Preliminary Draft

Lincoln County 2009
Solid Waste Management Plan Update

Presented to:

Lincoln County
Department of Public Works
27234 SR 25 N.
Davenport WA 99122

(509) 725-7041

June 2009
File No. 01207329

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Executive Summary

EXECUTIVE SUMMARY

The 2009 Lincoln County Comprehensive Solid Waste Management Plan Update (2009 Plan) provides background and guidance for a long-term approach to solid waste management in the County. The 2009 Plan updates the 1999 Lincoln County Solid Waste Plan Amendment, and has been prepared in accordance with The Solid Waste Management - Reduction and Recycling Act, Chapter 70.95 of the Revised Code of Washington (Ch 70.95 RCW).

The 2009 Plan has been developed with Lincoln County as the lead agency, along with participation and cooperation as defined in an inter-local agreement between the County and the cities of Almira, Creston, Davenport, Harrington, Odessa, Reardan, Sprague, and Wilbur. It is intended to provide citizens and decision makers in Lincoln County with a guide to implement, monitor, and evaluate future solid waste activities in the planning area for a 20-year period. The recommendations for the 2009 Plan guide local decision makers, and identify the need for fiscal responsibility and for local, State and Federal funds and grants in order to implement and operate the solid waste programs.

The 2009 Plan was prepared under the direction and guidance of the Lincoln County Public Works Department in conjunction with the Solid Waste Advisory Committee (SWAC). The SWAC has participated in the Plan development by providing input and comment on the issues covered by the Plan, reviewing draft reports, acting as a liaison to their constituencies, and assisting in public involvement. The SWAC will also be asked to recommend the 2009 Plan for adoption by the County and municipalities. After the 2009 Plan is adopted, the SWAC will routinely evaluate implementation of recommended programs, and will help to promote waste reduction and recycling throughout the region. SWAC members will also participate in amending the 2009 Plan, if necessary.

Plan Goals and Objectives

The intent of this Plan is to establish the foundation for the proper management of solid waste in Lincoln County. Solid waste management goals and objectives for Lincoln County were developed with the assistance of the SWAC. This plan update incorporates the following goals and objectives:

1. Mange the solid waste system to promote and maintain a high level of public health and safety which protects the human and natural environment of Lincoln County.

2. Manage solid wastes in a manner that promotes, in order of priority: waste reduction, recycling, and disposal.

3. Manage the waste management system in an efficient, cost effective way to ensure the future financial viability of the systems serving the County.

4. Ensure access to collection services for residences, businesses, and industry.

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

6. Increase public awareness of solid waste issues by continuing and expanding educational opportunities within the county.

7. Encourage development of sustainable waste management technologies, including evaluating the feasibility of energy production.

Recommendations

The options reviewed and evaluated for implementation represent an approach that will provide for continued progress towards meeting local and State goals regarding solid waste management, waste reduction and diversion. The recommended policies and programs will be implemented while maintaining a balance of costs and diversion benefits to County residents.

The following lists the recommendations included in the Plan.

SECTION 3 WASTE REDUCTION, RECYCLING, AND ORGANICS

Public Education and Outreach

1. Publications

2. Website

3. Education and Technical Assistance to Schools and Businesses

Waste Reduction

1. Procurement of Recycled Products

2. Environmentally Preferable Purchasing

3. County/City Waste Reduction Policies

4. Methods to Measure Waste Reduction Results

5. ReUse and SWAP Shops

6. Producer Responsibility

Recycling

1. Internal Recycling Program

2. Special Event or Public Venue Recycling

3. Evaluate Recycling Bin Program

4. Recognition for commercial Waste Reduction and Recycling Successes

5. Business Education

6. Commercial Waste Audit Assistance

7. Use Economic Development to Attract Recycling Businesses

Organics

1. Yard Waste Chipping Program

2. Food Waste Management

3. Biomass Processing

4. Assess Feasibility of Using In-or-Out-of-County Composting Facility

5. Backyard Composting Program

SECTION 4 COLLECTION

1. Contracting for Recycling

2. Service Level Ordinance

SECTION 5 TRANSFER AND DISPOSAL

1. Evaluate implementation of a flow control ordinances

2. Issue a request for proposal for contracting out the Transfer Station operations.

3. Actively pursue grant opportunities for the transfer station operations, maintenance, and other programs.

SECTION 6 MISCELLANEOUS AND MODERATE RISK WASTE

Miscellaneous Waste

1. Continue existing programs.

Moderate Risk Waste

1. Continue existing programs.

Implementation

The implementation of the recommendations contained in this Plan will begin upon approval of the Plan by the jurisdictions and Ecology. The schedule for implementation is included in Exhibit ES-1. The schedule may be revised as the Plan is updated, and as the objectives and needs of the County and jurisdictions change. As indicated, for some recommendations, the programs are ongoing and will continue. For new programs, some will be implemented within a few months and for others implementation will span many years.

Exhibit ES-1. 20- Year Projected Needs

PROGRAM	ACTIVITY	YEAR	COST/YR	REVENUE/ YR	TOTAL COST/YR
Operate Transfer Station			$265,458	$250,000	($15,458)
General Operations					
	1. MSW Collection Service	2010-2030			
	2. Employee Training/Education	2010-2030			
	3. Facility Maintenance/Utilities	2010-2030			
	4. Equipment Rental	2010-2030			
	5. Operating Supplies	2010-2030			
Transfer and Disposal - Plan & Program Options					
	1. Evaluate implementation of a flow control ordinance	2010-2030			
	2. Issue a request for proposal for contracting out the Transfer Station operations.	2010-2011	$5,000	$0	($5,000)
	3. Actively pursue grant oppor tunities for the transfer station ope rations, maintenance, and other programs.	2010-2030			
Waste Reduction & Recycling & Organics			$84,038	$84,038	$0
General Operations					
	1. Recycling Collection Services	2010-2030			
	2. Employee Training Education	2010-2030			
	3. Facility Maintenance/Utilities	2010-2030			
	4. Equipment Rental	2010-2030			
	5. Operating Supplies	2010-2030			
	6. Professional Services	2010-2030			
Recycling & Reuse - Plan & Program Options					
	1. Procurement of Recycled Products	2010-2030			
	2. Environmentally Preferable Purchasing	2015-2030			
	3. County/City Waste Reduction Policies	2015-2030			
	4. Methods to Measure Waste Reduction Results	2015-2030			
	5. ReUse and SWAP Shops	2010-2030			
	6. Producer Responsibility	2020-2030			
	7. Internal Recycling Program	2010-2030			
	8. Special Event or Public Venue Recycling	2010-2030			
Waste Reduction & Recycling & Organics					
	9. Evaluate Recycling Bin Program	2010-2030			
	10. Recognition for commercial Waste Reduction and Recycling	2015-2020			
	11. Business Education	2015-2030			
	12. Commercial Waste Audit Assistance	2015-2020			
	13. Use Economic Development to Attract Recycling Businesses	2010-2030			
	14. Contracting for Recycling	2012-2030			
	15. Service Level Ordinance	2012-2030			
Organics	1. Yard Waste Chipping Program	2010-2030			
	2. Food Waste Management	2020-2030			
	3. Biomass Processing	2020-2030			
	4. Assess Feasibility of Using In-or-Out-of-County Compos ting Facility	2015-2030			
	5. Backyard Composting Program	2015-2030			
Miscellaneous Waste Programs					
	1. Continue existing programs	2010-2030			
Operate Moderate Risk Waste Program			$9,900	$9,900	$0
	1. Continue existing programs	2010-2030			
Public Education and Outreach			$5,000	$5,000	$0
	1. Publications	2010-2030			
	2. Website	2010-2030			
	3. Education and Technical Assistance to Schools and Businesses	2010-2030			
Landfill Closure/Monitoring			$4,500	$0	($4,500)
	1. Continue Landfill Monitoring	2010-2030			
Capital Improvements/Facility Upgrades			$35,000	$0	($35,000)
	1. Facility Upgrades/Improvements	2010-2030			

NOTE: Cost Estimates listed should be increased a minimum of 3% per year in consideration for inflation and annual cost increases. Tipping fees and program fees would increase to offset inflation and cost increases.

Capital and operating expenses to implement the Plan recommendations over the next 6 years are summarized in Exhibit ES-2. Actual budgets to carry out the recommendations will vary from year to year as specific programs are defined, and will depend upon availability of grant funding and budgets approved by local governments.

