

Quantity Exclusion Limits (QEL): These limits are used to distinguish when a dangerous waste is only subject to the small quantity generator provisions, and when a dangerous waste is subject to the full requirements of WAC 173-303.

Recycling: The source separation of recyclable materials from solid waste or the processing of solid waste mechanically or by hand to segregate recyclable materials for sale or reuse.

Recyclable Materials: Materials which can be removed from solid waste through recycling include, but are not limited to, paper and paperboard products, newsprint, cardboard, magazines, aluminum, glass, plastics, chemicals, oil, wood, compostable organics (food, yard and land clearing wastes), scrap metal, waste tires, construction and demolition debris, gypsum wallboard, and inert material.

Reusable Containers: Containers that are used more than once to handle solid waste such as garbage cans.

Rubbish: All nonputrescible wastes from all public and private establishments and from all residences.

Run-Off: Any rainwater, leachate or other liquid which drains over land from any part of the facility.

Run-On: Any rainwater or other liquid which drains over land onto any part of a facility.

Scavenging: The removal of materials at a disposal site, without the approval of the owner or operator and the Health Officer.

Small Quantity Generator (SQG):

a) a business whose waste is dangerous waste under WAC 173-303-070 subsection (3) and the quantity of waste generated per month (or the aggregated quantity if more than one kind of waste is generated) does not equal or exceed the quantity exclusion limit (QEL) for such waste (or wastes) as described in WAC 173-303-979(7); and

b) the quantity accumulated or stored does not exceed 2200 pounds for wastes with a 220 pound Quantity Exclusion Limit (QEL) and 2.2 pounds for waste with a 2.2 pound QEL. (Exception: The accumulation limit for the acute hazardous wastes described in WAC 173-303-081 (2)(iv) and 173-303-082(2)(b) is 220 lbs.); and

c) the total quantity of dangerous waste generated in one month, all DW and EHW regardless of their QEL's, does not equal or exceed 220 pounds. If a person generates any dangerous wastes that exceed the QEL or accumulates or stores waste that exceeds the accumulation limits, then all dangerous waste generated, accumulated, or stored by that person is subject to the requirements of this chapter. A small

quantity generator who generates in excess of the quantity exclusion limits or, accumulates, or stores waste in excess of the accumulation limits becomes subject to the full requirements of WAC 173-303 and cannot again be a small quantity generator until after all dangerous waste on-site at the time he or she became fully regulated have been removed, treated, or disposed.

Sole Source Aquifer: An aquifer designated by the EPA pursuant to Section 1424e of the Safe Drinking Water Act (PL 93-523).

Solid Waste: All putrescible and nonputrescible solid and semi-solid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes, junk vehicles or parts thereof, and discarded commodities. This includes all liquid, solid and semi-solid, materials which are not the primary products of public, private, industrial, commercial, mining and agricultural operations. Solid waste also includes, but is not limited to, woodwaste, dangerous waste and problem wastes.

Solid Waste Collection Service: Any agency, business, or service operated by a person for the purpose of collecting and transporting solid waste.

Solid Waste Handling: The management, storage, collection, transportation, treatment, utilization, processing or final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from such wastes or the conversion of the energy in such wastes to more useful forms or combinations thereof.

Solid Waste Management: The systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment and disposal of solid waste.

Storage: The holding of solid waste materials for a temporary period.

Stream: The point at which any confined freshwater body of surface water reaches a mean annual flow of twenty (20) cubic feet per second.

Surface Impoundment: A facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), and which is designed to hold an accumulation of liquids or sludges. The term includes holding, storage, settling and aeration pits, ponds or lagoons, but does not include injection wells.

Surface Water: All lakes, rivers, ponds, streams, inland waters, salt waters and all other water and water courses within the jurisdiction of the State of Washington.

Transfer Station: A permanent, fixed, supplemental collection and transportation facility, used by persons and route collection vehicles to deposit collected solid waste from off-site into a larger transfer vehicle for transport to a solid waste handling facility. Transfer stations may also include recycling facilities.

Treatment: The physical, chemical or biological processing of solid waste to make such solid wastes safer for storage or disposal, amenable for energy or material resource recovery or reduced in volume.

Used Oil:

1. Lubricating fluids that have been removed from an engine crankcase, transmission, gearbox, hydraulic device, or differential of an automobile, truck, bus, vessel, plane, heavy equipment, or machinery powered by an internal combustion engine; or

2. Any oil that has been refined from crude oil, used, and as a result of use, has been contaminated with physical or chemical impurities; or

3. Any oil that has been refined from crude oil and, as a consequence of extended storage, spillage, or contamination, is no longer useful to the original purchaser; and

4. Used oil does not include oil to which hazardous wastes have been added.(i.e. brake fluid, antifreeze, solvents, thinners, gasoline).

Utilization: Consuming, expending or exhausting by use, solid waste materials.

Vadose Zone: That portion of a geologic formation in which soil pores contain some water, the pressure of that water is less than atmospheric pressure, and the formation occurs above the zone of saturation.

Vector: A living animal, insect or other arthropod which transmits an infectious disease from one organism to another.

Waste Recycling: Reusing waste materials and extracting valuable materials from a waste stream.

Waste Tires: Tires that are no longer suitable for their intended purpose because of wear, damage or defect.

Waste Tire Carrier: A person who transports waste tires over public roads for the purpose of storage, recycling or final disposal. This does not include:

1. Any person transporting five tires or less;

2. Any person transporting tire derived products;

3. Any United States government agency or political subdivision, when involved in the clean-up of illegal waste tire piles; or

4. Any person in the business of new or used tire sales, who transports more than five (5) waste tires generated by their operations for the purposes of recycling or final disposal, provided that said businesses retain complete trip manifests as provided in Section V.B.3.a.

Waste Tire Storage Facility: Any facility which stores more than two hundred (200) waste tires at any one time.

Water Quality Standard: A standard set for maximum allowable concentrations of specific parameters in surface waters as set forth in Chapter 173-201 WAC, Water Quality Standards for Waters of the State of Washington.

Wetlands: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, such as swamps, marshes, bogs, and similar areas. This includes wetlands created, restored or enhanced as part of a mitigation procedure. This excludes constructed wetlands.

White Goods: Appliances such as stoves,dishwashers and water heaters that no longer function for which they were intended and can be salvaged for scrap.

White Goods (freon containing): Refrigerators and Air Conditioning units that no longer function for which they were intended that can be salvaged for scrap once proper removal of freon is removed by a qualified technician.

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

Yard Waste: A compostable organic material generated in yards, gardens, and private or public areas resulting from the maintenance or removal of ornamental vegetation, including, but not limited to, brush, branches, prunings, grass, leaves, flowers, shrubs, and small trees. Yard waste shall not include land clearing wastes, construction and demolition wastes, woodwaste, animal excrement, rocks, garbage, moderate risk waste, or dangerous waste.

SECTION IV. ON-SITE SOLID WASTE MANAGEMENT STANDARDS

A. General Standards

1. Owner Responsibilities for Solid Waste.

   The owner, operator or occupant of any premise, business establishment or industry shall be responsible for the satisfactory and legal handling and/or disposal of all solid waste generated by them or accumulated on the property. Except as provided in Section IV.B.6., single-family residences and single-family farms are prohibited from dumping or depositing solid waste onto or under the surface of land owned or leased by them. All solid wastes must be stored in accordance with Section IV.A.2. until removed to a permitted solid waste handling facility.

2. Storage Requirements.

   a. Responsibility. The owner and/or occupant of any premises shall be responsible for the safe and sanitary storage of all solid wastes generated or accumulated at that premises until it is removed to a permitted solid waste facility. The storage area and storage containers shall be maintained in a clean, safe, and nuisance-free condition. Provisions shall be made for the safe and sanitary disposal of leakage and drainage from sanitary compactors, drop boxes, and storage areas. Materials shall be contained to prevent blowing. Additionally, generators should refer to Section IV.B. pertaining to specific solid waste handling requirements.

   b. On-Site Storage.

      (1) The owner, operator or occupant of any premises, business establishment or industry shall store all garbage and rubbish in containers that meet the following requirements, except for recyclables which are addressed in Section IV.A.2.b.(3).:

         (A) Disposable containers shall be sufficiently strong to allow lifting without breakage.

(B) Reusable containers, except for detachable containers, shall be:

(i) Rigid and durable;

(ii) Corrosion resistant;

(iii) Nonabsorbent and watertight;

(iv) Rodent-proof and easily cleanable;

(v) Equipped with a close-fitting cover;

(vi) Suitable for handling with no sharp edges or other hazardous conditions; and

(C) Detachable containers shall be durable, corrosion-resistant, nonabsorbent, non-leaking and having either a solid cover or screen cover to prevent littering.

(D) The Health Officer may require disinfection of any container. Containers shall be cleaned frequently to prevent rodent/vector nuisances. All wastewater from container cleaning shall be disposed of in a sanitary sewer system, unless otherwise authorized by the Health Officer.

(E) Any litter container required and approved pursuant to the Model Litter Control Act, Chapter 70.93 RCW, shall be exempt from the provisions of this section.

(2) Containers of garbage and rubbish shall be closed at all times except when waste is being added or removed.

(3) The owner, operator or occupant of any premises, business establishment or industry shall store all recyclable materials so as not to produce unsafe or unsanitary conditions.

3. Removal.

Putricible waste shall be removed from the premises where it was generated to a permitted solid waste handling facility no less than once per week, or at a different frequency approved by the Health Officer due to public health and safety risk. Rubbish shall be removed to a permitted solid waste handling facility as needed so as not to create a nuisance or litter problem.

4. Collection and Transportation.

a. All persons collecting or transporting solid waste shall prevent littering or the creation of other nuisances at the loading point, during transport, and shall be responsible for the proper unloading of the solid waste at a permitted transfer station or other permitted solid waste handling or disposal site. Non-containerized solid waste and recyclable materials shall be covered during transport to prevent spillage.

b. Vehicles or containers used for the collection and transportation of solid waste, except biomedical waste, shall be tightly covered or screened where littering may occur, durable, and of easily cleanable construction. Where garbage is being collected or transported, containers shall be cleaned and kept in good repair as necessary to prevent nuisances, odors and insect breeding.

c. Vehicles or containers used for the collection and transportation of any solid waste shall be loaded and moved in such a manner that the contents will not fall, leak, or spill therefrom. Where such spillage or leakage does occur, the waste shall be picked up immediately by the collector or transporter and returned to the vehicle or container and the area otherwise properly cleaned.

d. The Health Officer may require disinfection of any vehicle. Vehicles shall be cleaned frequently to prevent rodent/vector nuisances. All wastewater from vehicle cleaning shall be disposed of in a sanitary sewer system, unless otherwise authorized by the Health Officer.

e. A fee will be imposed in addition to other solid waste charges for a person arriving at a staffed landfill or transfer station without a cover on the vehicle's waste or without the waste secured in accordance with RCW 70.93.097.

    1. Funds generated by these fees will be utilized for solid waste education and enforcement.

    2. The fees collected by Solid Waste Programs shall be deposited no less often than quarterly with the Kittitas County Health Department.

f. A vehicle which is transporting sand, dirt, or gravel in compliance with the provisions of RCW 46.61.655 shall not be required to secure or cover a load.

5. Disposal.

a. Generally. All solid wastes shall be disposed of at an appropriate solid waste handling facility permitted to receive such waste, or in a manner consistent with these regulations as approved by the Health Officer. Should a situation arise where disposal of solid waste is not covered under these regulations, the Health Officer shall determine acceptability of a method of disposal for the solid waste on a case-by-case basis.

b. Unlawful Dumping. It shall be unlawful for any person to dump, deposit, bury, or allow the dumping, depositing or burying of any solid waste onto or under the surface of the ground or into the waters of this state, except at a solid waste disposal site for which there is a valid permit. Unlawful dumping shall include unauthorized deposition of solid waste into a container that is owned or leased by another person.

c. Name Appearing on Waste Material and Presumption. Whenever solid waste dumped in violation of this regulation contains three (3) or more items bearing the name of one individual, there shall be a presumption that the individual whose name appears on such items committed the unlawful act of dumping.

d. Identification Presumed. When the Health Officer investigates a case of unlawful dumping and finds identification in the solid waste as described in Section IV.A.5.c., or other evidence, he/she may then order the person who committed the unlawful dumping to remove and dispose of said solid waste according to these regulations. Following the disposal of said solid waste, the Health Officer may order this person to present to the Health Officer a receipt from the permitted disposal facility as proof of appropriate disposal.

e. Lack of Identification. When the Health Officer investigates a case of unlawful dumping and finds no identification in the solid waste, nor evidence, he/she may then order the property owner to remove said solid waste from his/her land, and have the solid waste disposed of according to these regulations. Where this occurs on private land, the property owner or occupant shall be responsible

for removal and disposal. Where this occurs on public land, the appropriate governmental agency shall be responsible for removal and disposal.

f. Burning Prohibited. It shall be unlawful for any person to burn solid waste including garbage or rubbish unless these materials are burned in an appropriate permitted energy recovery or incinerator facility.

g. Disposal Service Required. When a person does not dispose of solid wastes in a manner consistent with these regulations, the Health Officer may order said person to obtain ongoing and regularly scheduled solid waste collection service if said person does not already have this service and if a solid waste collection service exists or is offered in the geographic area where the person resides. Said service shall be from an approved solid waste collection service with necessary certificates issued by the Washington Utilities and Transportation Commission. If said person does not have this service and resides in a geographic area where a single solid waste collection service operates exclusively under covenant or ordinance as required by local government, and said service is mandatory for persons residing within the jurisdiction of the local government, the Health Officer may schedule ongoing regularly scheduled service for said person with this solid waste collection service.

B. Specific Waste Stream Standards

1. Applicability.

This section applies to all persons who generate and/or handle the specific wastes referenced herein.

2. Moderate Risk Waste and Used Oil.

a. Storage Requirements.

(1) Moderate Risk Waste (MRW), used oil, and hazardous substances shall be stored in containers which are:

(A) Compatible with the waste contained therein;

(B) In good condition and without any leaks, corrosion or other signs of deterioration;

(C) Securely covered at all times except during the addition or removal of contents; and

(D) In the case of hazardous substances which are unused products, stored in their original container.

(E) All containers shall be clearly marked with the contents (i.e. used oil, antifreeze, xylene etc.) or marked with the word “EMPTY”.

(2) Containers of MRW, used oil, and hazardous substances shall be stored on a bermed or curbed, impervious surface other than the ground, asphalt, or wood, and in a location(s) which is covered and controlled to prevent:

(A) Container deterioration due to weather exposure;

(B) Surface water run-on;

(C) Exposure to extreme temperatures; and

(D) Any other controllable condition which may cause or increase the possibility of container failure.

b. Accumulation. In addition as listed below to the quantity exclusion limits (QELs) contained in WAC 173-303-070(8), MRW, used oil, and hazardous substances shall not be accumulated in quantities that, in the opinion of the Health Officer, present a demonstrable threat to public health or the environment.

Small Quantity Generators (SQG*)* shall not accumulate wastes in excess of the Quantity Exclusion Limit for the wastes generated by their business per WAC 173-303-070, 070-100, and 170(1).

Large Quantity (Regulated) Generators shall not accumulate wastes on site in excess of their monthly accumulation limit for waste in accordance with WAC 173-303-200(1)(c), (1)(d).

Medium Quantity Generators (MQG) shall not accumulate wastes on site in excess of 2,200 pounds per 173-303-201(1),(2) WAC.

Above Waste Generators shall abide by the Waste Accumulation Time Limits per 173-303-200(1), (2) WAC.

Used oil shall not be accumulated in quantities in excess of 300 gallons at any one site, home or business. The Health Officer at his discretion may restrict the amount of used oil accumulated if potential public health and safety are at risk.

c. Transportation. MRW and used oil shall be transported in accordance with Sections IV.A.4.a. through IV.A.4.c.

d. Treatment and Disposal.

(1) Moderate Risk Waste. All MRW shall be disposed of at a permitted moderate risk waste collection facility, or picked up by a permitted dangerous waste transporter. MRW may also be processed using an on-site treatment system approved by Ecology which renders the waste non-dangerous. MRW shall not be deposited in the general municipal solid waste collection system, a public sewer system, a storm drain, an on-site sewage system, in surface or ground water, or onto or under the surface of the ground.

(2) Pesticides. Usable pesticides shall be utilized in accordance with the Washington State Department of Agriculture authorized usage of the product. Unused or leftover pesticide materials intended for farm business use that cannot be applied in a manner consistent with the pesticide label use instructions, outdated pesticide or an unwanted pesticide is considered a waste and must be disposed of through a Department of Agriculture sponsored collection event.

Disposal of used containers of DW, EHW, AHW and pesticides. Used liquid containers shall be multiple rinsed (a minimum of three times) so that no residues remain. The rinsate shall be utilized in a manner consistent with the directions. The containers must be clean and dry inside and outside, with no apparent odor, prior to disposal in the municipal solid waste stream.

Used paper and fiber containers must be cut open. To thoroughly remove the contents strike or shake the container and utilize the contents in the manner consistent with the directions. All residue shall be emptied prior to disposal.