Exhibit ES-2. Six Year Capital and Operational Financing Plan

ACTIVITY	PROJECTED COST	FUNDING MECHANISM (tip fees/grants/others)	IMPLEMENTATION YEAR
Operate Transfer Station	$265,458	Tipping/Program Fees	ongoing - 2010-2015
Issue RFP for Transfer Station Operation	$5,000	Program Fees/Solid Waste Fund	2010-2011
Waste Reduction & Recycling	$84,038	Grants/Program&Recycling Fees/Local Match	ongoing - 2010-2015
Operate MRW Program	$9,900	Grants/Program&Recycling Fees/Local Match	ongoing - 2010-2015
Public Education and Outreach	$5,000	Grants/Program Fees/Local Match	ongoing - 2010-2015
Landfill Monitoring	$4,500	Tipping/Program Fees	ongoing - 2010-2015
Capital Improvements	$35,000	Grants/Program&Recycling Fees/Local Match	ongoing - 2010-2015 as grants/fees/local match may be available
Projected Total	$408,896		
Estimates in year 2008 Dollars			
Projected Costs listed should be increased a minimum of 3% per year in consideration for inflation and annual cost increases			

Section 1

Introduction

1 INTRODUCTION

This document identifies and discusses elements of the revised comprehensive solid waste management plan for the incorporated and unincorporated areas of Lincoln County. The plan elements conform to requirements of the State Solid Waste Management – "Reduction and Recycling Act," (RCW 70.95), meet minimal Functional Standards (WAC 173-304), and follow suggested protocol as outlined in *Guidelines for the Development of Local Solid Waste Management Plans and Plan Revisions* (WDOE 90-11, December 1999).

The format of this Plan follows the recommendations outlined in the Department of Ecology (Ecology) Guidelines for the Development of Local Solid Waste Management Plans and Plan Revisions (December 1999). The Plan is organized as follows:

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

Formal adoption and approval of this plan in scheduled for spring 2009. 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 2014.

1.1 PLAN GOALS AND OBJECTIVES

The intent of this plan is to establish the foundation for the proper management of solid waste in Lincoln County. This plan update incorporates the following goals:

1. Manage the solid waste system to promote and maintain a high level of public health and safety which protects the human and natural environment of Lincoln County.

2. Manage solid wastes in a manner that promotes, in order of priority: waste reduction, recycling, and disposal.

3. Manage the waste management system in an efficient, cost effective way to ensure the future financial viability of the systems serving the County.

4. Ensure access to collection services for residences, businesses, and industry.

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

6. Increase public awareness of solid waste issues by continuing and expanding educational opportunities within the county.

7. Encourage development of sustainable waste management technologies, including evaluating the feasibility of energy production.

1.2 JURISDICTIONAL ROLES IN PLANNING

1.2.1 Role of Local Governments

Lincoln County and its designated Department, Public Works, was the lead agency responsible for developing the revised Solid Waste Management Plan. That office, in collaboration with the consultant and the Solid Waste Advisory Committee (SWAC), coordinated with participating local governments and agencies, conducted public participation and educational programs, and prepared funding request to support solid waste planning and management activities.

RCW 70.95.080 requires each county to prepare a comprehensive solid waste management plan. The county is directly responsible for the solid waste management of the unincorporated areas. Each incorporated town or city within a county may jointly participate, prepare their own plan, or be included in the County's plan. There are eight incorporated municipalities in Lincoln County: Reardan, Davenport, Harrington, Sprague, Odessa, Creston, Wilbur, and Almira. Resolutions of concurrence from the municipalities stating their intended participation and/or adoption of the plan are included in the appendices.

1.2.2 Solid Waste Advisory Committee

The SWAC is comprised of representatives from the incorporated areas, the county, business and industry, and citizens at large. RCW 70.95 identifies the purpose of the SWAC: "to assist in the development of programs and policies concerning solid waste handling." The committee played an active role in plan preparation, meeting regularly during the planning period to participate in the discussion issues, opportunities, constraints, and alternatives. The SWAC members reviewed the preliminary draft plan and provided comments on the various elements. Members of the SWAC are included in Table 1.

Table 1. Solid Waste Advisory Committee Members, 2008-2009

Name	Status	Name	Status
Rob Coffman	Member	Dennis McLaughlin	Member
Larry Condon	Member	Sheila Pachernag	Member
Ed Dzedzy	Vice-Chair	Tom Platt	Member
Steven Goemmel	Member	Roger Sebesta	Member
Scott Hutsell	Member	Gene Stuckle	Member
Shelly Johnston	Member	Marc Torre	Chair

1.3 SOLID WASTE PLANNING HISTORY IN LINCOLN COUNTY

Lincoln County's first Solid Waste Plan was adopted in 1974 and revised in 1984 and 1993.

1.3.1 1974/1984 Solid Waste Management Plans

Lincoln County's first Solid Waste Management Plan was adopted in 1974 and then revised in 1984. These early planning efforts concentrated on opening and operating small landfills; closing dump sites; meeting minimal federal and state regulatory requirements; and providing safe, flexible, and convenient solid waste options for residents of the small towns and rural areas.

1.3.2 1993 Solid Waste Management Plan

The 1993 update identified a number of priorities for the planning period. The priorities placed an emphasis on waste reduction and recycling, facilities, and public – private partnerships. The Plan established phase goals for meeting the state's 50% recycling goal: a 35% reduction in 15 years (2008) and 50% reduction in 20 years (2013). Public education activities were identified as integral to meeting these goals, and the Plan identified the need for additional staff resources to implement the Plan. The importance of the private sector involvement in the solid waste system was recognized, and the preference for of a public-private partnership where the public sector establishes basic policy parameters and the private sector, where feasible, is contracted to provide services. The Plan called for the development of a transfer facility (or facilities) by 1994 to accommodate waste export, as well as processing of recyclables and potentially a composting operation.

1.3.3 1999 Solid Waste Management Plan Amendment

The 1999 Plan Amendment reflected minor changes in the County solid waste system. The amendment identified the following issues:

- Slow growth in population and waste generation.
- Reliance on private sector for collection.
- Need for increased recycling to reduce disposal costs.
- Underutilization of Transfer Station and impact/need to raise tipping fees.

The Plan identified a number of recommendations for implementation. The recommendations, and status of their implementation, are included in Table 2.

Table 2. 1999 Plan Recommendations and Status of Implementation

1999 Plan Recommendation	Implemented (Yes/No)
Establishment of a centralized recycling facility for the collection, sorting, processing, and storage of recycled commodities.	Yes
Continue to develop and implement the following programs:	
Recycling and reduction program	Yes
Education and outreach	Yes
Additional drop-box facilities	Yes
Backyard composting programs	Yes
Reuse programs	Yes
Buy-back program	?
Agency programs	?
Market development	?
Conduct a feasibility study for new collection and transfer facilities in the western portion of the County.	No
Develop and implement a Household hazardous waste (Moderate Risk Waste) collection and disposal program, including reuse, technical assistance, and public education.	Yes

1.4 RELATIONSHIP TO OTHER PLANS

1.4.1 Comprehensive Plan

The planning guidelines require that the solid waste management plan reference all comprehensive land use plans for all participating jurisdictions to ensure that the solid waste management plan is consistent with policies set forth in the other documents.

Lincoln County's Comprehensive Plan is the official statement adopted by the Lincoln County Board of Commissioners (Board) setting forth goals and policies to protect the health, welfare, safety and quality of life of Lincoln County's residents. The County is currently updating the Comprehensive Plan, and anticipates adoption in the spring of 2009.

1.4.2 Lincoln County Moderate Risk Waste Management Plan

A Moderate Risk Waste Plan was prepared and adopted by Lincoln, Adams, and Grant Counties in 1993. The 2008 Solid Waste Management will incorporate a new Moderate Risk Waste Plan specifically for Lincoln County. Refer to Section 5 of this Plan.

1.4.3 Shoreline Management Plans

Shoreline Management Plans establish policies and regulations for development along shorelines. Shorelines are defined as all waters of the state, including reservoirs, floodplains and their associated wetlands. Portions of rivers having a mean annual flow of less than 20 cubic feet per second, and lakes less than 20 acres in size, are excluded from the regulations. There are a number of hydrological features in the County that meet the definitions for protection under the Washington Shoreline Management Act of 1972.

1.5 REGULATORY RELATIONSHIPS

In preparing and implementing solid waste management plans, it is important to identify the effect of other regulatory requirements on solid waste issues. An individual-medium approach can result in the transfer of pollutants to other media, rather than actual removal of pollutants from the environment or reduction in toxicity. For example, stringent limits in wastewater discharges have resulted in the generation of increased quantities of wastewater residuals, which sometimes contain the very pollutants originally intended to be controlled. Similarly, remediation of groundwater contaminated with volatile and semi-volatile organics can lead to increased emissions of volatile organic compounds into the air depending on the treatment technology employed. In the case of solid waste practices in Washington, in the past, uncontrolled burning of garbage was a common practice both on an individual basis and at unlined dumps. This caused cross contamination of air, water, and soils.