(3) Used Oil**.** Used oil shall be recycled or disposed of in accordance with RCW 70.95 and RCW 70.105, RCW 70.94 or a facility permitted in Washington State to transport or accept used oil.

Used oil shall not be burned as fuel in a land-based facility or in state waters unless it meets the standards of RCW 70.94.610.

"A person annually selling one thousand or more gallons of lubricating oil to ultimate consumers for use or installation off the premises, or five hundred or more vehicle oil filters to ultimate consumers for use or installation off the premises within Kittitas County shall:

- Post and maintain at or near the point of sale, durable and legible signs(obtained from the Department of Ecology or Solid Waste Programs at no charge) informing the public of the importance of used oil recycling and how and where used oil may be properly recycled: and

- Provide for sale at or near the display location of the lubricating oil or vehicle oil filters, household used oil recycling containers.

- A person, who, after notice, violates this section is guilty of a misdemeanor and on conviction is subject to a fine not to exceed one thousand dollars."

Disposal of used oil penalty

- The use of used oil for dust suppression or weed abatement is prohibited.
- No person may sell or distribute absorbent-based kits, intended for home use, as a means for collecting, recycling, or disposing of used oil.
- No person may knowingly dispose of used oil except by delivery to a person collecting used oil for recycling, treatment, or disposal subject to the provisions of Chapter 70.95 RCW and RCW 70.105.
- No owner or operator of a solid waste landfill may knowingly accept used oil for disposal in the landfill.
- Any persons who violate this section are guilty of a misdemeanor.

e. Mitigation and Control. A company or person responsible for a spill or nonpermitted discharge of MRW, DW, EHW, AHW, used oil, and/or hazardous substances shall take appropriate and immediate action to protect public health and the environment, including any necessary measure required to protect the immediate environment or human health. In addition, the person responsible for a spill or discharge shall, in accordance with WAC 173-303-145:

(1) Notify the Health Department and, when an imminent threat to public health or the environment exists, emergency 911;

(2) Notify the Central Regional Office of the Department of Ecology,

(3) Clean up any released hazardous substance, or take such actions as may be required or approved by federal, state, or local officials; and

(4) Meet applicable requirements of Section IV.C.3. as directed by the Health Officer.

3. Asbestos Containing Waste.

a. General. Asbestos containing waste material (ACWM), as defined in Section III, shall be handled and disposed of pursuant to 40 CFR Part 61, Chapter 173-303 WAC, and Chapter 296-65 WAC as these regulations are amended.

b. Removal. Persons removing ACWM shall contact Washington State Department of Labor and Industries for information and instruction concerning removal and disposal.

   Labor and Industries ACWM must be wetted down during removal to reduce airborne emissions of particulate matter. ACWM shall be sealed into leak tight containers or double bagged in polyethylene bags with a combined six (6) mils thickness or greater and identified with the proper warning label as per 296-62-07723 WAC.

   Floor tile, roofing material, packing, and gaskets (normally nonfriable `Asbestos Containing Material (ACM)) must be inspected by an inspector accredited in Washington State to inspect for Asbestos, before demolition to determine if the ACM is in poor condition, indicated by peeling, cracking, or crumbling of the material. If normally nonfriable ACM is in poor condition, then the material must be tested for friability. If the ACM is friable, it must be handled in accordance with the NESHAP. The above four nonfiable ACM should be removed before demolition only if they are in poor condition and are friable.

   If the nonfriable ACM is subjected to sanding, grinding, or abrading as part of demolition or renovation, then the nonfriable ACM must be handled in accordance with the NESHAP. If a building is demolished by burning, all ACM must be removed prior to the demolition.

c. Disposal. Generators of ACWM shall contact Kittitas County Solid Waste Programs prior to disposal at the Kittitas County Asbestos Site 24 hours prior to disposal of ACM. The ACM shall be disposed of in accordance with 40 CFR Part 61 and the approved plan under Section VI.B.1.c.(4), and covered with at least fifteen centimeters (6 inches) of non-asbestos containing waste material immediately following disposal..

4. Biomedical Waste.

   a. Sections referencing "Biomedical Waste"in WAC 480-70-500,WAC 296-62, and WAC 173-304 is hereby referenced and adopted.

   b. Home Sharps. Shall be in leakproof, rigid, puncture resistant, break resistant containers which are labeled and tightly lidded during storage, handling, and transport. These containers must be capable of maintaining their structural integrity from the point of storage to deposition at an approved disposal or collection site. The containers shall be of any color and shall be conspicuously labeled with the international biohazard symbol, and the words "Biohazardous Waste" or words that clearly denote the presence of biomedical waste.

5. Animal Waste.

   a. Animal waste, including but not limited to, manure, dead animals and agricultural wastes, shall be disposed of in a manner consistent with Chapter 246-203 WAC, General Sanitation Regulations, or other method approved by the Health Officer. Any animal waste which is deemed biomedical waste as defined in Section III shall be handled, treated and disposed of as required in Section IV.B.4.

b. Dead Animals. Except as otherwise provided in Section IV.B.5., dead animals shall be disposed of in a manner to protect the public health and the environment. Large animals shall be taken to a rendering plant, or a veterinary clinic, or property owners may bury animals on their property so long as no nuisance is created. i.e. (high water table or insufficient depth of soil so as not to completely cover the animal thereby allowing scavenging to take place). Small animals shall be taken to a veterinary clinic, an animal shelter, buried on site, or can be disposed of at transfer stations (double bagged) so as not to create a nuisance.

c. Agricultural Waste. Agricultural waste shall be regulated pursuant to Chapter 70.95 RCW.

d. Pet Feces. Pet feces, especially dog droppings, shall be disposed of in a manner, such as burial or bagging and placement into containers described in Section IV.A.2.b., which does not create a nuisance or pollute surface waters of the state, and shall be disposed of no less than once per week, unless a different frequency is approved by the Health Officer. Pet feces may be disposed of into the sanitary sewer if the system is served by a sewer treatment facility which will accept such waste. This waste shall not be put into a storm sewer.

6. Compost.

Composting of household food waste, grass clippings and/or other compostable material, shall be conducted in a manner which minimizes odors or emissions, does not create a nuisance, or attract rodents and/or other vectors. The Department of Ecology Best Management Practices publication #97-502 Compost Facility Handbook shall be referenced. Single family residences and single family farms which are composting materials resulting from their own activities on site, when such action does not create a nuisance, are exempt from the permit requirements in Section VI.L.

7. Bulky Waste.

Bulky wastes shall be stored and transported in such a manner so as not to create a nuisance or safety hazard. Bulky wastes should be recycled. County transfer stations provide this service(excluding junk cars) as well as independent recyclers. If recycling is not feasible, these wastes shall be disposed of at an approved solid waste facility.

8. Demolition Waste.

Generators of demolition waste should source separate and recycle the material to the maximum extent practicable. Individuals may take this material to county transfer stations. Contractors may contact Solid Waste Programs and once approved, haul directly to a permitted facility.

C. Specific Business Waste Stream Standards

1. Applicability.

This section applies to all businesses which generate and/or handle the specific wastes referenced herein.

2. Small Quantity Generators.

a. Applicability. This section applies to small quantity generators (SQGs) as defined in Section III. In addition to the requirements of this section, SQGs must meet the requirements of Section IV.B.2.

b. Waste Designation. SQGs shall designate suspected or known dangerous wastes pursuant to WAC 173-303-070.

c. Container Labeling. SQG's shall label all containers of MRW and used oil with the name of the waste and major hazard(s) associated with the waste. Containers of MRW shall also be labeled with the words or appropriate acronyms for "dangerous waste", "extremely hazardous waste", acutely hazardous waste".

d. Secondary Containment. Secondary containment is required of all containers of dangerous wastes and/or used oil stored on-site. This containment must be equipped with a drain, durable, compatible with the waste it is meant to contain, and large enough to contain ten (10) percent of the total waste volume, or one hundred ten (110) percent of the largest container, whichever is greater.

e. Hazardous Materials Management Plans. The Health Officer may require an SQG to prepare and follow a written Health Department approved Hazardous Materials Management Plan when the SQG has violated any part of this regulation.

3. Waste Screening.

a. All solid waste must be designated as required by WAC 173-303-070 to prevent the disposal of dangerous waste at a facility not permitted to accept dangerous waste. All solid waste which designates as dangerous waste must be managed in a manner consistent with these regulations and Chapter 173-303 WAC.

b. The Health Officer may require the screening of any wastes suspected of being a regulated dangerous waste as defined in Section III. The screening process may involve analytical testing, a disclosure of the waste constituents and waste generation process, and other additional information necessary to determine if the waste is dangerous. The Health Officer may establish a schedule for compliance as part of the screening process. Based on the results of the required screening, the Health Officer may require the generator or transporter to direct the waste to a facility permitted to handle such waste.

4. Waste Tires.

a. Applicability. This section applies to all buisnesses which store waste tires including, but not limited to, persons involved in the business of new or used tire sales, and waste tire storage facilities. Site owners shall meet applicable regulations contained in Chapter 173-314 and 173-304-420 WAC.

b. Generally. No person shall enter into a contract, or use services, for the transportation of waste tires, with a transporter who does not possess applicable licensing from the state.

c. Storage.

(1) Except as provided in Section IV.C.4.c.(2) below, businesses shall at no time store more than two hundred (200) waste tires, or store any volume of waste tires in which the manner could result in vector harborage and/or fire hazard. Tires shall not be used for the construction of

fencing, corrals or any other use in which tires were not originally intended for without prior written approval of the Health Officer.

(2) Any person who is engaged in the storage of more than two hundred (200) waste tires, shall obtain a Solid Waste Handling Permit as a waste tire storage facility in accordance with Section VI. F. Said waste tire storage facility shall comply with the provisions of WAC 173-304-420 and Chapter 173-314 WAC.

SECTION V. SOLID WASTE COLLECTION SERVICE STANDARDS

A. Operation and Maintenance Requirements

1. General.

   a. All persons operating a solid waste collection service shall prevent littering or the creation of other nuisances at the loading point, during transport, and shall be responsible for the proper unloading of solid waste at a permitted transfer station or other permitted solid waste handling or disposal site. Non-containerized solid waste and recyclable materials shall be covered during transport to prevent spillage.

   b. Vehicles or containers used for the collection and transportation of solid waste, except biomedical waste, shall be tightly covered or screened where littering may occur, durable, and of easily cleanable construction. Where garbage is being collected or transported, containers shall be cleaned and kept in good repair as necessary to prevent nuisances, odors and insect breeding.

   c. Vehicles or containers used for the collection and transportation of any solid waste shall be loaded and moved in such a manner that the contents will not fall, leak, or spill therefrom. Where such spillage or leakage does occur, the waste shall be picked up immediately by the collector or transporter and returned to the vehicle or container and the area otherwise properly cleaned.

   d. The Health Officer may require disinfection of any vehicle. Vehicles shall be cleaned frequently to prevent rodent/vector nuisances. All wastewater from vehicle cleaning shall be disposed of in a sanitary sewer system, unless otherwise authorized by the Health Officer.

   e. All persons operating a solid waste collection service shall inspect collection and transportation vehicles at least monthly for repairs to containers such as missing or loose fitting covers or screens, leaking containers, etc., and maintain such inspection records at the facility normally used to park such vehicles or such other location that maintenance records are kept. Such records shall be kept for a period of at least two (2) years, and be made available upon the request of the Health Officer.

   f. Any person desiring to operate a solid waste collection service shall meet the provisions of Chapter 480-70 WAC.

2. Waste Tire Carriers.

   a. Waste tire carriers shall meet the conditions in Section V.A.1.a., b., c., e., and f.

   b. Waste tire carriers shall obtain a waste tire carrier license from the Washington State Department of Licensing pursuant to WAC 173-314-200.

c. All waste tire carriers, and businesses transporting more than five (5) waste tires generated by their own operations for the purpose of recycling, storage or disposal, shall maintain complete trip manifests for each occurrence of waste tire transportation. Completed manifests shall be retained at the point of generation for a period of two (2) years and be available to the Health Officer on request. Manifests shall be on one form and shall include:

(1) Date tires are transported;

(2) Number of tires transported;

(3) Name, telephone number, and location of storage, recycling or final disposal facility to which the load is destined; and

(4) Printed name and signature of person(s) transporting the waste tires.

SECTION VI. SOLID WASTE HANDLING FACILITY STANDARDS

A. General Facility Requirements

1. Applicability.

a. All facilities which are subject to the standards of Chapters 173-303, 173-304 or 173-351 WAC or the amendments thereto, and all solid waste handling, storage, collection, transportation, treatment, utilization, processing, recycling, recovery, and final disposal facilities subject to these regulations are required to obtain permits. Single-family residences and single-family farms who generate waste on site are exempt from these permit requirements provided that the applicable standards of Section IV are fully complied with.

b. Permits are not required for corrective actions at solid waste handling facilities performed by the state and/or in conjunction with the United States Environmental Protection Agency to implement the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), or corrective actions taken by others to comply with a state and/or federal cleanup order provided that:

(1) The action results in an overall improvement of the environmental impact of the site;

(2) The action does not require or result in additional waste being delivered to the site or increase the amount of waste or contamination present at the site;

(3) The facility standards of Chapters 173-304 and 173-351 WAC and Sections IV.B. and VI.A.3. are met; and

(4) The Health Officer is informed in writing of the actions to be taken at least ninety (90) days prior to initial activities, and is given the opportunity to review and comment upon the proposed corrective action plans.

c. Effective Dates.

(1) Existing facilities will operate under the terms and conditions of their existing permits valid on the effective date of this regulation. After the expiratin date of existing permits, these existing facilities shall meet the requirements of this section.

(2) New and expanded waste handling facilities shall meet the requirements of this section on the effective date of this regulation.

2. Solid Waste Handling Permit.

No solid waste disposal site or facility, solid waste handling facility, shall be operated, established, substantially altered, expanded or improved until the county, city or other person operating or owning such site has obtained a Solid Waste Handling Permit from the Health Department pursuant to the provisions of this section.

a. Procedures for Permits.

(1) Any owner or operator subject to the permit requirements who intends to operate a facility must apply for a permit with the Health Officer. Filing shall not be complete until three (3) copies of the application have been signed by the owner and operator and received by the Health Officer, the permit fee has been submitted, and the applicant has filed an environmental checklist required under the State Environmental Policy Act Rules, Chapter 197-11 WAC.

(2) Except for municipal solid waste landfills which shall follow the permitting requirements of WAC 173-351-700 through WAC 173-351-750, all applications for a permit must contain the information set forth in these regulations.

(3) Once the Health Officer determines that an application for a permit is factually complete, he/she shall refer one (1) copy to the Central Regional Office of Ecology and one (1) copy to Solid Waste Programs for review and comment.

(4) If an application for a permit is factually incomplete, the Health Officer may deny the application without prejudice. In such a case, if the application is made factually complete within six (6) months of its denial without prejudice, it shall be considered to be a continuation of the initial application. Application fees are non-refundable.

(5) The Health Officer shall investigate every application to determine whether the facility meets all applicable laws and regulations and complies with all zoning requirements. Solid Waste Programs reviews to ensure that the application conforms with the most recently approved Kittitas County Comprehensive Solid Waste Management Plan.

(6) The Health Officer shall establish and collect fees for permits and renewal of permits. Fees must be submitted with the permit application.

(7) A copy of all permit applications must be sent to the Department of Ecology for review and recommendation for or against the issuance of each permit by the Health Officer

(8) When the Health Officer has evaluated all pertinent information, he or she may issue a permit. Every completed solid waste permit application shall be approved or disapproved within ninety (90) days after its receipt by the Health Officer or the applicant shall be informed as to the status of the application with a schedule for final determination.

(9) After the Health Officer denies issuance of a solid waste permit, reapplication for a permit involving substantially the same proposal shall not be considered for six (6) months and shall consist of an original application.

(10) Every permit application received by the Health Officer shall be on a format prescribed by the Health Officer and shall contain specific requirements necessary for the proper operation and development of the permitted site or facility, including the requirement that final engineering plans, specifications and other reports be submitted for approval to the Health Officer.

(11) The Health Department must file all issued permits with Ecology no more than seven (7) days after the date of issuance.

(12) The owner or operator of a facility shall apply for renewal of the facility's permit annually. The Health Officer shall annually:

(A) Review the original application for compliance with these regulations and such additional information as required in Section VI.A.2.c.;

(B) Review information collected from inspections, complaints or known changes in the operations;

(C) Collect the renewal fee;

(D) Renew the permit; and

(E) File the renewed permit with Ecology no more than seven (7) days after the date of issuance. Ecology shall review and may appeal the renewal as set forth in RCW 70.95.185 and RCW 70.95.190.

b. General Application Contents for Permits for New or Expanded Facilities. Except as provided for in Section VI.C., all permit applications for facilities subject to these regulations, shall include, but may not be limited to, the following:

(1) A general description of the facility;

(2) The types of waste to be handled at the facility;

(3) The plan of operation required by WAC 173-304-405 (2);

(4) The form used to record weights and volumes of each type of waste stream accepted as required by WAC 173-304-405 (3) and stipulated by the approved Kittitas County Comprehensive Solid Waste Management Plan;

(5) An inspection schedule and inspection log required by WAC 173-304-405 (5); and

(6) Documentation to show that any domestic or industrial wastewater treatment facility, such as a leachate collection and treatment system, is being reviewed by Ecology under Chapter 173-240 WAC (Submission of Plans and Reports for Construction of Wastewater Facilities).

c. Application Contents for Existing Facilities Renewing Permits.