Since the early 1970's the federal clean air and clean water acts have been implemented that called for reduction of pollution of the air and water. After more than three decades, great progress has been made in compliance with these Acts, and the effort continues. One of the results of regulatory compliance has been a shift in burden of air and water pollution management to solid waste management. Control of water pollution has essentially eliminated the dumping of effluent into waterways, and replaced this with solid waste handling methods, such as land application or composting of biosolids. Similarly, electronic precipitators and baghouses have removed industrial air pollutants from process air streams, and created a solid waste in the form of ash that requires disposal. Another major regulatory effort is control of toxic and hazardous contaminates and pollutants. Collection and accumulation of materials containing these pollutants has also increased the needed for solid waste disposal for these waste streams.

The State policies and programs that affect, or are affected by solid waste planning issues are discussed in more detail below.

1.5.1 Air Quality Policies and Programs

The Washington State Legislature passed the land clearing burning law in 1991 as part of Washington's Clean Air Act, and voted to phase in the ban on residential burning. Residential burning is a fire meant to dispose of household yard waste, such as leaves, grass, brush and other yard trimmings. The ban was originally set to take effect in 2001. This was to give local governments and communities time to develop alternatives to burning, such as composting, chipping, curbside pickup of yard waste, local yard waste disposal stations, and seasonal cleanup

days. In 1998, the Legislature delayed the ban for smaller communities until January 1, 2007, to give them more time to make these preparations. For communities with populations of 5,000 or more, outdoor burning has been banned since 2001. Starting January 1, 2007, residential and land clearing burning was banned in all urban growth areas (UGAs) in the State of Washington. Right now, the law bans outdoor burning within the Urban Growth Areas for cities with more than 5,000 people. The ban does not apply to agricultural burning or limit recreational (camp fires) burning. The new law will also prohibit land-clearing burning in areas with population densities of greater than 1,000 people per square mile. Lincoln County is not fully planning under the WA State Growth Management Act, therefore is not subject to the new burning rules that impact urban growth areas associated with incorporated communities.

Among alternatives to burning the vegetative material there is a hierarchy of preferences. Landfill disposal is considered to be a better choice than burning but several other reuse and recycling options are preferred. The needed and preferred alternatives will simultaneously satisfy reductions in burning and solid waste. Among these are composting, mulching, and primary reduction in the form of reducing production of vegetative waste.

1.5.2 Water Quality Policies and Programs

The Department of Ecology, Water Quality Program, is delegated by the U.S. EPA as the state water pollution control agency, responsible for implementing all federal and state water pollution control laws and regulations. Wastewater and stormwater discharges are regulated primarily by wastewater discharge permits, which stipulate specific limits and conditions of allowable discharge.

A wastewater discharge permit is required for disposal of waste material into “waters of the state,” which include rivers, lakes, streams, and all underground waters and aquifers. A wastewater discharge permit is also required for certain industrial users that discharge industrial waste into sanitary sewer systems.

One alternative for the disposal of wastewater treatment solids is the use of land application of biosolids. This method is used successfully throughout the state, and eliminates the disposal of biosolids in landfills. Another method which involves the co-composting of biosolids with green waste is also gaining attention as an alternative to landfill disposal.

1.5.3 Hazardous Waste Policies and Programs

In 1985, the Washington State Legislature amended the Hazardous Waste Management Act to require all cities and counties in the state to develop plans for improving moderate risk waste management in their jurisdictions. Moderate risk waste, as defined by the Act, includes:

- Any household wastes identified by Ecology as hazardous household substances.
- Any hazardous waste conditionally exempt from regulation because the waste is generated or accumulated in quantities below the threshold for state or federal regulation (typically 220 pounds per month or per batch or accumulate less than 2,200 pounds on site).

Management of the moderate risk waste stream is closely associated with the management of other solid wastes. Proper management of moderate risk waste is important, since such wastes pose a threat to public health, worker safety, and the environment. Moderate risk waste management plans, therefore, support solid waste management plans by discouraging indiscriminate dumping, and diverting hazardous waste from solid waste handling and disposal facilities and wastewater treatment facilities. In 1993, Lincoln, Adams, and Grant counties completed a moderate risk waste management plan as required by the Hazardous Waste Management Act. The findings and recommendations of the Moderate Risk Waste Management Plan have been totally integrated into this document as an ongoing effort to streamline the planning process in Solid Waste, improve solid waste permitting, and address proper solid waste handling.

1.6 BACKGROUND OF THE PLANNING AREA

An understanding of the environmental, land use and demographic features of Lincoln County assists in providing baseline information regarding existing and potential future solid waste handling needs. This chapter provides information on the natural environment of the county, which includes climate, geology, soils, and topography. The human environment is described, including area population and economics.

1.6.1 Natural Environment

Lincoln County is located in northeastern Washington. The County is approximately 2,340 square miles (3.5% of the State of Washington), and is characterized by large areas of agricultural and grazing lands. It is bounded to the east by Spokane County, to the west by Grant County, to the south by Adams County (as well as a small part of Whitman County at its southeast corner), and to the north by Ferry and Stevens counties (and a small part of Okanogan County at its northwest corner). The County's northern border with Ferry and Stevens counties is delineated by the Spokane River for roughly half the length of the border. The Spokane River empties into Franklin Roosevelt Lake, a reservoir of the Columbia River formed by Grand Coulee Dam. The lake forms the second half of the northern border.

1.6.1.1 Geology

The area south of the Columbia River lies on tertiary age basalt of the Columbia River Group deposited by a series of lava flows, many of which were separated by periods of erosion and/or sedimentation. The basalt layers vary in thickness and have an aggregate thickness of up to 5,000 feet. Dynamic earth forces have created relief in the area and erosive forces accompanying the ice ages have created deep coulees and basins filled with alluvium. Immediately adjacent to the Columbia River and along Hawk Creek, pre glacial deposits exist. These deposits consist of well sorted and bedded clay-sandstone combinations with interbeds of volcanic ash and cemented gravels.

1.6.1.2 Soils

Soils of Lincoln County vary from water deposited alluvium in the basins and coulees to windblown sand and loess in the uplands. In general, the alluvial soils vary from silty loam to

very coarse gravelly, sandy loams and are well drained. Soil depths throughout the county vary greatly with shallow to surfacing basalt formations (scabrock) quite common.

1.6.1.3 Topography

Lincoln County can be separated into two distinct drainage systems. The northern portion including the Hawk Creek area drains north to the Columbia River (Lake Roosevelt). The balance of the county lies in the Upper Crab-Wilson drainage area which drains to the southwest into Moses Lake. Elevations are generally over 2,000 feet and range from about 1,200 feet to 3,600 feet. The uplands are characterized by gently rolling hills.

1.6.1.4 Climate

Lincoln County has a semiarid climate with four distinct seasons. Summers are usually hot and dry, winters cool and wet. The diurnal range in temperature is approximately 15 degrees Fahrenheit in winter and 35 degrees Fahrenheit in summer. Precipitation ranges from an annual average of about eight inches in the southwest to about 18 inches in the northeast. Precipitation is light in summer, increases in the fall, reaches a peak in winter, then gradually decreases in the spring with an increase in late May and June followed by a drop that is quite sharp in early July.

The depth of the frost in the soil varies from winter to winter and is influenced by vegetation, soil type, snow cover, and temperature. During an average winter, frost reaches a depth of 15 to 20 inches. If several inches of snow accumulate before cold weather begins, the frost penetration may be only a few inches. In some of the years of lighter snowfall and colder temperatures, the frost has reached a depth of 30 to 36 inches.

1.6.2 Human Environment

Lincoln County's population resides in small cities and towns interspersed across the county. The population distribution across the County averages 4.4 people per square mile, with slightly more residents living in the incorporated cities/towns of the county as compared to the unincorporated area. Population data and distribution for 2007 are shown in Table 3.

Table 3. Lincoln County Population (2007)

Area	Population	Percent
Unincorporated	4,615	45%
Incorporated	5,685	55%
Almira	285	3%
Creston	255	2%
Davenport	1,745	17%
Harrington	420	4%
Odessa	955	9%
Reardan	630	6%
Sprague	495	5%
Wilbur	900	9%
Total	**10,300**	**100%**

1.6.2.1 Land Use

Approximately 1,351 square miles, or nearly 55 percent, of the County land use is in farms, with approximately 500,000 acres of that harvested yearly (primarily wheat). Rangeland makes up 31 percent of the total land area, open range is approximately 6 percent and woodland makes up 2 percent. Urban and built-up areas, waters, and public lands (except croplands) make up the remaining 6 percent of the County's land use.