(1) All owners or operators of existing facilities shall renew permits on application forms specified by the Health Officer. Previous information submitted to the Health Officer may be referred to on the application forms. Changes in operating methods or other changes must be noted on the application in order to be authorized by permit.

(2) Evidence of general liability insurance in an amount no less than one million dollars ($1,000,000) shall be furnished to the Health Officer, as he or she may require, prior to permit renewal for all existing facilities if the owner or operator is other than a governmental agency.

d. Re-Examination Fee. When plans and specifications that have been examined are altered and resubmitted, an additional fee for the re-examination of such plans shall be assessed at the current cost of the health department's hourly rate. Where a duplicate set of approved plans are submitted for examination and approval at any time after a permit has been issued on the original approved plans, a fee shall be charged at the current hourly rate for such examination and approval. Where a complete redesign of a site is submitted after one design has been examined, the current hourly rate shall also be charged in addition to the application fee for the first design. The examination of any further redesign shall be similarly charged.

3. Facility Standards.

a. The following Ecology facility standards are hereby adopted by reference:

(1) WAC 173-304-467: Financial Assurance for Public Facilities, except for municipal solid waste landfills regulated under Chapter 173-351 WAC.

(2) WAC 173-304-400: Solid Waste Handling Facility Standards.

(3) WAC 173-304-405: General Facility Requirements.

b. Out-of-County Generated Solid Waste. No out-of -county waste shall be accepted unless the Health Officer has reviewed and presented all pertinent information to the Board of Health for their review for either acceptance or denial. The Board of Health shall then forward their recommendation to the County Commissioners. The County Commissioners shall either accept or deny the Board of Health recommendation.

c. Disposal Site Inspection and Screening. If during inspections of solid waste handling facilities the Health Officer observes waste suspected of being regulated dangerous waste, the Health Officer shall have the authority to require the site operator to segregate and hold any such waste. If the Health Officer determines that testing is required to identify the waste, the generator shall be responsible for such analysis. If the generator is not known, the site owner or operator shall be responsible for such analysis. The disposal site owner, operator, and/or attendants shall have similar authority not to accept suspect wastes. All generators of dangerous wastes shall be subject to the conditions of the Dangerous Waste Regulations, Chapter 173-303 WAC. The site owner or operator will assume responsibility for disposal of the waste if the generator is unknown. The site owner or operator shall maintain records of loads refused as suspected dangerous wastes. These records shall include name and address of generator or transporter, license plate number of the transporting vehicle, description of waste and reason for refusal. The site operator shall refer this information to the Health Officer as soon as possible.

B. General Landfill Facilities (except Municipal Solid Waste Landfills)

1. Permit Application Contents.

   In addition to the requirements of Section VI.A.2., each landfill permit application, except for municipal solid waste landfill applications, must include, but may not be limited to, the following:

   a. A geohydrological assessment of the facility which meets the minimum requirements of WAC 173-304-600(3)(b)(i) including, but not limited to, information which addresses:

      (1) Local/regional geology and hydrology, including faults, unstable slopes and subsidence areas on site;

      (2) Evaluation of bedrock and soil types and properties;

      (3) Depths to ground water and/or aquifer(s);

      (4) Direction and flow rate of local ground water;

      (5) Direction of flow of regional ground water;

      (6) Number, location and construction (where available) of private and public wells within a two-thousand (2,000) foot radius of the site;

      (7) Tabulation of all water rights for ground water and surface water within a two-thousand (2,000) foot radius of the site;

      (8) Identification and description of all perennial surface waters within a one-mile radius of the site, and all ephemeral streams, wetlands, and lakes within a two-thousand (2,000) foot radius of the site;

      (9) Background ground water quality assessment, for the drinking water parameters indicated in WAC 173-304-9901 and WAC 173-200-040 (2), which accounts for both dry and wet weather conditions, and for expanded facilities, identification of impacts of existing facilities of the applicant, to date, upon ground waters from landfill leachate discharges or stormwater surface run-off;

      (10) Background surface water quality assessment for temperature, pH, fecal coliform bacteria, conductivity, turbidity, suspended solids, dissolved oxygen, heavy metals, hardness, chloride, nitrate, nitrite, ammonia, sulfate, chemical oxygen demand, total organic carbon, and organics, which account for both dry and wet weather conditions, and for expanded facilities, identification of impacts of existing facilities of the applicant, to date, upon surface waters from landfill leachate discharges or stormwater surface run-off, or other information specified by the Health Officer;

      (11) Calculation of a site water balance;

      (12) Conceptual design of a ground water and surface water monitoring system, including proposed installation methods for these devices and where applicable, a vadose zone monitoring plan;

      (13) Land use in the area, including the location of nearby residences; and

(14) Topography of the site and drainage patterns for both pre- and post-development conditions.

b. Preliminary engineering report/plans and specifications and development and operation plans are subject to the requirements of WAC 173-304-600(3)(b)(ii), and shall include, but not be limited to:

(1) How the facility will meet the locational standards of WAC 173-304-130;

(2) Relationship of the facility to the most recently approved Kittitas County Solid Waste Management Plan, and the basis/calculations for determining the facility's life;

(3) The design of bottom and side liners, and final cover system;

(4) Identification and analysis of borrow sources for liner construction, and daily and final cover;

(5) Interim/final leachate collection, treatment and disposal methodology;

(6) Ground water monitoring;

(7) Landfill gas control and monitoring;

(8) Stormwater surface run-off quality and quantity control, discharge, and monitoring;

(9) Trench design, fill methods, elevation of final cover and bottom liner, and equipment requirements; and

(10) Closure/post-closure design, construction, maintenance and land use.

c. The operation plan is subject to the requirements of WAC 173-304-600(3)(b)(iii), and shall address, at a minimum:

(1) Operation and maintenance of leachate collection, treatment and disposal systems;

(2) Operation and maintenance of landfill gas control systems;

(3) Operation, maintenance, and monitoring plans for ground water, surface water and landfill gases to include sampling technique, frequency, handling and analyses requirements;

(4) Plans for handling solid wastes on-site including plans for handling asbestos and problem wastes;

(5) Safety and emergency plans;

(6) Routine filling, grading, cover and housekeeping, including dust control and blowing litter;

(7) Record system to address records on weights and volumes of each waste stream type, number of vehicles and the types of waste received;

(8) A method to perform an annual waste capacity analysis study of the site to determine total amount of the site capacity filled to date, and total site life remaining based upon the frequency, volumes, and compaction effectiveness of solid wastes brought to the site;

(9) Vector control plans;

(10) Noise control;

(11) How inspections are conducted and their frequency;

(12) Actions to be taken if there is a fire or explosion;

(13) Actions to be taken if a leak is detected;

(14) Corrective action programs to take if ground water or surface water is contaminated; and

(15) Actions to be taken if there is a failure of the surface water containment system.

d. The closure plan is subject to the requirements of WAC 173-304-600(3)(b)(iv), and shall address, at a minimum:

(1) Estimate of closure season/year for individual cells (if applicable) and for the facility in whole;

(2) Capacity of site in volume and tonnage;

(3) Maintenance of active fill versus completed, final covered acreage;

(4) Estimated closure construction timing and notification procedures; and

(5) Inspection by regulatory agencies.

e. The post-closure plan is subject to the requirements of WAC 173-304-600(3)(b)(v), and shall address, at a minimum:

(1) Estimated time period for post-closure activities;

(2) Site monitoring of landfill gas, ground water, surface water, and leachate;

(3) Deed clause changes, land use and zoning restrictions;

(4) Maintenance activities to maintain final cover, stormwater run-on and run-off systems, and monitoring systems; and

(5) Identification of final closure costs, including cost calculations and the funding mechanism for financial assurance, as described in WAC 173-304-467 and WAC 173-304-468, as amended.

2. Facility Standards.

a. Ecology Facility Standards Adopted by Reference. Ecology solid waste facility standards contained in Chapters 173-304 WAC, as amended, and as hereafter adopted by Ecology, are hereby adopted by reference. These facility standards include, but may not be limited to the following:

(1) WAC 173-304-130: Locational Standards for Disposal Sites.

(2) WAC 173-304-460: Landfilling Standards, except for municipal solid waste landfills regulated under Chapter 173-351 WAC.

(3) WAC 173-304-468: Financial Assurance for Private Landfill Disposal Facilities, except for municipal solid waste landfills regulated under Chapter 173-351 WAC.

(4) WAC 173-304-490: Ground Water Monitoring Requirements, except for municipal solid waste landfills regulated under Chapter 173-351 WAC.

(5) WAC 173-304-9901: Maximum Contaminant Levels for Ground Water, except for municipal solid waste landfills regulated under Chapter 173-351 WAC.

b. Methane Monitoring. All landfills where methane gas is generated shall provide for adequate venting, collecting, redirecting, or elimination of gases generated by solid waste. It shall be the responsibility of the landfill operator and/or owner to develop a sampling and testing program to monitor gas production and migration. Such program shall be submitted for review and approval by the Health Officer prior to work initiation.

c. Development and Closure.

(1) WAC 173-304-407: General Closure and Post-Closure Requirements is hereby adopted by reference.

(2) Any person desiring to close an existing landfill facility must apply for a post-closure permit with the Health Officer, on a form to be provided by the Health Officer. The application shall address compliance with the facility's post-closure plan as described in Section VI.B.1.e.

C. Municipal Solid Waste Landfills

1. General.

Municipal solid waste landfills shall comply with the Kittitas County Solid Waste Management Plan and all provisions of Chapter 173-351 WAC: Municipal Solid Waste Landfills, which is hereby adopted by reference. Municipal solid waste landfills shall follow the permitting and permit application content requirements of WAC 173-351-700 through WAC 173-351-750.

2. Facility Standards.

a. General. Municipal solid waste landfills shall comply with the facility standards in Chapter 173-351 WAC and the additional requirements in this section.

b. Waste Screening.

(1) Municipal solid waste landfill operators shall develop and implement a waste acceptance and screening program to prevent dangerous waste from entering the facility. This waste screening program shall be reviewed and approved by the Health Department prior to implementation. At a minimum, the waste screening program shall include the following:

(A) A waste disposal application to be used by the facility to summarize the generator's waste designation procedures. The application shall include, at a minimum:

(i) The company name, contact name, address and telephone number of the generator, the generator's consultant, the generator's contractor, and the analytical laboratory providing data to support the application.

(ii) The site name, street address, city, county and state where the waste proposed for disposal originated. If the site is a remedial action identified by EPA or Ecology, the name and telephone number of the site manager representing the respective agency shall be included.

(iii) A description of how the waste was generated.

(iv) A description of the physical and chemical nature of the waste proposed for disposal including a description of the potential waste contaminants.

(v) Whether the application is for a one-time or on-going disposal authorization. Applications for on-going disposal must identify the procedures used to ensure that the application being submitted will remain representative of the waste proposed for disposal.

(vi) The quantity of waste proposed for disposal in cubic yards and tons and the manner in which the waste is stored on-site. Applications for on-going disposal must identify the quantity of waste that will be disposed of per month, or other frequency if monthly quantification cannot be achieved due to the manner in which the waste is generated.

(vii) A checklist identifying that each requirement of the waste designation procedures in WAC 173-303-070(3) was followed by the generator.

(viii) A description of the sampling frequency and sampling method. The sampling frequency recommended in Table I of Ecology document 91-30, "Guidance for Remediation of Petroleum Contaminated Soils" (April 1994 and as amended) shall be used. If the number of samples collected differs from the number recommended in Table I of this reference or required in the Health Department approved waste screening program a narrative shall be included which provides justification that the number of samples collected is representative of the entire waste stream proposed for disposal.

(ix) A description of the analytical procedures selected to designate the waste proposed for disposal including justification why certain parameters were chosen for analysis and others excluded from analysis. Analyses shall be performed by a professional laboratory accredited by the Washington State Department of Ecology waste water accreditation program, or other equivalent accreditation program(s), for the parameters tested. Equivalency of accreditation programs must be determined by the facility as part of the approved waste screening program. Analytical methods used must be those identified in the following Ecology and EPA guidance documents and their respective amendments:

(aa) Ecology document 80-12, "Biological Testing Methods".

(bb) Ecology document 91-30, "Guidance for Remediation of Petroleum Contaminated Soils".

(cc) Ecology document 93-51, "Chemical Testing Methods for Complying with the Dangerous Waste Regulations".

(dd) EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods".

(ee) Waste proposed for disposal that contains free liquid must also be analyzed pursuant to EPA Method 9095, "Paint Filter Liquids Test" contained in EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods".

(x) Copies of laboratory and/or field analysis reports used to designate the waste proposed for disposal, including quality assurance and quality control data and chain-of-custody's associated with the samples used to designate the waste.

(xi) For petroleum contaminated soils (PCS), the appropriate soil classification from Ecology document 91-30, as amended, shall be stated.

(xii) End use of the waste proposed for disposal shall be described. For PCS, end use shall be consistent with those listed in Table V of Ecology document 91-30, as amended.

(xiii) Certification by the generator and preparer of the application that the application is complete and correct and that the waste has been fully designated pursuant to WAC 173-303-070.

(xiv) Certification that the application has been reviewed for accuracy and completeness by the facility operator, certification that the waste does not designate as a dangerous waste under Chapter 173-303 WAC, and a recommendation by the facility operator as to whether to accept or deny request for disposal.

(B) Random inspections of incoming waste loads. Waste shall be inspected at a minimum of two (2) locations: entrance and active tipping area. If a public drop box is available at the facility, this location shall also be inspected. Inspections shall be recorded and records maintained of loads refused as suspected dangerous waste. These records shall include the name and address of the generator or transporter, license plate number of the transporting vehicle, and reason for denial. This information shall be submitted to the Health Department immediately.

(C) Development and implementation of a Health Department approved contingency plan should unacceptable waste be observed during inspections or during other facility operations.

(D) Training of facility personnel to recognize regulated dangerous waste and PCB wastes.

(2) The waste screening program may be amended by the Health Department. Alterations to the facility's waste screening program initiated by the facility operator shall be approved by the Health Department prior to implementation.

(3) The facility shall reimburse the Health Department for all time spent reviewing waste screening applications, applicable data, and supplemental information for continuous waste streams at the current hourly rate approved by the Kittitas County Board of Health.

D. Transfer Stations, Drop Box Stations, and Baling and Compaction Systems

1. General.

Any facility or site must comply with the Kittitas County Solid Waste Management Plan.

2. Permit Application Contents.

In addition to the requirements of Section VI.A.2., each application for a permit must contain preliminary engineering report/plans and specifications that include, but may not be limited to:

a. The proposed facility's zoning status;

b. The relationship to the most recently approved Kittitas County Comprehensive Solid Waste Management Plan and the area to be served by the facility; and

c. The facility design to address how the facility shall meet requirements of WAC 173-304-410, including closure.

3. Facility Standards.

WAC 173-304-410: Transfer Stations, Baling and Compaction Systems, and Drop Box Facilities, is hereby adopted by reference.

E. Surface Impoundments

1. General

Any facility or site must comply with the Kittitas County Solid Waste Management Plan.

2. Permit Application Contents.

In addition to the requirements of Section VI.A.2., each application for a permit must include, but may not be limited to, the following:

a. A geohydrological assessment of the facility that addresses all of the factors of Section VI.B.1.a.;

b. Preliminary engineering report/plans and specifications that address, where applicable:

(1) How the proposed facility will meet the locational standards of WAC 173-304-130;

(2) The relationship of the facility to the most recently approved Kittitas County Comprehensive Solid Waste Management Plan;

(3) The design of liners and foundation to be incorporated in the facilities design, including the design of leachate collection and treatment systems;

(4) The design of ground water monitoring;

(5) The design of dikes, including calculations on dike stability analyses under conditions of liner failure;

(6) Other design details, including sludge clean-out and disposal, overfilling alarms and inlet design; and

(7) Closure/post-closure design, construction maintenance and land use.

c. An operation plan that addresses:

(1) Operation and maintenance of leachate collection system, or ground water monitoring;

(2) Operation and maintenance of overfilling equipment or details of filling and emptying techniques;

(3) Inspection of dikes and liners for integrity; and

(4) Safety and emergency plans consistent with local police, fire, and emergency management policies and procedures.

d. A closure plan to address:

(1) Estimate of closure year and cost;

(2) Methods of removing wastes, liners and any contaminated soils and location of final disposal;

(3) Closure timing and notification procedures; and

(4) Final inspection by regulatory agencies.

3. Facility Standards.

WAC 173-304-430: Surface Impoundment Standards, is hereby adopted by reference.