1.6.2.2 Industry and Employment

Agriculture is the primary industry in the County, and is among the top wheat producing regions in Washington. Information on major industry sectors in the County is provided in Table 4.

Table 4. Number of Establishments and Employment

NAICS Sector	Number of Establishments	Employees
Agriculture, Forestry, Fishing and Hunting	227	247
Mining	1	*
Utilities	2	*
Construction	36	134
Manufacturing	6	33
Wholesale Trade	15	194
Retail Trade	30	248
Transportation and Warehousing	8	32
Information	4	28
Finance and Insurance	16	85
Real Estate and Rental and Leasing	7	15
Services	13	84
Federal Government	6	62
State Government	11	63
Local Government	33	1,259
Not Elsewhere Classified	7	43
Total	**422**	**2,527**

Source: Covered Employment & Wage Data, First Quarter 2007
Washington State Employment Security Department, *www.workforceexplorer.com*
* Not shown to avoid disclosure of data for individual employer.

1.6.2.3 Population Trends

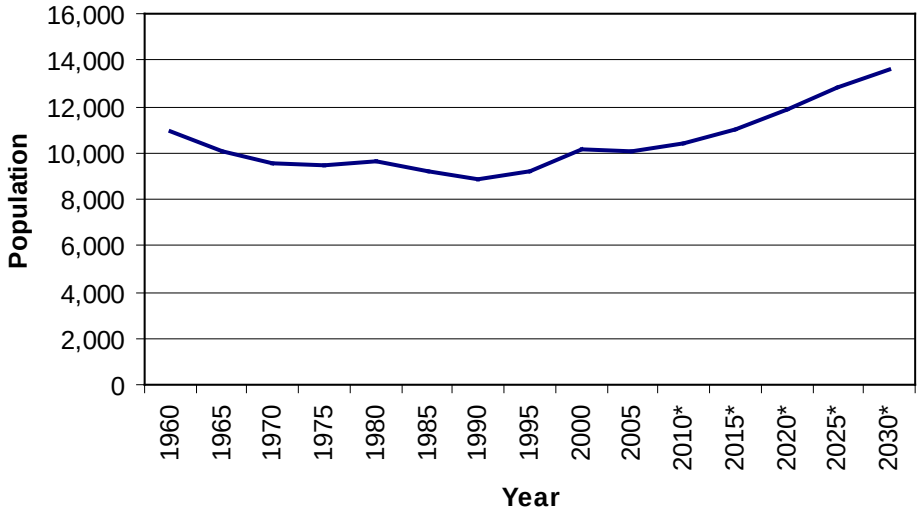
Lincoln County has an estimated 2007 population of 10,300 as shown in Table 5. Population growth from 1990 to 2000 was approximately 14 percent. From 2000 to 2007 growth slowed to just over one percent, with most growth occurring in the unincorporated area of the county.

Table 5. Lincoln County Population Growth, 2001-2007

Area	2001	2002	2003	2004	2005	2006	2007
Unincorporated	4,494	4,563	4,561	4,572	4,470	4,540	4,615
Incorporated	5,706	5,637	5,539	5,628	5,630	5,660	5,685
Almira	300	295	295	270	275	280	285
Creston	251	243	225	253	255	255	255
Davenport	1,735	1,720	1,690	1,730	1,730	1,745	1,745
Harrington	425	429	434	430	420	420	420
Odessa	960	950	930	950	950	950	955
Reardan	610	605	595	610	610	920	630
Sprague	505	490	490	490	495	495	495
Wilbur	920	905	880	895	895	895	900
Total	**10,200**	**10,200**	**10,100**	**10,200**	**10,100**	**10,200**	**10,300**

Estimates prepared by the Washington State Office of Financial Management (medium series) project the population to be 13,601 by the year 2030. This is an increase of 3,300 people, or almost a 32 percent increase over the 23-year period (see Exhibit 1).

Exhibit 1. Lincoln County Population, 1960-2030



Source: State of Washington, Office of Financial Management
*Medium Growth Management Projection

Section 2

Waste Generation

2 WASTE GENERATION

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 and programs to be implemented to meet those needs. This chapter analyzes Lincoln County's waste generation trends, and uses historical and projected population data to produce a 20-year waste generation forecast.

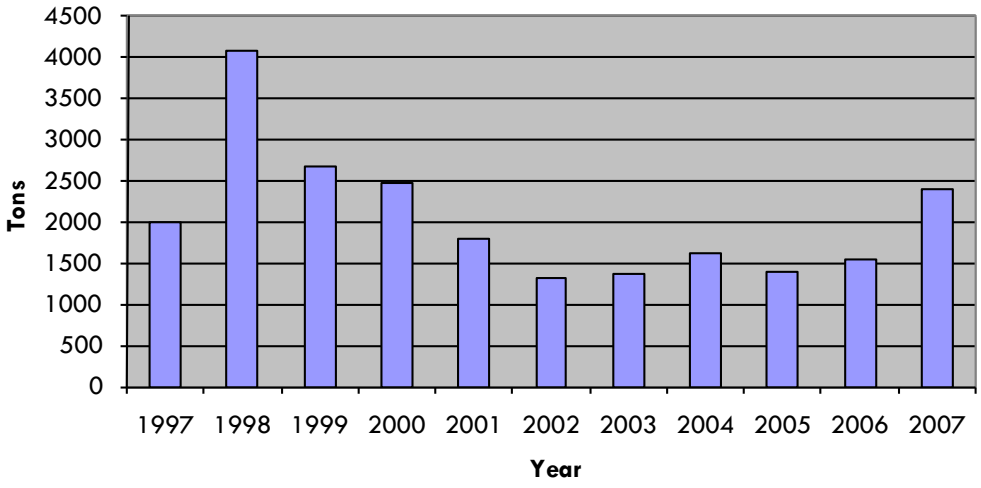
For the purposes of this analysis, waste generation is defined as the sum of tons of solid waste disposed and diverted in Lincoln County. As used in this Plan, disposed solid waste is considered to be all solid waste placed in landfills or incinerated. Diverted waste includes waste that is recycled, 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 construction and demolition debris, wood waste, agricultural waste, 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.

2.1 WASTE ANALYSIS

2.1.1 Waste Disposal

Exhibit 2 depicts the amount of municipal solid waste disposed from the County over the past ten years, from 1997 through 2007. Data for 2008 is not yet available.

Exhibit 2. Tons of Solid Waste Disposed, 2000-2007[1]



[1] Washington Department of Ecology, Waste Disposed by County.

2.1.2 Waste Diversion

There are numerous methodologies for calculating a diversion or recycling rate, as described below.

Recycling Rate: To determine a recycling rate that is consistent and comparable to past years, Ecology has measured a very specific part of the solid waste stream since 1986. It is roughly the part of the waste stream defined as municipal solid waste by the Environmental Protection Agency. It includes durable goods, nondurable goods, containers and packaging, food wastes, and yard trimmings. It does not include industrial waste, inert debris, asbestos, biosolids, petroleum contaminated soils or construction, demolition and landclearing debris recycled or disposed of at municipal solid waste landfills and incinerators.

Diversion Rate: Since the mid-1990s, Ecology has noted very large increases of material recovery in "non-MSW" waste streams; most notable are the growing industries in recycling asphalt, concrete, and other construction, demolition, and landclearing debris. The recovery of these materials for uses other than landfill disposal is termed "diversion." The diversion rate is an overall measure which includes materials that fall under the "MSW Recycling Rate" and also "diverted" materials.

Available recycling and diversion rates for the county from 2005-2007 are presented in Table 6.

Table 6. Lincoln County Recycling and Diversion , 2005-2007[2]

Recycling/Diversion Rates	2005 (tons)	2006 (tons)	2007 (tons)
Total MSW Recycled	1,739.33	2,214.22	1,837.63
Total Diverted Material	6.18	9.59	171.35
Total Recovery (MSW Recycled + Diverted)	1,745.51	2,223.81	2,330.80
MSW Recycling Rate	55.99%	59.05%	49.33%
Diversion Rate	52.16%	56.88%	45.63%

2.1.3 Existing and Projected Waste Generation

Existing Waste Generation

According to data from the County and from Ecology, in 2007 the County generated approximately 4,700 tons of solid waste, including an estimated 2,400 tons of waste disposed and 2,300 tons diverted from disposal. Table 7 contains data on solid waste generation and diversion for the County for 2007.

[2] Washington Department of Ecology, Recycling and Diversion Rates.