F. Piles

1. General

Any site must comply with the Kittitas County Solid Waste Management Plan

2. Permit Application Contents.

In addition to the requirements of Section VI.A.2., each application for a permit must include, but may not be limited to:

a. Preliminary engineering reports/plans and specifications that include, but are not limited to:

(1) How the proposed facility will meet the locational standards of WAC 173-304-130;

(2) The relationship of the facility to the most recently approved Kittitas County Solid Waste Management Plan and zoning;

(3) The design of the liner or sealed surface upon which the liner rests, including an analysis of the liners ability to withstand the stress;

(4) The design of the run-on and run-off system;

(5) The design to avoid washout when the pile is located in a 100-year floodplain; and

(6) Maximum elevation and boundaries of the waste pile.

b. An operation plan that addresses:

(1) Methods of adding or removing wastes from the pile (waste screening) and equipment used;

(2) Inspection of the liner for integrity; and

(3) Safety and emergency plans consistent with local police, fire, and emergency management policies and procedures.

c. A closure plan to address:

(1) Estimate of closure year and cost;

(2) Methods of removing wastes, liners and any contaminated soils, and location of final disposal;

(3) Closure timing and notification procedures; and

(4) Final inspection by regulatory agencies.

3. Facility Standards.

WAC 173-304-420: Piles Used for Storage and Treatment Facility Standards, is hereby adopted by reference.

G. Energy Recovery and Incinerator Facilities

1. General

Any facility must comply with the Kittitas County Solid Waste Management Plan

2. Permit Application Contents.

In addition to the requirements of Section VI.A.2., each application for a permit must include, but may not be limited to:

a. Preliminary engineering reports/plans and specifications that include, but are not limited to:

(1) The relationship of the facility to the most recently approved Kittitas County Comprehensive Solid Waste Management Plan and zoning;

(2) The design of the storage, treatment, and handling facilities on-site for incoming waste, as well as the storage, treatment, and handling on-site, and/or the transportation off-site, of fly ash, bottom ash and any other wastes produced by air or water pollution controls; and

(3) The design of the incinerator or thermal treater, including changing or feeding systems, combustion air systems, combustion or reaction chambers, including heat recovery systems, ash handling systems and air pollution and water pollution control systems. Instrumentation and monitoring systems design shall also be included.

b. An operation plan that includes, but is not limited to:

(1) Cleaning of storage areas as required by WAC 173-304-440 (2)(a);

(2) Alternative storage plans for breakdowns as required in WAC 173-304-440 (2)(c);

(3) Inspection to ensure compliance with state and local air pollution laws and to comply with WAC 173-304-405 (5). The inspection log or summary must be submitted with the application; and

(4) How and where the fly ash, bottom ash and other solid wastes will be disposed of.

c. A closure plan to address:

(1) Estimate of closure year and cost;

(2) Methods of closure and methods of removing wastes, equipment and location of final disposal;

(3) Closure timing and notification procedures; and

(4) Final inspection by regulatory agencies.

3. Facility Standards.

WAC 173-304-440: Energy Recovery and Incinerator Standards, is hereby adopted by reference.

H. Recycling Facilities

1. General

Any facility must comply with the Kittitas County Solid Waste Management Plan.

2. Permit Application Contents.

a. In addition to the requirements of Section VI.A.2., applications shall include a proposed methodology for a waste screening program to effectively remove and properly dispose of unacceptable waste types. Additionally, application contents for recycling facilities shall demonstrate compliance with the requirements of WAC 173-304-300.

b. An operations plan, closure plan, health and safety plan, haul route and site layout.

3. Facility Standards.

The following Ecology facility requirements are hereby adopted by reference:

a. WAC 173-304-300: Waste Recycling Facility Standards.

I. Moderate Risk Waste Collection Facilities

1. Applicability.

a. Any facility must comply with the Kittitas County Moderate Risk Waste Plan, Solid Waste Plan and Used Oil Amendment to the Solid Waste Plan.

b. Owners and operators of MRW Facilities shall obtain a permit from the Health Officer as required in Section VI.I.2.

c. Unless otherwise directed by the Health Officer, operators of temporary MRW collection facilities, commonly referred to as "MRW collection events" or "MRW roundups", are not required to obtain a permit under these regulations when the following conditions are met:

(1) The Health Department is notified of the event location and schedule at least thirty (30) days in advance of operations; and

(2) Adequate systems and procedures are implemented to protect pubic health and the environment, and the event meets the general intent of Section VI.I.3.

2. Permit Application Contents.

In addition to the requirements of Section VI.A.2., each application shall include, but may not be limited to:

a. A description of how the facility will meet each of the operational requirements of Section VI.I.3.a.

b. Engineering reports, plans, and specifications that include, but are not limited to:

(1) How the facility will meet the locational requirements of WAC 173-304-130;

(2) Facility drawings showing the location of fencing, signs, emergency equipment, absorbents and other supplies, shower(s), eye wash(es), fire extinguishers and other fire suppression equipment, and the location of MRW sorting, analysis, and storage, including a description of aisle spacing between containers and vertical container stacking;

(3) Stormwater surface run-off quality and quantity control, discharge, and monitoring; and

(4) Closure/post-closure design, construction, maintenance, and land use.

c. An operations plan that includes:

(1) A visitor policy including requirements for safety and supervision;

(2) A waste acceptance protocol to preclude and redirect fully regulated dangerous waste generators and excluded waste types such as explosives and/or radioactives;

(3) For materials exchanges, a description of the exchange program including the types of waste included and a description of how restricted wastes will be excluded;

(4) Standard administrative procedures, including a description of:

(A) How facility inspections will be performed by the operator, including the frequency and detail of inspections;

(B) Shipping procedures and documentation; and

(C) How facility records and reports will be completed and maintained;

(5) A description of how MRW is handled on-site including:

(A) MRW packing and labeling procedures;

(B) Methods for managing and/or identifying unknown wastes;

(C) Procedures for managing wastes that arrive in corroded or leaking containers or when MRW is left at the gate when the facility is unattended; and

(D) A MRW sorting protocol;

(6) Procedures for checking MRW storage containers for leaks and the signs that indicate container deterioration;

(7) Control measures to protect containers of MRW from weather and temperature extremes;

(8) Actions to take if leaks are detected in containers, tanks, or containment structures;

(9) Actions to take if other releases are detected such as failure of the run-off containment system, or release of gas(es) due to chemical reaction;

(10) How operating, environmental, and safety equipment will be maintained including personal protective equipment; and

(11) An outline of the Safety and Health Program prepared under Chapter 296-62 WAC and copies of all Health and Safety Plans and Procedures prepared under Chapters 296-62 and 296-24 WAC.

d. A description of the facility's direct relationship to the recommended alternatives of the most recently approved Kittitas County Moderate Risk Waste Management Plan.

3. Facility Standards.

a. Operation and Maintenance. MRW collection facilities subject to the requirements of this section are required to meet the following minimum standards:

(1) Comply with the requirements of WAC 173-304-405, "General facility requirements," except for subsections (2)(e), (2)(g), (4)(d), and (6);

(2) Maintain daily operating records which include the number of vehicles entering the facility. Major deviations from the Plan of Operations shall also be noted on the operating record.

(3) Maintain a log of the types and volumes of all MRW and used oil shipped off-site for final disposal or processing. The shipment date shall be included on each log entry.

(4) Restrict public access to the facility when not open to the public and adequately control public access to MRW unloading area(s) while open to the public;

(5) Be constructed of easily cleanable materials;

(6) Provide secondary containment for all MRW;

(7) Be free of potential rat harborages, and provide effective means to control rodents, insects, birds, and other vermin;

(8) Be accessible by all weather roads;

(9) Be designed and serviced as often as necessary to ensure safe handling, appropriate MRW removal, and adequate collection and storage capacity at all times;

(10) Be designed to exclude underfloor spaces and underground storage tanks, except to provide for site utilities, containment spaces, and sumps;

(11) Have an adequate buffer zone around the operating area to minimize noise and dust nuisances, and have a buffer zone of fifty (50) feet from the operating area to the nearest property line in areas zoned residential;

(12) Comply with applicable zoning, fire, hydraulics, and building codes including approved local variances and waivers;

(13) Provide pollution control measures to protect air quality including any applicable requirements of the Washington Clean Air Act of 1991, and its amendments;

(14) Prohibit scavenging, with the exception of approved materials exchange programs;

(15) Provide adequately trained staff on-site during hours of operation;

(16) Comply with the Department of Labor and Industries standards for health and safety, including Chapters 296-62 and 296-24 WAC;

(17) Have a sign readable from a distance of at least twenty-five (25) feet that identifies at least the facility name, the hours the facility is open for public and/or business use, and the materials not accepted at the facility;

(18) Have communications capabilities to immediately summon fire, police, or emergency services personnel in the event of an emergency; and

(19) Remove all wastes at closure from the facility to a solid waste handling facility permitted to receive the wastes.

b. Development and Closure. MRW collection facilities subject to the requirements of this section are required to comply with the minimum standards in WAC 173-304-407(1) through (5), "General closure and post-closure requirements".

J. Commercial Compost Facilities

1. General.

a. Any facility must comply with the Kittitas County Solid Waste Management Plan.

b. Generators of compost for retail sales shall operate under permit by the Health Officer and submit chemical analyses and reports to the Health Officer in sufficient frequency to demonstrate that the resulting product does not contain levels of chemicals or pathogens that could create a risk to the public health. Publication #97-502 Department of Ecology Compost Facility Resource Handbook shall be referenced.

c. Generators of sewage sludge compost and/or biosolids compost shall operate under permit by the Health Officer and must follow the methods and procedures developed by Ecology and EPA.

2. Facility Standards.

a. Commercial compost facilities shall meet the applicable facility standards found in WAC 173-304-300, as amended, which are adopted by reference in Section VI.J.2.a. herein.

b. Generators shall provide written information to the compost user describing appropriate end uses of the compost product. This information should identify application rates, feedstock percentages, and specify if the compost is recommended for use in home gardens.

c. Odorous materials such as spoiled foods, animal feces, blood and slaughter house wastes shall be immediately processed to prevent odors.

d. The composted material shall not reheat upon standing, shall be innocuous and shall contain no sharp particles which would cause injury to persons handling the compost.

K. Other Methods of Solid Waste Handling

1. General.

a. Any site must comply with the Kittitas County Solid Waste Management Plan.

b. Other methods of solid waste handling such as a material resource recovery system for municipal waste not specifically identified elsewhere in this regulation, nor excluded from this regulation. Owners and operators of other methods of solid waste handling shall comply with the requirements contained in Chapter 173-304 WAC.

c. Petroleum Contaminated Soils (PCS) shall be remediated in accordance with the Guidance for Remediation of Releases from Underground Storage Tanks, Washington State Department of Ecology Toxics Cleanup Program (July, 1991, 91-30) and subsequent revisions.

2. Solid Waste Handling Permit.

Owners and operators of other methods of solid waste handling shall obtain a permit from the Health Officer as required in Section VI.A. by submitting an application containing information required in Section VI.A.2. and such other information as may be required by the Health Officer and Ecology, including but not limited to:

a. Preliminary engineering reports, plans, and specifications;

b. Operation and development plans and specifications; and

c. A closure plan, health and safety plan, haul route and site layout.

SECTION VII. ADMINISTRATION AND ENFORCEMENT

A. Other Laws, Regulations and Agency Requirements

1. All solid waste management shall be subject to the authority of other laws, regulations or other agency requirements in addition to these rules and regulations. Nothing in these rules and regulations is intended to abridge or alter the rights of action by the state or by persons which exist in equity, common law or other statutes to abate pollution or to abate a nuisance.

2. Chapter 173-304 WAC and 173-351WAC, or as amended, is hereby adopted by reference. If a conflict exists in the interpretation of these chapters or these regulations, the more stringent shall apply.

3. Information revealing the identity of persons who file complaints with the Health Department, is exempt from public inspection and copying if disclosure would endanger any person's life, physical safety, or property, as stipulated in RCW 42.17.310(1)(e) which is hereby adopted by this reference. If at the time a complaint is filed the complainant, victim, or witness indicates a desire for disclosure or nondisclosure, such desire shall govern.

B. Enforcement Authority

The Health Officer shall have the authority to enforce the provisions of these regulations equally on all persons. The Health Officer is also authorized to adopt rules consistent with the provisions of these rules and regulations for the purpose of enforcing and carrying out its provisions.

C. Right of Entry

1. Whenever necessary to make an inspection to enforce or determine compliance with the provisions of these regulations, and other relevant laws and regulations, or whenever the Health Officer has cause to believe that a violation of these regulations has been or is being committed, the Health Officer or his/her duly authorized inspector may enter any building, structure, property or portion thereof at reasonable times to inspect the same.

2. If such building, structure, property or portion thereof is occupied, the inspector shall present identification credentials, state the reason for the inspection, and request entry. Entry shall not be unreasonably denied by the owner or his or her agent, but may be conditioned on the owner or an agent of the owner escorting the inspector, said escort to be provided immediately upon request.

3. If such building, structure, property or portion thereof is unoccupied, the inspector shall first make a reasonable effort to locate the owner or other persons having charge or control of the building, structure, property or portion thereof and request entry. If the inspector is unable to locate the owner or such

other persons and he/she has reason to believe that conditions therewith create an immediate and irreparable health hazard, then he/she shall make entry.

4. If entry is refused, the Health Officer shall have recourse to the remedies provided by law to secure entry, including but not limited to search warrants.

D. Violations and Penalties - Persons Not Requiring a Permit

1. Applicability.

   The requirements in this section apply to all persons who are not required to obtain a permit under these regulations. The violation of any provisions of these regulations shall constitute an infraction. Each such violation shall constitute a separate infraction for each and every day or portion thereof during which such violation is committed, continued, or not permitted.

2. Violations - Investigations - Evidence.

   An authorized representative of the Health Department may investigate alleged or apparent violations of these regulations. Upon request of the authorized representative of the Health Department, the person allegedly or apparently in violation of these regulations shall provide information identifying themselves. Willful refusal to provide information identifying a person as required by this section is a misdemeanor.

3. Notice and Order to Correct Violation.

   a. Issuance. Whenever an authorized representative of the Health Department determines that a violation has occurred or is occurring, he/she may issue a written notice and order to correct violation to the property owner or to any person causing, allowing or participating in the violation.

   b. Content. The notice and order to correct violation shall contain:

      (1) The name and address of the property owner or other persons to whom the notice and order to correct violation is directed;

      (2) The street address or description sufficient for identification of the building, structure, premises, or land upon or within which the violation has occurred or is occurring;

      (3) A description of the violation and a reference to that provision of the regulation which has been violated;

      (4) A statement of the action required to be taken to correct the violation and a date or time by which correction is to be completed;

      (5) A statement that a monetary penalty in an amount per day for each violation shall be assessed against the person to whom the notice and order to correct violation is directed for each and every day, or portion of a day, on which the violation continues following the date set for correction; and

      (6) A statement requiring the person to whom the notice and order to correct violation is directed to produce receipts from a permitted solid waste disposal facility or transporter to demonstrate compliance with any order issued by the Health Department.

c. Service of Order. The notice and order to correct violation shall be served upon the person to whom it is directed, either personally or by mailing a copy of the order to correct violations by certified mail, postage prepaid, return receipt requested, to such person at his/her last known address. Proof of service shall be made at the time of service by a written declaration under penalty of perjury executed by the persons effecting the service, declaring the time and date of service and the manner by which service was made.

d. Extension. Upon written request received prior to the correction date or time, the authorized representative may extend the date set for corrections for good cause. The authorized Health Department representative may consider substantial completion of the necessary correction or unforeseeable circumstances which render completion impossible by the date established as a good cause.

4. Notice of Civil Infraction - Service.

An authorized representative of the Health Department may issue a notice of civil infraction pursuant to Chapter 7.80 RCW if the authorized representative has reasonable cause to believe that the person has violated any provision of these regulations or has not corrected the violation as required in the written notice and order to correct violation. A notice of civil infraction may be served either by:

a. The authorized representative serving the notice of civil infraction on the person named in the notice of civil infraction at the time of issuance; or

b. The authorized representative filing the notice of civil infraction with the Department court, in which case the Department court shall issue the notice and the authorized representative shall have it served, either personally or by mail, postage prepaid, on the person named in the notice of infraction at his or her last known address.

5. Notice of Civil Infraction - Contents.

The notice of civil infraction shall include the following:

a. A statement that the notice represents a determination that the infraction has been committed by the person named in the notice and that the determination shall be final unless contested as provided in this regulation;

b. A statement that the infraction is a non-criminal offense for which imprisonment shall not be imposed as a sanction;

c. A statement of the specific infraction for which the notice was issued;

d. A statement that monetary penalties as set forth below have been established for each infraction;

e. A statement of the options provided in these regulations for responding to the notice and the procedures necessary to exercise these options;

f. A statement that at any hearing to contest the determination that the Health Department has the burden of proving by a preponderance of the evidence that the infraction was committed; and that the person may subpoena witnesses, including the authorized representative of the Health Department, who issued and served the notice of infraction;

g. A statement that at any hearing requested for the purpose of explaining mitigating circumstances surrounding the commission of the civil infraction, the person will be deemed to have committed the civil infraction and may not subpoena witnesses;

h. A statement that the person must respond to the notice as provided in this section within fifteen (15) days; and

i. A statement that failure to respond to the notice or a failure to appear at a hearing requested for the purpose of contesting the determination or for the purpose of explaining mitigating circumstances will result in a default judgment against the person in the amount of the penalty and that this failure may be referred to the prosecuting attorney or city attorney for criminal prosecution for failure to respond or appear.

6. Notice of Civil Infraction - Filing in Department Court.

A notice of civil infraction shall be filed in Department Court within forty-eight (48) hours of issuance, excluding Saturdays, Sundays, and holidays. Kittitas County Department Court shall have jurisdiction to hear and determine violations occurring under these regulations.

7. Notice of Civil Infraction - Determination Infraction Committed.

Unless contested in accordance with this regulation, the notice of civil infraction represents a determination that the person to whom the notice was issued committed the infraction.

8. Notice of Civil Infraction - Response Requesting A Hearing - Failure To Respond Or Appear - Order To Set Aside.

a. A person who receives a notice of civil infraction shall respond to the notice as provided in this section within fifteen (15) days of the date the notice was served.

b. If the person named in the notice of civil infraction does not contest the determination, the person shall respond within fifteen (15) days by completing the appropriate portion of the notice of civil infraction and submitting it, either by mail or in person to the court specified in the notice. A check or money order in the amount of the penalty prescribed for the infraction must be submitted with the response. When a response which does not contest the determination is received, an appropriate order shall be entered in the court's records and a record of the response shall be furnished to the Health Department.

c. If the person named in the notice of civil infraction wishes to contest the determination, the person shall respond within fifteen (15) days by completing the portion of the notice of civil infraction requesting a hearing and filing it with the court specified on the notice. The court shall notify the person in writing of the time, place, and date of the hearing and that date shall not be earlier than seven (7) days nor more than ninety (90) days from the date of the notice of hearing except by agreement.

d. If the person named in the notice of civil infraction does not contest the determination, but wishes to explain mitigating circumstances surrounding the infraction, the person shall respond by completing the portion of the notice of civil infraction requesting a hearing for that purpose and filing it with the court specified in the notice. The court shall notify the person in writing of the time, place, and date of the hearing, and that date shall not be earlier than seven (7) days nor more than ninety (90) days from the date of the notice of the hearing, except by agreement.

e. The court may enter a default judgment assessing the monetary penalty prescribed for the infraction, and may notify the prosecuting attorney of the failure to respond to the notice of civil infraction or to appear at a requested hearing if any person issued a notice of civil infraction:

(1) Fails to respond to the notice of civil infraction as provided in Section VII.D.8.b.; or

(2) Fails to appear at a hearing requested pursuant to either Section VII.D.8.c. or Section VII.D.8.d.

9. Notice. Failure To Sign, Non-Appearance - Failure To Satisfy Penalty.

a. A person who fails without just cause to sign a notice of civil infraction is guilty of a misdemeanor.

b. Any person willfully violating his or her written and signed promise to appear in court or his or her written and signed promise to respond to a notice of civil infraction is guilty of a misdemeanor regardless of the disposition of the notice of civil infraction; provided that a written promise to appear in court or a written promise to respond to a notice of civil infraction may be complied with by appearance by counsel.

c. A person who willfully fails to pay a monetary penalty or to perform community service as required by a court under these regulations may be found in civil contempt of a court after notice and hearing.

10. Representation by Attorney.

a. A person subject to proceedings under these regulations may appear or be represented by counsel.

b. The prosecuting attorney representing the Health Department may, but need not, appear in any proceedings under these regulations, notwithstanding any statue or court rules to the contrary.

11. Infraction - Hearing - Procedure - Burden of Proof - Order - Appeal.

a. A hearing held to contest the determination that an infraction has been committed shall be without a jury.

b. The court may consider the notice of civil infraction and any sworn statements submitted by the Health Department's authorized representative who issued and served the notice in lieu of his or her personal appearance at the hearing. The person named in the notice may subpoena witnesses, including the authorized representative who has issued and served the notice, and has the right to present evidence and examine witnesses present in court.

c. The burden of proof is on the Health Department to establish the commission of the infraction by a preponderance of the evidence.

d. After consideration of the evidence and argument, the court shall determine whether the infraction was committed. If it has not been established that the infraction was committed, an order dismissing the notice shall be entered in the court's records. If it has been established that a civil infraction has been committed, an appropriate order shall be entered in the court's records.

e. An appeal from the court's determination or order shall be to the Superior Court in the manner provided by the Rules of Appeal of Decisions of Courts of Limited Jurisdiction. The decision of the Superior Court is subject only to discretionary review pursuant to the Rules of Appellate Procedure.

12. Infraction - Explanation of Mitigating Circumstances.

    a. A hearing held for the purpose of allowing a person to explain mitigating circumstances surrounding the commission of an infraction shall be an informal proceeding. The person may not subpoena witnesses. The determination that an infraction has been committed may not be contested at a hearing held for the purpose of explaining mitigating circumstances.

    b. After the Court has heard the explanation of the circumstances surrounding the commission of the infraction, an appropriate order shall be entered in the court's records.

13. Monetary Penalties - Restitution.

    a. In addition to or as an alternative to any other judicial or administrative remedy provided in this regulation or by law or other rules and regulations, any person found to have committed an infraction shall be assessed a monetary penalty. All violations of this ordinance shall be denominated Class I Civil Infractions.

    b. Whenever a monetary penalty is imposed by court under this ordinance it is immediately payable. If the person is unable to pay at that time, the court may grant an extension of the period in which the penalty may be paid. If the penalty is not paid on or before the time established for payment, the court may proceed to collect the penalty in the same manner as other civil judgments and may notify the prosecuting attorney of the failure to pay. The court shall also notify the Health Department of the failure to pay the penalty, and the Health Department shall not issue the person any future permits or approvals until the monetary penalty has been paid.

    c. The court may also order a person found to have committed a civil infraction to make restitution.

14. Order of Court - Civil Nature - Modification of Penalty - Community Service.

    a. An order entered after the receipt of a response which does not contest the determination, or after it has been established at a hearing that the civil infraction was committed, or after a hearing for the purpose of explaining the mitigating circumstances is civil in nature.

    b. The court may waive, reduce to be consistent, or suspend the monetary penalty prescribed for the civil infraction. If the court determines that a person has insufficient funds to pay the monetary penalty, the court may order performance of a number of hours of community service in lieu of a monetary penalty, at the rate of the state’s current minimum hourly wage.

15. Costs and Attorney's Fees.

    Each party in a civil infraction case is responsible for costs incurred by that party, but the court may assess witness fees against a non-prevailing respondent. Attorney's fees may be awarded to either party in a civil infraction case.

16. Written Assurance of Discontinuance.

    The Health Officer may accept a written assurance of discontinuance of any act in violation of this regulation from any person who has engaged in such act. Failure to comply with the assurance of discontinuance shall be a further violation of this regulation.

17. Stop-Work and Abatement Orders.

    a. Stop-Work Orders. The Health Officer may cause a stop-work order to be issued whenever the Health Officer has reason to believe that a violation of this regulation is occurring. The effect of the stop-work order shall be to require the immediate cessation of such work or activity which has contributed to the violation until authorized by the Health Officer to proceed. The stop-work order shall be posted upon the property where the violation is occurring, and shall be served upon the owner of the property either personally or by certified mail, return receipt requested, at the owner's last known address.

    b. Abatement Orders. In addition to or as an alternative to any other judicial or administrative remedy provided in these regulations or by law or other rules and regulations, the Health Officer may order a violation of these regulations to be abated. The effect of the abatement order shall be to require work to be done to correct the violation within a reasonable time period. If the required corrective work is not commenced or completed within the time specified, the Health Officer will proceed to abate the violation and cause the work to be done. The abatement order shall be posted upon the property where the violation is occurring, and shall be served upon the owner of the property either personally or by certified mail, return receipt requested, at the owner's last known address. The property owner is responsible for the costs of all corrective action, whether done by the owner or the Health Department. The Health Department shall have the right to collect the amount expended for abatement through appropriate legal action.

18. Other Legal or Equitable Relief.

    Notwithstanding the existence or use of any other remedy, the Health Officer may seek legal or equitable relief to enjoin any acts or practices or abate any conditions which constitute or will constitute a violation of these regulations, or rules and regulations adopted under them.

E. Violations and Penalties - Persons Requiring a Permit

1. Applicability.

   The requirements in this section apply to all persons which are required to obtain a permit under these regulations.

2. Violations - Investigations - Evidence.

   An authorized representative of the Health Department may investigate alleged or apparent violations of these regulations. Upon request of the authorized representative of the Health Department, the person allegedly or apparently in violation of these regulations shall provide information identifying themselves. Willful refusal to provide information identifying a person as required by this section is a misdemeanor.

3. Notice and Order to Correct Violation.

   a. Issuance:

(1) Whenever an authorized representative of the Health Department determines that a violation has occurred or is occurring at an unpermitted site, he/she may issue a written notice and order to correct violation to the property owner or to any person causing, allowing or participating in the violation.

(2) Whenever an authorized representative of the Health Department determines that a violation has occurred or is occurring at a permitted site, he/she shall pursue a reasonable attempt to secure voluntary correction, failing which he/she may issue a written notice and order to correct violation to the property owner or to any person causing, allowing or participating in the violation. Pursuant to Section VII.H., the Health Department may issue a written notice and order to correct violation without first pursuing a reasonable attempt to secure voluntary correction if there is an imminent and substantial danger to public health.

b. Content. The notice and order to correct violation shall contain:

(1) The name and address of the property owner or other persons to whom the notice and order to correct violation is directed;

(2) The street address or description sufficient for identification of the building, structure, premises, or land upon or within which the violation has occurred or is occurring;

(3) A description of the violation and a reference to that provision of the regulation which has been violated;

(4) A statement of the action required to be taken to correct the violation and a date or time by which correction is to be completed; and

(5) A statement that a monetary penalty in an amount per day for each violation shall be assessed against the person to whom the notice and order to correct violation is directed for each and every day, or portion of a day, on which the violation continues following the date set for correction.

c. Service of Order. The notice and order to correct violation shall be served upon the person to whom it is directed, either personally or by mailing a copy of the order to correct violations by certified mail, postage prepaid, return receipt requested, to such person at his/her last known address. Proof of service shall be made at the time of service by a written declaration under penalty of perjury executed by the persons effecting the service, declaring the time and date of service and the manner by which service was made.

d. Extension. Upon written request received prior to the correction date or time, the authorized representative may extend the date set for corrections for good cause. The authorized Health Department representative may consider substantial completion of the necessary correction or unforeseeable circumstances which render completion impossible by the date established as a good cause.

e. Administrative Conference. An informal administrative conference may be conducted at any time by the Health Officer for the purposes of bringing out all the facts and circumstances related to an alleged violation, promoting communications between concerned parties, and providing a forum for efficient resolution of any violation. The Health Officer may call a conference in response to a request from any person aggrieved by the Health Officer's order or the Health Officer may call a conference on his/her own motion. Attendance at the hearing shall be determined by the Health

Officer and need not be limited to those named in an order to correct violations. As a result of information developed at the conference, the Health Officer may affirm, modify or revoke his/her order. The administrative conference is optional with the Health Officer and is not a prerequisite to utilization of any of the enforcement provisions described in these regulations.

f. Appeals. Appeals from any decision by the Health Officer made pursuant to these regulations, shall be made to the Board of Health within the stated time period and in the following manner:

(1) Any bona fide party aggrieved by a decision or order of the Health Officer made pursuant to these regulations pertaining to a solid waste handling or disposal site or facility in which the person has an interest may file an appeal.

(2) Any appellant wishing to appeal the decision of the Health Officer must file in writing a statement with the Health Officer within ten (10) calendar days of the date of serving of the order. Such notice must be delivered personally to the Administration Office of the Kittitas County Health Department (Attn: Health Officer) or sent by certified mail. The appellant shall submit specific statements in writing of the reason why error is assigned to the decision of the Health Officer, and which shall be accompanied by a fee as established in the current Health Department fee schedule.

(3) When an appeal of the Health Officer's decision is made to the Board of Health, the filing of such appeal shall stay the effective date of the decision until such time as the appeal is adjudicated or withdrawn, unless in the opinion of the Board of Health such decision is necessary to protect the immediate health and safety of the public.

(4) A Health Officer's decision which has been appealed in a timely manner shall be reviewed by the Board of Health or designated Board of Health member(s). The review shall occur not less than twenty (20) days and not more than thirty (30) days after service of the statement of appeal upon the Health Officer. Parties shall be notified of the date of review by the Board of Health or the designated Board of Health member(s). Both parties may submit additional written information, if desired, for review by Board members. Such information must be received by the Health Officer not fewer than five (5) working days prior to the hearing to permit copying and mailing to Board members.

g. Supplemental Order to Correct Violation. The Health Officer may at any time add to, rescind in part, or otherwise modify a notice and order to correct violation. The supplemental order shall be governed by the same procedures applicable to all notice and order to correct violations procedures contained in these regulations.

h. Finality of Order.

(1) Any order duly issued by the Health Officer pursuant to the procedures contained in this regulation shall become final thirty (30) days after service of the order unless a written request for hearing or statement of appeal is received by the Health Officer within the ten (10) day period.

(2) An order which is subjected to the appeal procedure shall become final twenty (20) days after mailing of the Board of Health's decision unless within that time period an aggrieved person initiates review by writ of certiorari in Superior Court.

i. Enforcement of Final Order.

(1) If, after any order duly issued by the Health Officer has become final, the person to whom such order is directed fails, neglects, or refuses to obey such order, the Health Officer may:

(A) Cause such person to be prosecuted under these regulations; and/or

(B) Institute any appropriate action to collect a civil penalty assessed under these regulations; and/or

(C) Abate the health violation using the procedures of these regulations; and/or

(D) Pursue any other appropriate remedy at law or equity under these regulations.

(2) Enforcement of any notice and order of the Health Officer pursuant to these regulations shall be stayed during the pendency of any appeal under these regulations, except when the Health Officer determines that the violation will cause immediate and irreparable harm and so states in the notice and order issued.

4. Written Assurance of Discontinuance.

The Health Officer may accept a written assurance of discontinuance of any act in violation of this regulation from any person who has engaged in such act. Failure to comply with the assurance of discontinuance shall be a further violation of this regulation.

5. Violation of Permit Conditions - Misdemeanor Penalty.

Any person who: (a) fails, neglects, or refuses to obey a final order of the Health Officer to correct a violation as set forth in Section VII.E.3.i. above; (b) fails, neglects, or refuses to comply with a written assurance of discontinuance pursuant to Section VII.E.4. above; (c) operates a solid waste facility or collection service without a permit; or (d) operates a solid waste facility or collection service after a permit has been revoked; is guilty of a misdemeanor, and upon conviction, shall be punished by imprisonment in the county jail for a maximum term fixed by the court, or by a fine in an amount fixed by the court, or by both such imprisonment and fine. The court may also impose restitution.

6. Stop-Work and Abatement Orders.

a. Stop-Work Orders. The Health Officer may cause a stop-work order to be issued whenever the Health Officer has reason to believe that a violation of this regulation is occurring. The effect of the stop-work order shall be to require the immediate cessation of such work or activity until authorized by the Health Officer to proceed. The stop-work order shall be posted upon the property where the violation is occurring, and shall be served upon the owner of the property either personally or by certified mail, return receipt requested, at the owner's last known address.

b. Abatement Orders. In addition to or as an alternative to any other judicial or administrative remedy provided in these regulations or by law or other rules and regulations, the Health Officer may order a violation of these regulations to be abated. The effect of the abatement order shall be to require work to be done to correct the violation within a reasonable time period. If the required corrective work is not commenced or completed within the time specified, the Health Officer will proceed to abate the violation and cause the work to be done. The abatement order shall be posted upon the property where the violation is occurring, and shall be served upon the owner of the property either personally or by certified mail, return receipt requested, at the owner's last known address. The property owner is responsible for the costs of all corrective action, whether done by the owner or

the Health Department. The Health Department shall have the right to collect the amount expended for abatement through appropriate legal action.

7. Other Legal or Equitable Relief.

   Notwithstanding the existence or use of any other remedy, the Health Officer may seek legal or equitable relief to enjoin any acts or practices or abate any conditions which constitute or will constitute a violation of these regulations, or rules and regulations adopted under them.

8. Permit Suspension, Revocation, and Appeal.

   a. Suspension of Permits.

      (1) The Health Officer may temporarily suspend any permit issued under these regulations for: (a) failure of the holder to comply with the requirements of the permit; (b) failure to comply with any notice and order issued pursuant to these regulations related to the permitted activity; or (c) the dishonor of any check or draft used by the permit holder to pay any fees associated with the permit.

      (2) Permit suspension shall be carried out through the notice and order provisions specified in Section VII.E.3., and the suspension shall be effective upon service of the notice and order upon the holder or operator. The holder or operator may appeal such suspension as provided in Section VII.E.3.f. and Section VII.E.8.c.

      (3) Notwithstanding any other provision of this regulation, whenever the Health Officer finds that a violation of this regulation has created or is creating an unsanitary, dangerous or other condition which, in his/her judgment, constitutes an immediate and irreparable hazard, he/she may, without service of a written notice and order, suspend and terminate operations under the permit immediately.

   b. Revocation of Permits.