Table 7. Lincoln County Waste Generation, 2007

Waste Stream	Tons
Total Solid Waste Diverted	2,330.80
Total Solid Waste Disposed	2,394.06
Total Solid Waste Generated	4,724.86

Projected Waste Generation

The methodology used to estimate solid waste generation rates for the next 20 years consists of using the per capita generation rate and multiplying this rate by population projections. The per capita waste generation rate for the County was calculated using the known data from 2007.

That calculation is:

$$\text{Generation Rate (2007)} = \frac{\text{Total Waste Generation (tons)}}{\text{Population (pp)}} = \frac{4{,}724\ \text{(tons)}}{10{,}300\ \text{(pp)}} \times \frac{2{,}000\ \text{lb}}{\text{ton}} \times \frac{\text{year}}{365\ \text{days}} = 2.5\ \text{lb/pp/day}$$

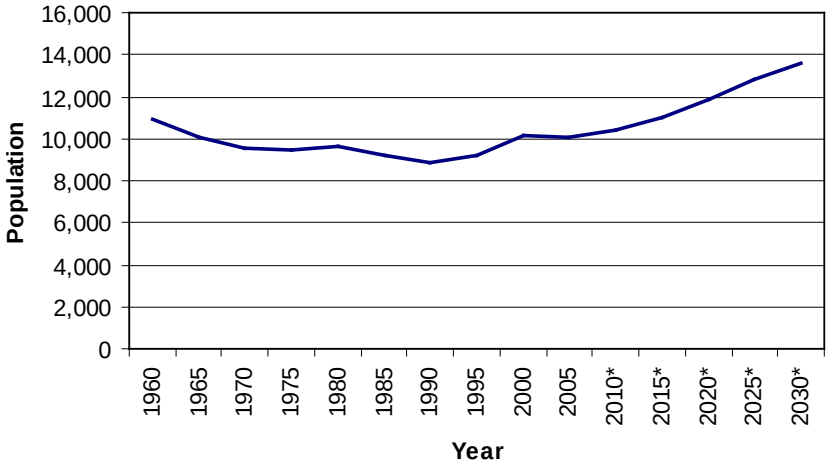
2.2 COUNTY DEMOGRAPHICS

2.2.1 Population

As discussed earlier Lincoln County has an estimated 2007 population of 10,300. Population growth from 1990 to 2000 was approximately 14 percent. This rate slowed to just over one percent from 2000 to 2007.

Estimates prepared by the Washington State Office of Financial Management (medium series) project the population to be 13,601 by the year 2030. This is an increase of 3,300 people, or almost a 32 percent increase over the period from 2008 to 2030 (see Exhibit 3).

Exhibit 3. Lincoln County Population, 1960-2030



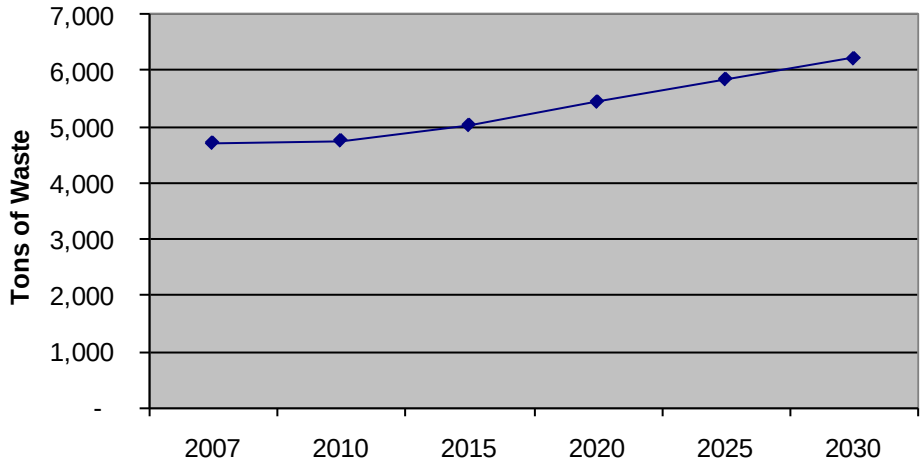
Source: State of Washington, Office of Financial Management
*Medium Growth Management Projection

Table 8 combines population projections with the calculated per capita waste generation rate for the County. This growth in waste generation is depicted graphically in Exhibit 4.

Table 8. Lincoln County Solid Waste Projections

Year	Population	Projected Waste Generation (Tons)
2010	10,393	4,767
2015	10,994	5,042
2020	11,907	5,461
2025	12,790	5,866
2030	13,601	6,238

Exhibit 4. Waste Generation Projections, 2010-2030



Waste generation is influenced by various demographic and economic factors, including changes in levels of employment and personal income, the value of recyclable materials, the price of disposal services, changes in product design and packaging, and changes in behavior affecting waste reduction and recycling activities. Some of these factors are difficult to measure over time, while others are so interrelated that using them in a statistical analysis lowers the accuracy of the forecast. For these reasons a forecast was developed based on the historical waste generation and using population to indicate the upper limit of potential increase in solid waste generation within the county. However, it is important to realize that any of these related factors may change within the forecast period. To maintain accuracy, the generation rate should be monitored and projections should be routinely updated.

2.2.2 Level of Service

The population projections for Lincoln County predict a growth of approximately 3,300 people by the year 2030. In order to maintain an adequate level of service, Lincoln County will need to provide waste management programs for an additional 1,623 tons generated in 2030.

2.3 WASTE COMPOSITION

In addition to the amount of waste being generated, it is important to evaluate the components of disposed waste in order to identify potentially recyclable materials. This information is valuable in planning effective recycling and waste minimization programs. Several factors affect waste composition, including opportunities available for recycling or composting materials, types of business and industry, the area climate, occurrence of natural disasters, mix of urban versus rural designations, the density of single and multi-family dwellings, and technological advances.

No detailed waste composition study has been performed to date for Lincoln County. Waste composition studies from other jurisdictions were reviewed, and it was determined that the waste composition study conducted for Eastern Washington is most representative of Lincoln County's disposed waste, due to similar geography and climate. In order to estimate Lincoln County's

disposed composition, the categorical percentages from the Eastern Washington study were multiplied with the total disposed tonnage for Lincoln County in 2007.

The results of the composition analysis are shown in Exhibit 5 and Table 9. The information is important for identifying the types and quantities of materials that could potentially be targeted for recycling or other diversion programs.

Exhibit 5. Major Waste Categories

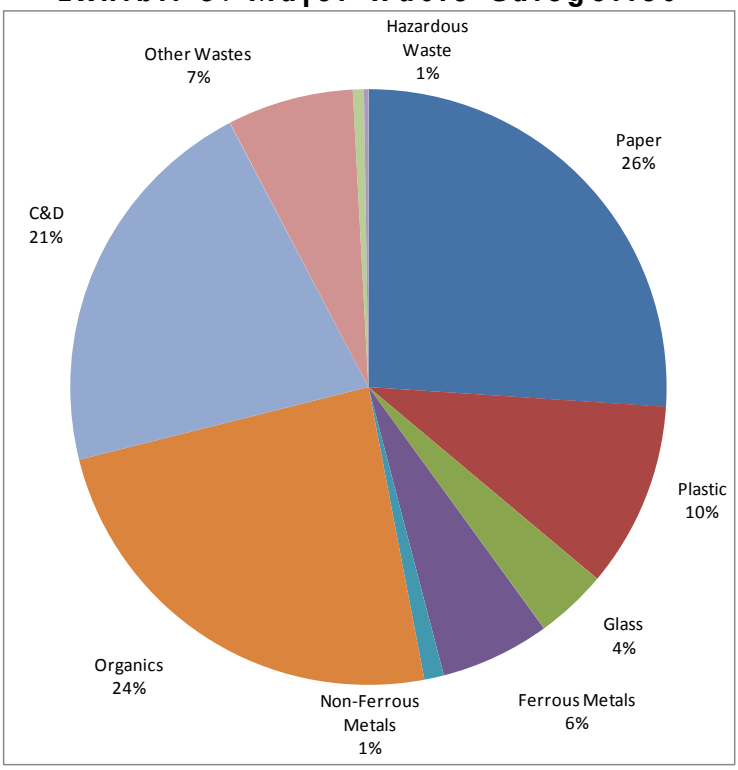


Table 9. Waste Disposal Composition Summary for Lincoln County Using Eastern Washington Percentages

CATEGORY and Material Type	Eastern WA Percent	Lincoln County Tons	CATEGORY and Material Type	Eastern WA Percent	Lincoln County Tons
PAPER	**26.06%**	**623.8**	**NON-FERROUS METALS**	**1.07%**	**25.5**
Newspaper	3.34%	79.9	Aluminum Cans	0.60%	14.3
Corrugated Paper	7.31%	175.0	Other Aluminum	0.13%	3.1
Computer Paper	0.19%	4.6	Other Non-Ferrous Metals	0.34%	8.1
Office Paper	0.81%	19.3	**ORGANICS**	**24.07%**	**576.2**
Mixed Recyclable Paper	7.01%	167.9	Food	8.34%	199.6
Milk / Juice Cartons	0.61%	14.6	Yard Wastes	11.64%	278.7
Aseptic Juice Containers	0.01%	0.3	Other Organics	4.09%	98.0
Frozen Food Containers	0.18%	4.4	**CONSTRUCTION DEBRIS**	**21.24%**	**508.5**
Other Paper	6.58%	157.6	Wood Wastes	12.99%	311.0
PLASTIC	**10.06%**	**240.9**	Gypsum Drywall	0.80%	19.2
PET Containers (#1)	0.31%	7.4	Inert Solids/ Fines	1.78%	42.7
HDPE Containers (#2)	0.67%	16.1	Other Construction Debris	5.67%	135.7
LDPE Plastics (#4)	0.06%	1.4	**OTHER WASTES**	**6.84%**	**163.7**
Polystyrene (#6)	0.74%	17.7	Disposable Diapers	2.08%	49.9
Plastic Bags	3.93%	94.2	Textiles	3.72%	89.1
Other Coded Plastic Packaging	0.77%	18.4	Rubber Products (except Tires)	0.40%	9.5
Other Plastics	3.58%	85.7	Large Bulky Items	0.44%	10.6
GLASS	**3.87%**	**92.7**	Other Materials	0.19%	4.6
Clear Glass Containers	2.06%	49.3	**HAZARDOUS WASTE**	**0.61%**	**14.5**
Green Glass Containers	0.37%	8.7	Paint / Adhesives / Solvents	0.20%	4.8
Brown Glass Containers	0.81%	19.5	Cleaners	0.02%	0.5
Refillable Beer Bottles	0.05%	1.2	Pesticides / Herbicides	0.06%	1.3
Other Glass	0.58%	14.0	Non- Vehicle Batteries	0.02%	0.4
FERROUS METALS	**5.95%**	**142.4**	Other Hazardous Wastes	0.32%	7.6
Tin Cans	1.46%	35.0	**SPECIAL WASTES**	**0.24%**	**5.7**
Bi-Metal Cans	0.00%	0.1	Used Oil	0.00%	0.0
Mixed Metal & Other Materials	1.70%	40.7	Tires	0.07%	1.8
White / Brown Goods	0.15%	3.5	Vehicle Batteries	0.17%	4.0
Other Ferrous Metals	2.64%	63.1	Ferrous Vehicle Parts	0.00%	0.0
			TOTAL	**100.00%**	**2,394.0**

Section 3

Waste Reduction, Recycling, and Organics

3 WASTE REDUCTION, RECYCLING, AND ORGANICS

This chapter describes existing programs and potential options for reducing the amount of waste being generated and disposed in Lincoln County. The programs discussed in this chapter are organized as follows:

- Public Education & Outreach
- Waste Reduction
- Recycling
- Organics Management

The next section, public education and outreach, is common to all three programs (waste reduction, recycling, and organics). Messages covering all three topics often are included in a single outreach effort. The next section, waste reduction, discusses programs that reduce the amount of waste generated, while the final two sections discuss programs that reduce the amount of waste requiring disposal (recycling and organics management).

This chapter provides an update of the County's waste diversion methods as well as fulfills State requirements regarding waste reduction and recycling programs. The Revised Codes of Washington (RCW), RCW 70.95 requires that local solid waste management plans demonstrate how the following goals will be met:

- Washington State's goal is to achieve a statewide recycling and composting rate of 50% by 2007.

- There is a statewide goal to eliminate yard debris from landfills by 2012 in those areas where alternatives exist.

- Source separation of waste (at a minimum, separation into recyclable and non-recyclable fractions) must be a fundamental strategy of solid waste management.

- Steps should be taken to make recycling at least as affordable and convenient to the ratepayer as mixed waste disposal.

3.1 PUBLIC EDUCATION AND OUTREACH

3.1.1 Existing Programs

Public education and outreach programs supporting waste reduction, recycling, and organics management activities include:

Lincoln County. The County Public Works Department provides information on waste reduction and recycling on the county's website, in the newspaper, and hand outs at the Public Works office, WSU extension office, County court house and the transfer station, as well as to the cities and towns for distribution to their residents and businesses. The County is also putting together an email newsletter for schools.

Almira. The Town uses utility inserts and public notice boards (Post office and town hall) to post notices about waste reduction and recycling.

Creston. The Town does not have any formal public outreach or education programs for waste reduction or recycling.

Davenport. The City does not have a formal public outreach or education programs for waste reduction, recycling or organics. The City works with local groups to promote an annual clean up day.

Harrington. The City does not have a formal public outreach or education programs for waste reduction, recycling or organics.

Odessa. The City uses City Council meetings and the local newspaper to encourage residents to participate in recycling. The City provides information on the location of recycling bins, and the types of materials that are accepted for recycling.

Reardan. The Town includes waste reduction, reuse, and recycling information in the utility bills.

Sprague. The City sends out newsletters in the utility bills and distributes flyers around town with information on waste reduction and recycling.

Wilbur. The Town does not have a formal public outreach or education programs for waste reduction, recycling or organics.

3.1.2 Key Issues

One of the goals established for this plan is to increase public awareness of solid waste issues by continuing and expanding educational opportunities within the county. The County and incorporated cities and towns should annually monitor existing efforts to gauge attendance, interest, and feedback. Adjustments to educational and outreach programs should be made, as necessary.

3.1.3 Options

The following options for public education and outreach were evaluated by the SWAC.

1. Publications

Consider ways to expand public outreach through available local publications and resources, such as the Lincoln Advertiser. Content of public notices and information would include information on recycling, waste reduction, solid and hazardous waste disposal, transfer station operations, collection, littering and other solid waste enforcement issues.

2. Website

Lincoln County should update its website to be a successful component of a waste reduction and recycling education campaign. As with any promotional medium, the website must be user-friendly, accurate, and interesting.

3. Education and Technical Assistance to Schools and Businesses

A number of programs exist, including those provided by the County, as well as the cities of Reardan, Davenport, and Odessa. This option recognizes the need to reach schools and businesses regarding their handling of waste. Outreach to schools and businesses should consider free technical assistance and waste audits to identify opportunities to implement waste reduction, recycling and composting activities. The benefits of this alternative are that commercial sources produce a significant portion of solid waste in Washington. Focusing waste reduction efforts towards the business sector can have a large impact on the waste stream as a whole. This alternative is in line with the State's Beyond Waste Plan (Initiative 1). It is also important to provide technical assistance to schools. A functional waste reduction and recycling program in a school yields daily reminders to the students of their direct impacts on the environment.

3.2 WASTE REDUCTION

Activities and practices that reduce the amount of wastes that are generated are classified as "waste reduction." Waste reduction is the highest priority for solid waste management according to RCW 70.95. A goal established by this plan is to manage solid wastes in a manner that promotes, in order of priority: waste reduction, recycling, and disposal.

3.2.1 Existing Programs

A number of waste reduction programs and activities exist in the County, including the following:

Lincoln County. The County is in the planning stages of implementing a reuse and swap shop at the Transfer Station. The operation will allow residents to drop off unwanted household items that will be made available for free to other residents. The County is also planning to sponsor a one-day reuse fair in the spring of 2009 for residents.

The County has implemented a number of source reduction programs for their own operations, including chipping materials from road debris and road maintenance projects, and clearing and grubbing for road and bridge projects.

Almira. The Town does not have a formal waste reduction or recycling program, however there are a number of activities that occur in Almira throughout the year, including donations to charities, such as the Wilbur Senior Center, and an all town yard sale each spring. The Town sponsors an annual "Clean Up Days" with the Lion's Club, where residents can get 1 cubic yard of waste hauled free to the Lion's Club, and then they pay for any additional waste that is hauled.

Creston. The Town has no formal waste reduction program.

Davenport. Although the City has no formal waste reduction program, the City works with local groups to promote an annual clean up day. Internally, the City encourages vendors to use environmentally responsible products and practices, and also provides a site for clean green yard waste, where for a nominal charge, residents can bring their yard waste material. The material is chipped and used for ground cover at City facilities, and/or given to the chipping contractor in payment for services.

Harrington. The City has no formal waste reduction program.

Odessa. There are local organizations in the City and County where residents can take useable items for donations and reuse. The City purchases some recycled content office supplies.