      (1) The Health Officer may permanently revoke any permit issued by him/her for: (a) failure of the holder to comply with the requirements of the permit; (b) failure of the holder to comply with any notice and order issued pursuant to these regulations related to the permitted activity; (c) interference with the Health Officer in the performance of his/her duties; (d) discovery by the Health Officer that a permit was issued in error or on the basis of incorrect information supplied to him/her; or (e) the dishonor of any check or draft used by the holder to pay any fees associated with the permit.

      (2) Such permit revocation shall be carried out through the notice and order provisions specified in Section VII.E.3. and the revocation shall be effective upon service of the notice and order upon the holder or operator. The holder or operator may appeal such revocation, as provided in these regulations.

      (3) A permit may be suspended pending its revocation or a hearing relative to revocation pursuant to the provisions of Section VII.E.8.a. above.

   c. Permit Appeal.

      (1) Subject to Appeal. Any denial, suspension or revocation of a solid waste permit by the Health Officer may be appealed.

(2) Appellant Defined. The appellant shall be the applicant for a solid waste permit or holder of a solid waste permit who appeals a decision denying, suspending or revoking a solid waste permit.

(3) Appeal Procedure. The appeal procedure shall be carried out through the appeals process specified in VII.E.3.f.

F. Variances

1. Applicability.

Any person who owns or operates a solid waste facility may apply to the Health Officer for a variance from any section of these regulations. The application shall be accompanied by such information as the Health Officer may require. The Health Officer may grant such variance, but only after due notice (or a public hearing) if it finds that:

a. The solid waste handling practices or site location do not endanger public health, safety or the environment; and

b. Compliance with the regulation from which variance is sought would produce hardship without equal or greater benefits to the public.

2. Application.

a. An application for a variance, or for the renewal thereof, submitted to the Health Officer shall be approved or disapproved by the Health Officer within ninety (90) days of receipt unless the applicant and the Health Officer agree to a continuance.

b. Notice shall be given by mailing a notice of the variance application to persons who have written to the Health Officer asking to be notified of all variance requests.

3. Granting Requirements.

a. No variance shall be granted pursuant to this section until the Health Officer has considered the relative interests of the applicant, other owners of property likely to be affected by the handling practices and the general public.

b. Any variance or renewal shall be granted within the requirements of this section and for time period and conditions consistent with the reasons therefore, and within the following limitations:

(1) If the variance is granted on the grounds that there is no practicable means known or available for the adequate prevention, abatement or control of pollution involved, it shall be only until the necessary means for prevention, abatement or control become known and available and subject to the taking of any substitute or alternative measures that the Health Officer may prescribe;

(2) The Health Officer may grant a variance conditioned by a time table if:

(A) Compliance with this regulation will require spreading of costs over a considerable time period; and

(B) The timetable is for a period that is needed to comply with this regulation.

d. No variance from Chapters 173-304 and 173-351 WAC shall be granted by the Health Officer except with the approval and written concurrence of Ecology prior to action on the variance by the Health Officer. The Health Officer may grant variances from these Board of Health regulations for standards that are more stringent than the standards of Chapters 173-304 and 173-351 WAC, or from provisions in these Board of Health regulations that are not contained in Chapters 173-304 and 173-351 WAC.

4. Renewal.

   Any variance granted pursuant to this section may be renewed on terms and conditions and for periods which would be appropriate on initial granting of a variance. No renewal thereof shall be granted, unless following a public hearing on the complaint or due notice, the Health Officer finds the renewal is justified. No renewal shall be granted except on application. Any such application shall be made at least sixty (60) days prior to the expiration of the variance. Within ten (10) business days of receipt of an application for renewal the Health Officer shall give public notice of such application in accordance with these regulations.

G. Inspections

1. General.

   At a minimum, quarterly inspections of all permitted solid waste facilities shall be performed by the authorized representative of the Health Department. Findings shall be noted and kept on file. A copy of the inspection report or annual summary shall be furnished to the site operator at the discretion of the Health Officer or upon request.

2. Pre-Operational Inspection.

   Whenever plans and specifications are required by these regulations to be submitted to the Health Officer, the Health Officer shall inspect the proposed solid waste disposal site, solid waste handling facility, or solid waste collection service prior to the start of the operations.

H. Imminent and Substantial Dangers

Notwithstanding any provisions of this regulation the Health Officer may take immediate action to prevent an imminent and substantial danger to the public health by the improper management of any waste irrespective of quantity or concentration.

SECTION VIII. ADDENDUM INCORPORATION

The Health Officer shall have the authority to adopt or incorporate any addenda or amendments to these regulations, provided such addenda or amendments are not at variance with the Minimum Functional Standards for Solid Waste Handling, Chapter 173-304 WAC, or the Criteria for Municipal Solid Waste Landfills, Chapter 173-351 WAC, in accordance with due process of law.

SECTION IX. SEVERABILITY

Should any section, paragraph, phrase, sentence or clause of these regulations be declared invalid or unconstitutional for any reason, the remainder of these regulations shall not be affected thereby.

SECTION X. EFFECTIVE DATE

The effective date of this regulation shall be July 15, 1999.

APPENDIX A. REFERENCES

The following is a list of Federal, State, and local laws, regulations, and documents referenced in Kittitas County Board of Health Ordinance 1999-, Solid Waste Regulations. Copies of these documents may be found at the Kittitas County Health Department, Kittitas County Solid Waste Programs, or the Public Library.

A. Federal

1. United States Code (USC):

33 USC 1344	SECTION 404 OF THE FEDERAL CLEAN WATER ACT (PL 95-217), PERMITS FOR DREDGED OR FILL MATERIAL
42 USC 300	SAFE DRINKING WATER ACT (PL 95-523)
42 USC 2011	ATOMIC ENERGY ACT OF 1954

2. Code of Federal Regulations (CFR):

10 CFR Part 20	STANDARDS FOR PROTECTION AGAINST RADIATION
40 CFR Part 61	NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
40 CFR Part 258	CRITERIA FOR MUNICIPAL SOLID WASTE LANDFILLS
40 CFR Part 503	STANDARDS FOR THE USE OR DISPOSAL OF SEWAGE SLUDGE

3. Environmental Protection Agency:

SW-846	TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/ CHEMICAL METHODS

B. State:

1. Revised Code of Washington (RCW), Chapters:

7.80	CIVIL INFRACTIONS
42.17	DISCLOSURE - CAMPAIGN FINANCES - LOBBYING - RECORDS
46.55	ABANDONED, UNAUTHORIZED, AND JUNK VEHICLES - TOW TRUCK OPERATORS
49.17	WASHINGTON INDUSTRIAL SAFETY AND HEALTH
70.05	LOCAL HEALTH DEPARTMENTS, BOARDS, OFFICERS - REGULATIONS
70.93	WASTE REDUCTION, RECYCLING, AND MODEL LITTER CONTROL ACT
70.94	WASHINGTON CLEAN AIR ACT
70.95	SOLID WASTE MANAGEMENT - REDUCTION AND RECYCLING
70.95K	BIOMEDICAL WASTE
70.105	HAZARDOUS WASTE MANAGEMENT

76.04 STATE FOREST PRACTICES ACT
90.48 WATER POLLUTION CONTROL

2. Washington Administrative Code (WAC), Chapters:

173-200 WATER QUALITY STANDARDS FOR GROUND WATERS OF THE STATE OF WASHINGTON
173-201A WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE STATE OF WASHINGTON
173-218 UNDERGROUND INJECTION CONTROL PROGRAM
173-240 SUBMISSION OF PLANS AND REPORTS FOR CONSTRUCTION OF WASTEWATER UTILITIES
173-303 DANGEROUS WASTE REGULATIONS
173-304 MINIMUM FUNCTIONAL STANDARDS FOR SOLID WASTE HANDLING
173-314 WASTE TIRE CARRIER AND STORAGE SITE LICENSES
173-340 MODEL TOXICS CONTROL ACT
173-351 CRITERIA FOR MUNICIPAL SOLID WASTE LANDFILLS
173-400 CLEAN AIR ACT
197-11 SEPA RULES
246-203 GENERAL SANITATION
246-220 RADIATION PROTECTION - GENERAL PROVISIONS
246-232 RADIOACTIVE MATERIALS - LICENSING APPLICABILITY
296-24 GENERAL SAFETY AND HEALTH STANDARDS
296-62 GENERAL OCCUPATIONAL HEALTH STANDARDS
296-65 ASBESTOS REMOVAL AND ENCAPSULATION
480-70 SOLID WASTE AND/OR REFUSE COLLECTION COMPANIES

3. Washington State Department of Ecology (Ecology):

Ecology document 80-12, “Biological Testing Methods”

Ecology document 91-30, “Guidance for Remediation of Petroleum Contaminated Soils” (revised April 1994)

Ecology document 92-13, "Moderate Risk Waste Fixed Facility Guidelines"

Ecology document 93-51, “Chemical Testing Methods for Complying with the Dangerous Waste Regulations”

C. Local:

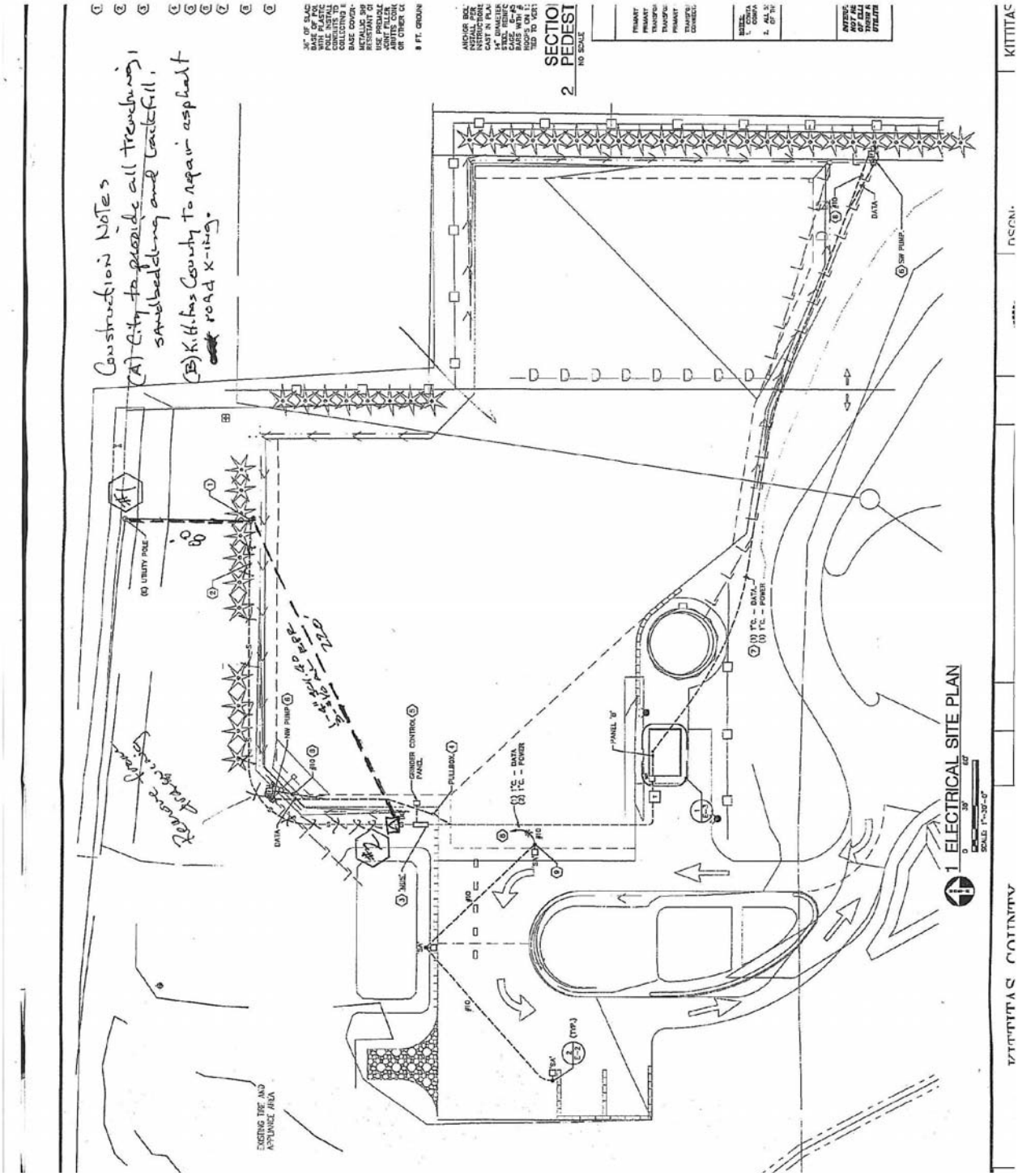
Kittitas County Solid Waste Management Plan

Used Oil Amendment to the Solid Waste Management Plan

Kittitas County Moderate Risk Waste Management Plan

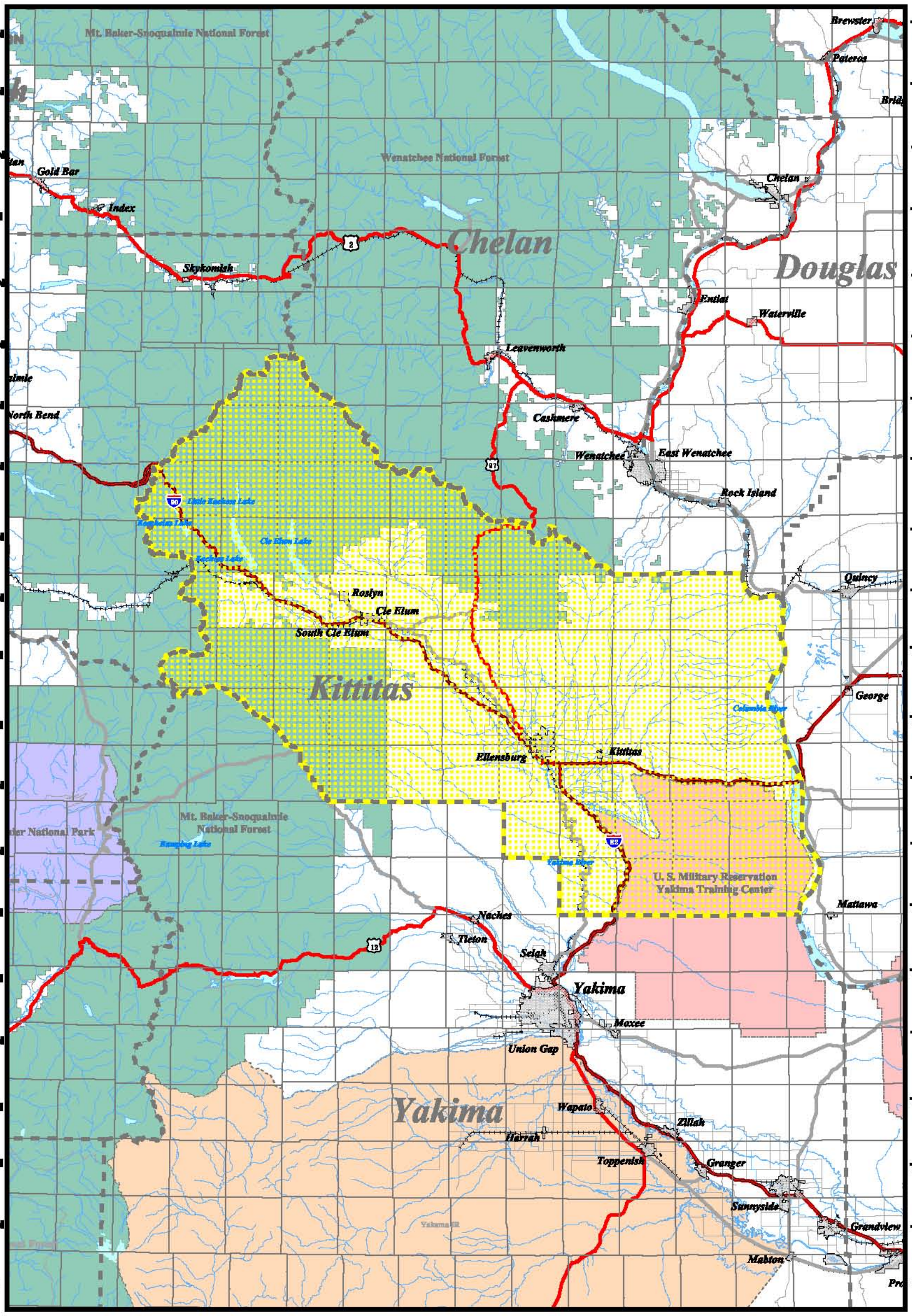
Appendix D

Site Plan for Composting Facility


Construction Notes
(A) City to provide all trenching, sandbedding and backfill.
(B) K.H. has County to repair asphalt road x-ing.
1 ELECTRICAL SITE PLAN
2 PEDEST
SECTIO
(2) UTILITY POLE
DATA
PANEL 'B'
PULLBOX
EXISTING TIRE AND APPLIANCE AREA
KITITAS

Appendix E

Waste Management of Washington (d.b.a. Waste Management of Ellensburg) Service Area Map



N
W E
S

0 7 14 21 Miles

Scale: 1 : 450,000

Kittitas County Authority

UTILITIES AND TRANSPORTATION COMMISSION
WASHINGTON STATE SOLID WASTE CERTIFICATE AUTHORITY
June 2004
Waste Management of WA, Inc.
Certificate : G000237
(Kittitas County)

WASHINGTON UTC UTILITIES AND TRANSPORTATION COMMISSION

For more information contact:
Ray Dejoe
GIS Tech
(360) 664-1249

Legend

Application No. GA-079268 Docket No. TG- 0040570 Effective: 06-08-2004

PID427_Solid Waste Collection Service (All)

Cities
County Lines
Interstate Highway
Local Roads
Rail Lines
State Highway
Township Lines
U.S. Highway
Water (River, Creek)
National Forest
National Park Service
Military Installations
Native American Lands
Water (Ocean, Lake)

Data used to create this map were generated at a scale of 1:24,000. Use of this information for purposes requiring a greater accuracy is not recommended.