Reardan. The Town has no formal waste reduction program, however they provide information to residents on the location of donation sites, such as Good Will and Care & Share. The Town will occasionally burn tree limbs and yard debris to reduce the quantity that must be landfilled.

Sprague. The City has no formal waste reduction program. The High School has a "closet" program where residents can drop off clothes and shoes for others to pick up and use.

Wilbur. The Town has no formal waste reduction program. When available, the Town purchases recycled content products, and chips green materials from landscaping and other operations. The Town also provides a yard waste and brush drop off for residents at a minimal fee.

3.2.2 Key Issues

The County and cities could do more to adopt policies and procedures that address waste reduction, including procurement and contract requirements. The County and cities could also improve outreach efforts to promote existing waste reduction programs. In addition, it is important to be able to measure the results of waste reduction activities. Personal and commercial efforts in waste reduction cover a broad range and are not well documented. Waste reduction could be shown to be handling significantly more waste if the personal and commercial efforts could be measured more completely.

3.2.3 Options

1. Procurement of Recycled Products

Local, state, and federal government can and do use their tremendous purchasing power to influence the products that manufacturers bring to the marketplace. The goal of these voluntary procurement practices is to create viable, long-term markets for recovered materials.

Procurement programs create viable, long-term markets for recovered materials and provide more efficient use of valuable resources. Research is necessary to determine the types of recycled content products that are available, their specifications, performance, and cost. Much of this research is available from other agencies and municipalities.

Government purchasing agents often have concerns about the quality and price of recycled-content products. Careful testing and selection of recycled content products can minimize concerns about product quality. Certain recycled-content products may have a higher initial purchase cost, but may require less maintenance or long-term costs over the life of the product. Cost concerns can be addressed by considering short-term and long-term costs (life cycle costs) in comparing product alternatives.

The County and the local jurisdictions can draw upon work by EPA and others to ensure that they are purchasing, to the maximum extent practicable, products made with recycled content. The County can help to synthesize information for businesses and individuals, and help to identify recyclable materials and recycling opportunities.

2. Environmentally Preferable Purchasing

More recently, efforts have expanded beyond buy-recycled programs and policies (discussed above) to "Environmentally Preferable Purchasing" (EPP). In fact, the federal government has been directed by Executive Order 13101 to identify and give preference to the purchase of products and services that pose fewer environmental burdens. Environmentally preferable products typically are defined as products that have a lesser or reduced effect on human health and the environment when compared with competing products that serve the same purpose. They include products that have recycled content, reduce waste, use less energy, are less toxic, and are more durable.

Some of the benefits of EPP include:

- Improved ability to meet existing environmental goals.
- Improved worker safety and health.
- Reduced liabilities.
- Reduced health and disposal costs.

Lincoln County and the cities could consider environmentally preferable purchasing criteria for computers and electronics (such as CPUs, monitors, keyboards, printers, fax machines, and copiers) which could include:

- Compliance with federal Energy Star Guidelines.
- Reduced toxic constituents.
- Reduced toxic materials used in manufacturing process.
- Recycled content plastic housing.
- Pre-installed software and on-line manuals.
- Designed for recycling/reuse.

- Upgradeable/long life.
- Reduced packaging.
- Manufacturer provides product take-back service.
- Manufacturer demonstrates corporate environmental responsibility.

Implementing EPP options for computers can result in the purchase of computers with lower operating costs, extended useful lives and reduced disposal costs.

3. County/City Waste Reduction Policies

In addition to educating consumers and businesses, it is important for local governments to "practice what they preach." Through numerous, small choices employees make each day, large amounts of waste can be prevented. Employees should be encouraged to learn more about waste reduction practices and work toward implementing and promoting such practices.

Such practices by county/city employees should be implemented whenever practicable and cost-effective. Examples include:

- Electronic communication instead of printed, double-sided photocopying and printing.
- Using copiers and printers capable of duplexing.
- Allowing residents to submit electronic rather than paper forms and applications.
- Washable and reusable dishes and utensils.
- Rechargeable batteries.
- Streamlining and computerizing forms.
- "On-demand" printing of documents and reports as they are needed.
- Leasing long-life products when service agreements support maintenance and repair rather than new purchases, such as carpets.
- Sharing equipment and occasional use items.
- Choosing durable products rather than disposable.
- Reducing product weight or thickness when effectiveness is not jeopardized in products such as, but not limited to, paper and plastic liner bags.
- Buying in bulk, when storage and operations exist to support it.

- Reusing products such as, but not limited to, file folders, storage boxes, office supplies, and furnishings.

- Mulching pruned material from parks and using on site.

County and city employees are most knowledgeable about ways that waste can be reduced or even eliminated and their ideas are essential. Adopted policies should be reinforced through employee incentives for outstanding performance.

4. Methods to Measure Waste Reduction Results

Waste reduction is the top solid waste management priority, but it is inherently difficult to measure something that has not been produced. In 1997, EPA finalized a document titled "Source Reduction Program Potential Manual" that Ecology staff recommended for use.

The work developed by EPA is based on "program potential" and whether a specific waste reduction program has the potential to reduce a significant portion of the waste stream in a cost-effective manner. The manual provides guidance for calculating program potential for the following programs: grasscycling, home composting, clothing and footwear reuse, office paper reduction, converting to multi-use pallets, and paper towel reduction.

Waste reduction successes can also be measured qualitatively, through observed changes in industrial processes, purchasing patterns, shifts in public perception as identified through surveys, business policies, and county and city initiatives and ordinances.

5. ReUse and Swap Shops

Some communities establish reuse and Swap operation at landfills and transfer stations. After passing over the scales, customers can voluntarily set items that are deemed in usable condition in a designated area. Other residents can pick up the item at no charge after signing a hold harmless waiver. At the Lincoln County Transfer Station, there is a waste exchange program for household hazardous waste. The Transfer Station can consider options to offer an area where residents can drop off or take additional items, such as bicycles, toys, electronics, construction materials, and other reusable materials. The County should advertise these operations to keep these materials out of the landfill, and increase diversion.

6. Producer Responsibility

Lincoln County and other jurisdictions should encourage and support efforts in Product Stewardship. This measure encourages all manufacturers to share in the responsibility for eliminating waste through minimizing excess packaging, designing products for durability, reusability and the ability to be recycled; using recycled materials in the manufacture of new products; and providing financial support for collection, processing, recycling, or disposal of used materials. This alternative would shift the existing product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in order to reduce public costs and drive improvements in product design that promote environmental sustainability. The policy would seek to build relationships among local government and other stakeholders to increase capacity and knowledge in order to bring

about producer financed and managed systems for life cycle and end of life management of their products.

3.3 RECYCLING

Recycling has been established by the State as a fundamental aspect of solid waste management that is reflected in various sections of RCW 70.95. Specifically, solid waste management plans should provide programs that:

- Provide incentives and mechanisms for source separation.
- Establish recycling opportunities for source-separated waste.

Washington State's goal is to achieve a statewide recycling and composting rate of 50% by 2007.

3.3.1 Existing Programs (2008)

Recycling Bins

The County operates a system of recycling bin collection sites located throughout the county. The bin sites are located in Odessa, Fort Spokane, Wilbur, Harrington, Seven Bays, Davenport, and at the County's Transfer Station. Each site contains a bin for the separate collection of mixed paper, newspaper and magazines, aluminum and plastic containers, and at some sites, cardboard. Until recently, the sites also collected glass containers, however this program has been discontinued due to a lack of market for the glass containers. The County collects the bins when they are full, and transports the materials to the Transfer Station. The materials are temporarily stored at the transfer station until an adequate amount is accumulated for transfer to or collection by a recycler. At this time, all materials are collected source separated. In the future, the County may commingle the materials for transfer to a commingled materials processing facility.