Appendix F

WUTC Cost Assessment Questionnaire

COST ASSESSMENT QUESTIONNAIRE

Please provide the information requested below:

PLAN PREPARED FOR THE COUNTY OF: **KITTITAS**

PLAN PREPARED FOR THE CITY OF: **N/A**

PREPARED BY: **SCS ENGINEERS**

CONTACT TELEPHONE: **562-426-9544** **DATE:** **MAY 23, 2011**

DEFINITIONS

Please provide these definitions as used in the Solid Waste Management Plan and the Cost Assessment Questionnaire.

Throughout this document:

YR.1 shall refer to 2010 .
YR.3 shall refer to 2012 .
YR.6 shall refer to 2015 .

Year refers to (circle one): **Calendar** (Jan 01 - Dec 31)
Fiscal (Jul 01 - Jun 30)

1. DEMOGRAPHICS: To assess the generation, recycling, and disposal rates of an area, it is necessary to have population data. This information is available from many sources (e.g. the State Data Book, County Business Patterns, or the State Office of Finance and Management).

1.1 Population

1.1.1 What is the **total** population of your County/City?

YR.1 40,500 YR.3 43,574 YR.6 48,185

1.1.2 For counties, what is the population of the area **under your jurisdiction**? (Exclude cities choosing to develop their own solid waste management system)

YR.1 40,500 YR.3 43.574 YR.6 48,185

1.2 References and Assumptions

2. WASTE STREAM GENERATION: The following questions ask for total tons recycled and total tons disposed. Total tons disposed are those tons disposed of at a landfill, incinerator, transfer station, or any other form of disposal you may be using. If other, please identify.

2.1 Tonnage Recycled

2.1.1 Please provide the total tonnage **recycled** in the base year, and projections for years three and six.

YR.1 17,419 YR.3 22,240 YR.6 29,470

2.2 Tonnage Disposed

2.2.1 Please provide the total tonnage **disposed** in the base year, and projections for years three and six.

YR.1 32,494 YR.3 31,284 YR.6 29,470

2.3 References and Assumptions

3. SYSTEM COMPONENT COSTS: This section asks questions specifically related to the types of programs currently in use and those recommended to be started. For each component (i.e. waste reduction, landfill, composting, etc.) please describe the anticipated costs of the program(s), the assumptions used in estimating the costs, an the funding mechanisms to be used to pay for it. The heart of deriving a rated impact is to know what programs will be passed through to the collection rates, as opposed to being paid for through grants, bonds, taxes, and the like.

3.1 Waste Reduction Programs

3.1.1 Please list the solid waste programs which have been implemented and those programs which are proposed. If these programs are defined in the SWM plan, please provide the page number. Attach additional sheets as necessary.

IMPLEMENTED	PROPOSED
See Attached Table 1	See Attached Table 1

Programs defined in SWM Plan pages 3-4 through 3-7

3.1.2 What are the costs, capital costs, and operating costs for waste reduction programs implemented and proposed? SEE ATTACHED TABLE 2.

IMPLEMENTED

YR.1 $24,844 YR.3 $25,343 YR.6 $24,611

PROPOSED

YR.1 $0 YR.3 $0 YR.6 $1,500

3.1.3 Please describe the funding mechanism(s) that will pay the cost of the programs in 3.1.2.

IMPLEMENTED

YR.1 Grants / Tip Fees / Other YR.3 Grants / Tip Fees / Other YR.6 Grants / Tip Fees / Other

PROPOSED

YR.1 Grants / Tip Fees / Other YR.3 Grants / Tip Fees / Other YR.6 Grants / Tip Fees / Other

3.2 Recycling Programs

3.2.1 Please list the proposed or implemented recycling program(s) and their costs and proposed funding mechanism or provide the page number in the draft plan on which it is discussed. Attach additional sheets as necessary.

IMPLEMENTED

PROGRAM	COST	FUNDING

See attached Tables 1 and 2 for program listing and cost estimates

Programs defined in SWM Plan pages 3-16 through 3-19

3.3 Solid Waste Collection Programs

3.3.1 Regulated Solid Waste Collection Programs

Fill in the table below for each WUTC regulated solid waste collection entity in your jurisdiction. Make additional copies of this section as necessary to record all such entities in your jurisdiction.

WUTC Regulated Hauler Name Waste Management of Ellensburg

G-permit # 237

	YR.3	YR.6
RESIDENTIAL		
# Customers	2,982	3,298
Tonnage Collected	4,257	4,707
COMMERCIAL		
# Customers	310	343
Tonnage Collected	3,074	3,400

3.3.2 Other (Non-Regulated) Solid Waste Collection Programs

Fill in the table below for other solid waste collection entities in your jurisdiction. Make additional copies of this section as necessary to record all such entities in your jurisdiction.

Hauler Name Waste Management of Ellensburg (serves City of Ellensburg)

	YR.1	YR.3	YR.6
RESIDENTIAL			
# Customers	2,725	2,932	3,242
Tonnage Collected	3,869	4,162	4,603
COMMERCIAL			
# Customers	492	529	585
Tonnage Collected	4,858	5,226	5,779

Hauler Name Waste Management of Ellensburg (serves City of Cle Elum)

	YR.1	YR.3	YR.6
RESIDENTIAL			
# Customers	684	736	814
Tonnage Collected	967	1,041	1,151

Hauler Name Waste Management of Ellensburg (serves City of Cle Elum) continued

	YR.1	YR.3	YR.6
COMMERCIAL			
# Customers	177	190	211
Tonnage Collected	1,810	1,947	2,153

3.4 Energy Recovery and Incineration (ER&I) Programs

3.4.1 Complete the following for each facility:

Name: N/A

Location: _____

Owner: _____

Operator: _____

3.4.2 What is the permitted capacity (tons/day) for the facility?_____

3.4.3 If the facility is not operating at capacity, what is the average daily throughput?

YR.1 _____ YR.3 _____ YR.6 _____

3.4.4 What quantity is estimated to be landfilled which is either ash or cannot be processed?

YR.1 _____ YR.3 _____ YR.6 _____

3.4.5 What are the expected capital costs and operating costs for ER&I programs (not inclusing ash disposal expense)?

YR.1 _____ YR.3 _____ YR.6 _____

3.4.6 What are the expected costs of ash disposal?

YR.1 _____ YR.3 _____ YR.6 _____

3.4.7 Is ash disposal to be: _____ on-site?
_____ in-County?
_____ long-haul?

3.4.8 Please explain the funding mechanism(s) that will fund the costs of this component.

3.5 Land Disposal Program

3.5.1 Provide the following information for each land disposal facility in your jurisdiction which received garbage or refuse generated in the county.

In the County, there is one facility (Ryegrass Landfill) that accepts construction and demolition debris. This facility is described in detail in Chapter 5 of the SWM Plan.

3.5.2 Estimate the approximate tonnage disposed at the landfill by WUTC regulated haulers. If you do not have a scale and are unable to estimate tonnages, estimate using cubic yards, and indicate whether they are compacted or loose.[1]

The WUTC hauler did not send tonnage to Ryegrass.

3.5.3 Using the same conversion factors applied in 3.5.2, please estimate the approximate tonnage disposed at the landfill by other contributors.

In 2008, 4,019 tons were taken to Ryegrass directly.

3.5.4 Provide the costs of operating (including capital acquisitions) each landfill in your jurisdiction. For any facility that is privately owned and operated, skip these questions.

The cost of operating the landfill is about $50,000 per year.

3.5.5 Please describe the funding mechanism(s) that will defray the cost of this component.

Funding for this facility is through tipping fees and lease payments exclusively.

3.6 Administration Program

3.6.1 What is the budgeted cost for administering the solid waste and recycling programs and what are the major funding sources?

The 2009 Administration budget is $448,000. The funding sources include tip fees and grants.

3.6.2 Which cost components are included in these estimates?

Expenses included in the estimate are as follows: salaries, benefits, supplies, legal fees, telephone, postage, travel, insurance, utilities, building maintenance, equipment repairs, vehicle maintenance, capital outlay, equipment replacement and depreciation, and other miscellaneous costs. See Chapter 8 in the SWM Plan for a description of administrative functions.

[1] Compacted cubic yards will be converted at a standard 600 pounds per yard. Loose cubic yards will be converted at a standard 300 pounds per cubic yard. Please specify an alternative conversion ratio if one is presently in use in your jurisdiction.

3.6.3 Please describe the funding mechanism(s) that will recover the costs of each component.

Funding mechanisms include tip fees and grants; these funding mechanisms are not targeted for specific components.

3.7 Other Programs
For each program in effect or planned which does not readily fall into one of the previously described categories, please answer the following questions. Make additional copies of this section as necessary.

3.7.1 Describe the program, or provide a page number reference to the plan.

Program	Page Number Reference
Composting and yard waste	3-20 to 3-25
Construction and demolition debris	6-2 to 6-6
Tire recycling	6-9 to 6-11
Other special waste	6-6 to 6-9, 6-11 to 6-14 to 6-22
Enforcement	8-6 to 8-8

3.7.2 Owner/Operator: Kittitas County Solid Waste Department

3.7.3 Is WUTC Regulation involved? If so, please explain the extent of involvement in Section 3.8.

Not Applicable

3.7.4 Please estimate the anticipated costs for this program, including the cost of this component.

See attached Table 2 for program cost estimates.

3.7.5 Please describe the funding mechanism(s) that will recover the costs of this component.

Tip fees and grants are the funding mechanisms for all programs.

3.8 References and Assumptions (attach additional sheets as necessary)

4. FUNDING MECHANISMS: This section relates specifically to the funding mechanisms currently in use and the ones which will be implemented to incorporate the recommended program in the draft plan. Because the way a program is funded directly relates to the costs a resident or commercial customer will have to pay, this section is crucial to the cost assessment process. Please fill in each of the following tables as completely as possible.

Table 4.1.1 Facility Inventory

Facility Name	Type of Facility	Tip Fee per Ton ex. tx.	Transfer Cost	Transfer Station Location	Final Disposal Location	Total (tons, yards, or gallons)	Total Revenue Generated (Tip Fee x Tons)
Ellensburg Transfer Station	Transfer	$86.84	$46.92	Ellensburg, WA	Wenatchee Landfill	22800	$2,257,800
Cle Elum Transfer Station	Transfer	$86.84	$46.00	Cle Elum, WA	Wenatchee Landfill	7200	
CDL at Ellensburg TS	Transfer	$47.70		Ellensburg, WA			$100,000
CDL at Cle Elum TS	Transfer	$57.85		Cle Elum, WA			
Solid Waste Office	Admin.	$0.00	$0.00	Ellensburg, WA	N/A	N/A	
Moderate Risk Waste Facility	Recycling						
	Disposal	$0.00	varies	Ellensburg and Cle Elum, WA			$2,000
Yard Waste	Composting	$35.92	$0.00	Ellensburg Composting Facility	N/A		$74,000
Tires	Recycling	$1.75	$128.00/ton	Ellensburg TS and Cle Elum TS	L&S		$10,000
Oil Recycling at MRW Facility	Recycling	Free	$0.59/gal	Various	Emerald Services		
CFC Removal	Recycling	10.00/ea		Ellensburg TS and Cle Elum TS			$6,000
Antifreeze Recycle. Satellite	Recycling	Free	$0.40/gal	S. W. Office Park.Lot	Emerald Services		
Vehicle Batt. Recycling at MRW Facility	Recycling	Free	($0.141)/lb	Cle Elum TS	IBS of Apple Valley		$3,000
Recycling Drop Boxes Satellite	Recycling	Free	$0.00	Ellensburg TS and Cle Elum TS	WMI or Ellensburg		$0
Ryegrass CDL Site-contractors	Diversion	$7.00/yd	$0.00	Contractor Hauls			$40,000
Ryegrass Liquid Waste	Treatment	$0.15/gal	$0.00	Contractor Hauls	Treatment/Land Application		$96,000

Table 4.1.2 Tip Fee Components

Tip Fee by Facility	Surcharge	City Tax	County Tax	Transportation Cost	Operational Cost	Administrative Cost	Closure Costs
Ellensburg Tansfer Station	$0.00	$0.00	$0.00	$43.05	$22.72	$4.86	$16.21
Cle Elum Transfer Station	$0.00	$0.00	$0.00	$43.05	$22.72	$4.86	$16.21
Ryegrass Balefill	$0.00	$0.00	$0.88	$0.00	$6.12	$0.00	$0.00
Ellensburg TS C&D	$0.00	$0.00	$0.00	$23.64	$12.48	$2.67	$8.91
Cle Elum TS C&D	$0.00	$0.00	$0.00	$28.68	$15.13	$3.24	$10.80

Table 4.1.3 Funding Mechanism

Name of Program Funding Mechanism that Will Defray Costs	Bond Name	Grant Name	Grant Amount*	Tip Fee	Sale of Commodities	Leases	Interest	Alpental Garbage	Other
Solid Waste Office	N/A					$0	$75,000		$827,164
MRW Facility	N/A	DOE - CPG	$684,317	$3,600					
Recycling	N/A	DOE - CPG	$30,000		$15,000				
Composting Facility		DOE - CPG	$210,000	$74,000	$0				$70,000
CFC & Vehicle Batt. Recycling	N/A			$11,700					
Refuse Collection Transfer	N/A			$2,420,361		$42,200		$2,000	$49,000
CDL at Ryegrass	N/A			$49,848			$13,500		
CDL at Transfer Stations	N/A			$125,000					
Tires	N/A			$10,000					
Liquid Waste	N/A			$102,000					

* In the event that grant funding is reduced or eliminated, programs that are funded by these grants will need to be re-evaluated and either eliminated, curtailed, or if continued, funded using alternative methods, such as an increase in tipping fees or other revenue sources.

Table 4.1.4 Tip Fee Forecast

Tip Fee by Facility	Unit	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Ellensburg Transfer Station	ton	$86.84	$88.14	$89.46	$90.81	$92.17	$93.55
Cle Elum Transfer Station	ton	$86.84	$88.14	$89.46	$90.81	$92.17	$93.55
Ellensburg TS C&D	ton	$47.70	$48.42	$49.14	$49.88	$50.63	$51.39
Cle Elum TS C&D	ton	$57.85	$58.72	$59.60	$60.49	$61.40	$62.32
Ryegrass CDL Site-contractors	cubic yard	$7.00	$7.11	$7.21	$7.32	$7.43	$7.54
Ryegrass Liquid Waste	gallon	$0.15	$0.15	$0.15	$0.16	$0.16	$0.16
Yard Waste	ton	$35.92	$36.46	$37.01	$37.56	$38.12	$38.70
Street Sweeping	ton	$51.75	$52.53	$53.31	$54.11	$54.93	$55.75

4.2 Funding Mechanisms, Summary by Percentage

In the following tables, please summarize the way programs will be funded in the key years. For each component, provide the expected percentage of the total cost met by each funding mechanism. (e.g. Waste Reduction may rely on tip fees, grants, and collection rates for funding). You would provide the estimated responsibility in the table as follows: Tip fees = 10%; Grants = 50%; Collection Rates = 40%. The mechanisms must total 100%. If components can be classified as "other," please note the programs and their appropriate mechanisms. Provide attachments as necessary.

Table 4.2.1 Funding Mechanism by Percentage
Year One

Component	Tip Fee %	Grant %	Revenue %	Other %	Total
Waste Reduction and Recycling	29%	0%	71%	0%	100%
Compost	50%	0%	50%	0%	100%
Collection and Transfer	98%	0%	0%	2%	100%
Land Disposal	1%	20%	0%	79%	100%
Liquid Waste	100%	0%	0%	0%	100%
MRW	3%	97%	0%	0%	100%
Tires	100%	0%	0%	0%	100%
Administration	1%	20%	0%	79%	100%

Table 4.2.2 Funding Mechanism by Percentage
Year Three

Component	Tip Fee %	Grant %	Revenue %	Other %	Total
Waste Reduction and Recycling	29%	0%	71%	0%	100%
Compost	50%	0%	50%	0%	100%
Collection and Transfer	98%	0%	0%	2%	100%
Land Disposal	1%	20%	0%	79%	100%
Liquid Waste	100%	0%	0%	0%	100%
MRW	3%	97%	0%	0%	100%
Tires	100%	0%	0%	0%	100%
Administration	1%	20%	0%	79%	100%

Table 4.2.3 Funding Mechanism by Percentage
Year Six

Component	Tip Fee %	Grant %	Revenue %	Other %	Total
Waste Reduction and Recycling	29%	0%	71%	0%	100%
Compost	50%	0%	50%	0%	100%
Collection and Transfer	98%	0%	0%	2%	100%
Land Disposal	1%	20%	0%	79%	100%
Liquid Waste	100%	0%	0%	0%	100%
MRW	3%	97%	0%	0%	100%
Tires	100%	0%	0%	0%	100%
Administration	1%	20%	0%	79%	100%

4.3 References and Assumptions

Please provide any support for the information you have provided. An annual budget or similar document would be helpful.

4.4 Surplus Funds

Please provide information about any surplus or saved funds that may support your operations.

Table 1. Solid Waste Programs

No.	Option	Existing Option	Revised Option	New Option	Plan Page No.
WRRC.WR.1.	Government	X			3-4
WRRC.WR.2.	Public Education and Outreach		X		3-4
WRRC.WR.3.	Commercial Technical Assistance	X			3-6
WRRC.WR.4.	Institutional and Non-Profit Assistance		X		3-6
WRRC.WR.5.	Purchasing		X		3-6
WRRC.WR.6.	Create Re-Use Opportunities			X	3-7
WRRC.REC.1.	Collection and Drop-Off			X	3-16
WRRC.REC.2.	Commercial Programs			X	3-16
WRRC.REC.3.	Large Venue and Special Event Recycling			X	3-16
WRRC.REC.4.	Self-Haul			X	3-17
WRRC.REC.5.	Rate Structure		X		3-17
WRRC.REC.6.	Recycling Incentives		X		3-17
WRRC.REC.7.	Evaluation and Monitoring		X		3-17
WRRC.REC.8.	Identify Funding and Other Non-Monetary Resources	X			3-18
WRRC.REC.9.	Formal Working Relationships	X			3-18
WRRC.REC.10.	Sustainable Community			X	3-18
WRRC.REC.11.	Evaluate Expansion of Programs		X		3-19
WRRC.REC.12.	Public Outreach and Education			X	3-19
WRRC.REC.13.	White Goods Processing			X	3-19
WRRC.COMP.1.	Composting Public Education and Outreach		X		3-23
WRRC.COMP.2.	Compost Facility			X	3-23
WRRC.COMP.3.	Vermicomposting			X	3-23
WRRC.COMP.4.	Residential Yard Waste Collection Programs	X			3-24
WRRC.COMP.5.	Commercial Collection of Organics			X	3-24
WRRC.COMP.6.	Marketing of Finished Compost Products			X	3-24
WRRC.COMP.7.	Tiered Rate Structure for Organics			X	3-24
WRRC.COMP.8.	Yard Waste Disposal Ban			X	3-24
COLL.1.	Routing of Collected Waste through County Facilities	X			4-5
COLL.2.	Curbside Recycling Collection		X		4-5
COLL.3.	Review Collection Contracts	X			4-6

No.	Option	Existing Option	Revised Option	New Option	Plan Page No.
COLL.5.	Funding Sources	X			4-6
TRD.XFER.2.	Use of Transfer Stations		X		5-2
TRD.DISP.2.	Long-Term Disposal Opportunities	X			5-6
TRD.DISP.3.	Contractual Arrangements	X			5-6
TRD.ALT.1.	Future Consideration and Feasibility	X			5-11
TRD.ALT.2.	Alternative Energy Technologies	X			5-11
SPC.CD.1.	Recovery of C&D Debris		X		6-4
SPC.CD.6.	Materials Exchange Program		X		6-5
SPC.CD.8.	Evaluate Flow Control Measures			X	6-6
SPC.AG.1.	Evaluate Opportunities for Beneficial Reuse of Biomass			X	6-8
SPC.TIR.1.	Public Education Programs for Tires			X	6-10
SPC.TIR.3.	Evaluate Diversion Options for Tires		X		6-10
SPC.TIR.4.	Continue Current System	X			6-11
SPC.BIO.1.	Develop and Distribute Education Materials for Correct Management of Residential Medical Waste		X		6-13
SPC.BIO.2.	Monitoring of Solid Waste Programs for Biomedical Waste	X			6-14
SPC.BIO.3.	Pharmaceutical Waste			X	6-14
SPC.VET.1.	Large Animal Disposal	X			6-15
SPC.VET.2.	Education and Outreach - Large Animal		X		6-15
SPC.PCS.1.	In-County PCS Site		X		6-17
SPC.PCS.2.	Street Sweepings Management			X	6-17
SPC.PCS.3.	Feasibility Study for PCS Management			X	6-17
SPC.PCS.4.	Import PCS	X			6-17
SPC.ACM.1.	Public Education on ACM			X	6-18
SPC.LIQ.1.	Catch Basin Liquids		X		6-20
SPC.EWA.1.	Monitor and Evaluate E-Waste Program			X	6-21
SPC.EWA.2.	E-Waste Education			X	6-22
MRW.1.	MRW Facilities		X		7-9
MRW.3.	Commercial Outreach, Education, and Technical Assistance	X			7-9

No.	Option	Existing Option	Revised Option	New Option	Plan Page No.
MRW.4.	Funding for MRW Programs	X			7-10
MRW.5.	Small Business Collection Assistance			X	7-10
ADM.ORD.1.	Staffing and Resources		X		8-9
ADM.ORD.2.	Funding	X			8-9
ADM.ORD.3.	Other Long-Term Needs	X			8-9
ADM.ORD.4.	New Regulations and Ordinance Requirements	X			8-9
ADM.ORD.5.	Permit Procedures, Policies and Fee Structures	X			8-10
ADM.ORD.6.	Permit Review	X			8-10

Table 2. Six Year Capital and Operational Financing for Kittitas County, 2009-2014

		2010	2011	2012	2013	2014	2015
Waste Reduction, Recycling, and Composting							
Waste Reduction							
	Existing Programs	24,844	25,092	25,343	24,097	24,353	24,611
	New Programs	0	0	0	1,500	1,500	1,500
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Waste Reduction	*24,844*	*25,092*	*25,343*	*25,597*	*25,853*	*26,111*
Recycling							
	Existing Programs	52,508	48,033	43,513	38,948	34,338	29,681
	New Programs	16,000	21,160	26,372	31,635	36,952	42,321
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Recycling	*68,508*	*69,193*	*69,885*	*70,584*	*71,289*	*72,002*
Composting							
	Existing Programs*	16,090	113,494	114,629	110,775	106,883	102,951
	New Programs	158,634	160,220	161,823	168,441	175,125	181,876
	Capital Expenditures	96,280	0	0	0	0	0
	Subtotal, Composting	*271,004*	*273,714*	*276,451*	*279,216*	*282,008*	*284,828*
	Subtotal, Waste Reduction, Recycling, and Composting	***364,356***	***367,999***	***371,679***	***375,396***	***379,150***	***382,941***
Solid Waste Collection							
	Existing Programs	6,500	6,565	6,630	6,697	6,764	6,831
	New Programs	0	0	0	0	0	0
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Solid Waste Collection	***6,500***	***6,565***	***6,630***	***6,697***	***6,764***	***6,831***
Transfer and Disposal							
Transfer Stations							
	Existing Programs	209,964	343,616	347,052	350,523	354,028	357,568
	New Programs	0	0	0	0	0	0
	Capital Expenditures	130,250	0	0	0	0	0
	Subtotal, Transfer Stations	*340,214*	*343,616*	*347,052*	*350,523*	*354,028*	*357,568*

* The increase from 2010-2011 reflects a shift from capital to operational expense for the composting facility.

		2010	2011	2012	2013	2014	2015
Waste Import / Waste Export							
	Existing Programs	1,400,976	1,414,986	1,429,136	1,443,427	1,457,861	1,472,440
	New Programs	0	0	0	0	0	0
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Waste Import / Waste Export	*1,400,976*	*1,414,986*	*1,429,136*	*1,443,427*	*1,457,861*	*1,472,440*
Alternative Disposal Technologies							
	Existing Programs	1,568	1,584	1,600	1,616	1,632	1,648
	New Programs	0	0	0	0	0	0
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Alternative Disposal Technologies	*1,568*	*1,584*	*1,600*	*1,616*	*1,632*	*1,648*
	Subtotal, Transfer and Disposal	***1,742,758***	***1,760,186***	***1,777,788***	***1,795,566***	***1,813,521***	***1,831,656***
Special Waste							
Construction and Demolition Debris							
	Existing Programs	216,471	218,636	220,822	219,530	225,261	227,513
	New Programs	0	0	0	3,500	0	0
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Construction and Demolition Debris	*216,471*	*218,636*	*220,822*	*223,030*	*225,261*	*227,513*
Agricultural Waste							
	Existing Programs	1,568	1,584	1,600	1,116	1,632	1,648
	New Programs	0	0	0	500	0	0
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Agricultural Waste	*1,568*	*1,584*	*1,600*	*1,616*	*1,632*	*1,648*
Tires							
	Existing Programs	15,000	15,150	14,802	14,955	15,109	15,265
	New Programs	0	0	500	500	500	500
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Tires	*15,000*	*15,150*	*15,302*	*15,455*	*15,609*	*15,765*

		2010	2011	2012	2013	2014	2015
Biomedical Waste							
	Existing Programs	4,643	4,689	4,236	4,283	4,331	4,380
	New Programs	0	0	500	500	500	500
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Biomedical Waste	*4,643*	*4,689*	*4,736*	*4,783*	*4,831*	*4,880*
Veterinary Wastes							
	Existing Programs	4,643	4,689	4,736	4,783	4,831	4,880
	New Programs	0	0	0	0	0	0
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Veterinary Wastes	*4,643*	*4,689*	*4,736*	*4,783*	*4,831*	*4,880*
Petroleum-Contaminated Soils							
	Existing Programs	50,000	50,500	51,005	51,515	47,030	47,551
	New Programs	0	0	0	0	5,000	5,000
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Petroleum-Contaminated Soils	*50,000*	*50,500*	*51,005*	*51,515*	*52,030*	*52,551*
Asbestos							
	Existing Programs	1,568	1,584	1,600	1,616	1,632	1,648
	New Programs	0	0	0	0	0	0
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Asbestos	*1,568*	*1,584*	*1,600*	*1,616*	*1,632*	*1,648*
Liquid Wastes							
	Existing Programs	73,169	73,901	74,640	75,386	76,140	76,901
	New Programs	0	0	0	0	0	0
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Liquid Wastes	*73,169*	*73,901*	*74,640*	*75,386*	*76,140*	*76,901*
Electronic Waste							
	Existing Programs	4,643	3,689	3,736	3,783	3,831	3,880
	New Programs	0	1,000	1,000	1,000	1,000	1,000
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Electronic Waste	*4,643*	*4,689*	*4,736*	*4,783*	*4,831*	*4,880*

		2010	2011	2012	2013	2014	2015
	Subtotal, Special Waste	***371,705***	***375,422***	***379,176***	***382,968***	***386,797***	***390,665***
Moderate Risk Waste							
	Existing Programs	65,165	64,817	65,475	66,140	66,811	67,489
	New Programs	0	1,000	1,000	1,000	1,000	1,000
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Moderate Risk Waste	***65,165***	***65,817***	***66,475***	***67,140***	***67,811***	***68,489***
Administration and Enforcement							
	Existing Programs	386,374	918,973	928,162	937,444	946,818	956,287
	New Programs	0	0	0	0	0	0
	Capital Expenditures	523,500	0	0	0	0	0
	Subtotal, Administration and Enforcement	***909,874***	***918,973***	***928,162***	***937,444***	***946,818***	***956,287***
Other							
	Existing Programs	18,406	18,590	18,776	18,964	19,153	19,345
	New Programs	0	0	0	0	0	0
	Capital Expenditures	0	0	0	0	0	0
	Subtotal, Other	***18,406***	***18,590***	***18,776***	***18,964***	***19,153***	***19,345***
	Grand Total	**3,478,763**	**3,513,551**	**3,548,686**	**3,584,173**	**3,620,015**	**3,656,215**

Appendix G

SEPA Documents

WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

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

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Kittitas County Solid Waste Management Plan Update

2. Name of applicant: Kittitas County Solid Waste Department
3. Address and phone number of applicant and contact person:

925 Industrial Way 509-962-7577
Ellensburg, WA 98926 Patti Johnson, Solid Waste Director

4. Date checklist prepared: February 4, 2011
5. Agency requesting checklist: Washington State Department of Ecology
6. Proposed timing or schedule (including phasing, if applicable):

2009-2014

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

This plan will be updated in six years.

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

Environmental review will occur on a per-project basis.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

N/A

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

N/A

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

The Kittitas County Solid Waste Management Plan provides a guide for the short- and long-term management of the solid waste systems within the planning area. The Plan documents the existing solid waste programs and facilities, describes the opportunities for improvement to the existing solid waste system, evaluates alternatives and recommends programs and facilities which will achieve the County's goals and descries the strategy for implementing the recommended programs. The Plan's 20-year planning period is from 2010-2030. The six-year implementation schedules and the WUTC cost assessment were developed for the years 2009-2014.

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

County of Kittitas, Washington

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other . . . . . .

varies throughout County

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

Does not apply

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The geology of Kittitas County typically is complex, consisting of a variety of rocks and sediments. Volcanic and old marine sedimentary rocks occur mostly in western portions of the County. The eastern half is chiefly composed of younger sedimentary units and basalt flows. Valleys have deep glacial and alluvial deposits, with some areas of wind-deposited soils. Depth to groundwater is widely variable, reflecting the complexity of the geologic formations in Kittitas County.

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

Does not apply

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Does not apply

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

Does not apply

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

Does not apply

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

Does not apply

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Does not apply

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

Does not apply

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

Does not apply

3. **Water**

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The major bodies of water in Kittitas County include Lake Keeche (which flows into the Yakima River, Lake Kachess, Lake Easton, and Lake Cle Elum (which flows into the Cle Elum River). There are a number of smaller lakes in the Cascade Range on the western edge of the County.

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

Does not apply

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Does not apply

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

Does not apply

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

Does not apply

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

Does not apply

b. Ground:

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

Does not apply

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Does not apply

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

Does not apply

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

Does not apply

4. **Plants**

a. Check or circle types of vegetation found on the site: Does not apply

———— deciduous tree: alder, maple, aspen, other

———— evergreen tree: fir, cedar, pine, other

———— shrubs

———— grass

———— pasture

———— crop or grain

———— wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

———— water plants: water lily, eelgrass, milfoil, other

———— other types of vegetation

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

Does not apply

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

Does not apply

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

Does not apply

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

Does not apply

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.

Does not apply

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

Does not apply

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

Does not apply

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply

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

Does not apply

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The County operates two Moderate Risk Waste facilities. The sites are operated by trained County personnel. Residents drop off waste materials at the site for recycling or proper disposal. Materials are stored temporarily on-site in enclosed containers. The facility incorporates various spill containment measures. Exposure to the general public is limited.

1) Describe special emergency services that might be required.

County Fire Department personnel would respond to emergencies at the MRW facilities.

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

The MRW facilities incorporate various spill control and containment measures.

b. Noise

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

Does not apply

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Does not apply

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

Does not apply

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties?

Does not apply

b. Has the site been used for agriculture? If so, describe.

Does not apply

c. Describe any structures on the site.

Does not apply

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

Does not apply

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

Does not apply

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

Does not apply

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

Does not apply

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Does not apply

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

Does not apply

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

Does not apply

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

Does not apply

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

Does not apply

9. Housing

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

Does not apply

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

Does not apply

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

Does not apply

10. Aesthetics

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

Does not apply

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

Does not apply

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

Does not apply

11. Light and glare

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

Does not apply

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

Does not apply

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

Does not apply

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

Does not apply

12. Recreation

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

Does not apply

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

Does not apply

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

Does not apply

13. **Historic and cultural preservation**

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

Does not apply

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

Does not apply

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

Does not apply

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Does not apply

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

Does not apply

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply

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

Does not apply

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

Does not apply

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Does not apply

g. Proposed measures to reduce or control transportation impacts, if any:

Does not apply

15. Public services

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

Does not apply

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

Does not apply

16. Utilities

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

Does not apply

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Does not apply

C. SIGNATURE

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

Signature: .....

Date Submitted: .....

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Does not apply

Proposed measures to avoid or reduce such increases are:

Does not apply

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

Does not apply

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

Does not apply

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

Does not apply

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

Does not apply

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Does not apply

Proposed measures to protect such resources or to avoid or reduce impacts are:

Does not apply

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Does not apply

Proposed measures to avoid or reduce shoreline and land use impacts are:

Does not apply

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Does not apply

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

Does not apply

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

The Kittitas County Solid Waste Management Plan has been prepared in compliance with local and state laws and regulations governing solid waste management and is based on published guidelines by the Department of Ecology.

Appendix H

Resolutions of Adoption

To be inserted after Plan is adopted.