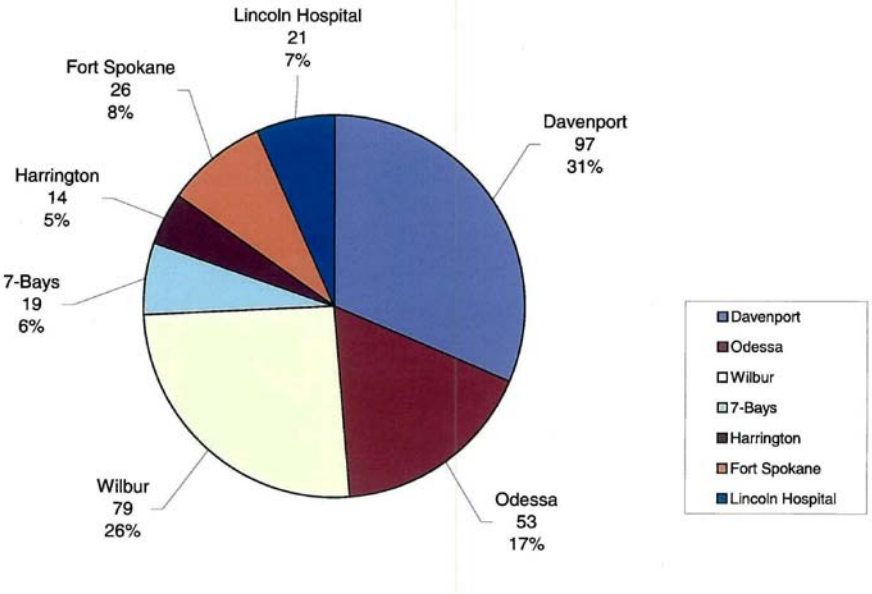
A list of the sites and types of containers, as well as the number of collections in 2008, is included in Table 10. As indicated, approximately 75% of the collections are in three locations: Davenport, Odessa, and Wilbur.

Table 10. Recycling Bin Collection Summary, 2008 (#collections)

Location	Total All	Mixed Recyclables Bin	Cardboard
Davenport	97	52	45
Odessa	53	19	34
Wilbur	79	38	41
7-Bays	19	17	2
Harrington	14	14	0
Fort Spokane	26	26	0
Lincoln Hospital	21	21	0
TOTAL	**309**	**187**	**122**

A graph depicting the use of the sites by location is included as Exhibit 3-1.

Exhibit 6. Use of Recycling Sites, by Location



The County conducted an analysis of the costs to service the recycling bins in 2008, and the revenue from the sale of the recyclables. This information is summarized in Tables 11 and 12, and the full analysis is included in Appendix A. As indicated, the existing program results in a significant cost to the County. As a result of the losses to the County from the Recycling Bin operation, in 2009 the County implemented delivery/pickup fees to recover the costs of the services. A number of cities declined to pay the fees, and therefore bins were removed from the Wilbur, Davenport, Lincoln Hospital and Seven Bays Marina sites.

Table 11. Recycling Bin Costs

Location	Annual Cost
Davenport	$ 14,476.00
Harrington	2,332.00
Odessa	11,389.00
Reardan	2,457.00
Wilbur	14,902.00
Fort Spokane	5,724.00
Lincoln Hospital	3,134.00
Seven Bays	4,183.00
Total	**$ 58,597.00**

Table 12. Estimated Recycling Income

Commodity	Annual Revenue
Aluminum cans	$ 3,171.00
Cardboard	10,891.00
Newsprint	19,040.00
Paper #6	2,121.00
Plastic	3,700.00
Tin	1,692.00
Total	***$ 40,615.00***
Bin Share (70%)	**$ 28,430.50**

Recycling Quantities

It has been estimated that in 2007, the residents and businesses in the county diverted approximately 2,330 tons of waste from disposal. The information is from reports provided to Ecology from haulers and recyclers, as well as from the Lincoln County Transfer Station. A summary of the types and quantities of materials diverted in Lincoln County in 2007 is shown in Table 13.

Table 13. Lincoln County Diversion, 2007

Material	Total (Tons)
Paper	
Paper #6	50.8
Loose Newsprint #8	170.4
Cardboard	195.9
Plastic	19.8
HDPE Plastics	6.5
LDPE Plastics	.9
Other Grades	4.5
Metal	
Aluminum Cans	4.5
Tin	2.6
Brass	0.0
Copper	0.1
Misc. Aluminum	30.6
Scrap Metal	1,745.0
Glass	38.5
Wood	0.5
Asphalt/Concrete	1.6
Special Wastes	
Batteries	39.2
Waste Oil	13.4
Tires	
Baled	2.49
Burned For Energy Recovery	3.15
Tires - Reuse	0.37
Total	**2,330.0**
Source: Lincoln County; Ecology.	

3.3.2 Key Issues

Following is a summary of several key issues surrounding recycling programs in the County.

Recycling Bin Program Costs and Revenues

The existing system is very expensive for the County to operate, especially with the volatility of the recyclable commodities market. In 2008 the County Public Works staff met with the councils of the cities and towns to discuss the recycling bins. Some indicated a willingness to pay for the recycling bin services; others indicated they would not participate. A resolution adopted by the County Commissioners went into effect January 1, 2009 to charge a fee for recycling bin services.

The viability of the County's recycling program will continue to rely on the volatility of the market for recyclables, disposal, transportation and other cost factors, and public participation. All of these elements must be evaluated in order to accurately assess the continued operation of the program. The County will use the evaluation of these factors to determine the need to increase the recycling program rates and other program fees.

Designation of Recyclable Materials

The Washington Administrative Code (WAC 173-350-100) defines Recyclable Materials to mean, "those solid wastes that are separated for recycling or reuse, including, but not limited to, papers, metals, and glass that are identified as recyclable material pursuant to a local comprehensive solid waste plan." In order for any material to be considered a recyclable material under Chapter 173-350, it must be identified as such in the local comprehensive solid waste management plan. If a materials is not identified in the plan as recyclable, then the ability of the person/company wanting to recycle this material and be able to benefit from some of the exemptions granted under Section 350 does not exist. If materials are not designated as recyclables, they remain regulated as solid wastes.

The following materials are designated as recyclable materials in the County:

- Paper (newspapers, mixed paper, and corrugated cardboard).
- Glass bottles (clear, brown, and green).
- Plastic bottles (PETE, LDPE and HDPE).
- Steel and aluminum cans.
- Ferrous metals.
- Used motor oil.
- Antifreeze.
- Automobile batteries.
- Compact fluorescent lights.
- Selected electronics (Computers, monitors, and TVs).
- Tires.
- Yard debris.
- Selected MRW / HHW items.

The addition or deletion of materials accepted for recycling will require ongoing evaluation and will be based on several factors such as market stability and collection and processing costs. As

required by the planning guidelines, criteria have been developed for adding or removing materials from the above list of materials. The following will be considered for adding new materials:

- Local markets and/or brokers expand their list of acceptable items based on new uses for materials or technologies that increase demand.
- New local or regional processing or demand for a given material occurs.
- Sufficient quantity of the material is available in the waste stream.
- The material can be collected efficiently and has minimal processing requirements.
- Other conditions not anticipated at this time.

Removing materials from the list requires:

- The market price becomes so low that it is not longer feasible to collect, process, and/or ship to markets.
- No market can be found for an existing recyclable material, causing the material to be stockpiled with no apparent solution in the near future.
- Other conditions not anticipated at this time.

Although it is unlikely that any existing recyclables would be removed from the current collection program barring a sudden shift in market conditions, it is likely that additional markets might become available for materials not currently recycled.

A proposal to add or delete a designated recyclable material will be brought to the SWAC, who will vote for or against the proposal. In the event the SWAC is not scheduled to meet in a timely manner, the county solid waste manager or his designee will make the decision, utilizing the above-referenced criteria. Following approval or non-approval of the proposal, all parties in the County will be notified of the addition or deletion of the material.

Urban and Rural Designation

The planning guidelines recognize that there are differences in the services that can be offered to urban versus rural areas for solid waste services. The guidelines require solid waste management plans to identify urban/rural service areas for the purpose of determining:

- Required recycling programs for single and multi-family residences.
- Voluntary services for rural areas such as conveniently located drop-off boxes and buy-back centers.

The County currently uses the following designation to determine the level of services provided to residents:

Urban = Population greater than or equal to 5,000 per square mile.

Using this criteria, the entire Lincoln County is considered rural. The rural nature of Lincoln County limits the economic feasibility of certain methods of recyclables collection. For example, curbside collection may not be economically feasible in any of the communities.

3.3.3 Options

1. Internal Recycling Program

Lincoln County and the other jurisdictions in the county should encourage employees to recycle at work. The various entities will need to design a system to collect the recyclable materials, identify key staff to make decisions and resolve problems, notify employees regarding the recycling program, and train staff.

For informational purposes, the general steps involved in setting up a recycling program include:

- Designate a "Recycling Coordinator": Select someone to oversee the recycling program. The recycling coordinator will be responsible for arranging collection of recyclables, encouraging employees to recycle and overall monitoring of the recycling program.
- Arrange for Collection: There are several options to consider for collection. The first place to start is the current waste hauler.
- Get Recycling Bins: Buy new bins for multiple locations in county/city offices, or transform some existing trash cans into recycling.
- Location: To generate maximum participation, recycling bins should be placed at each workstation or office (desk side), as well as in central areas such as lunchrooms, lounges and office machine rooms.
- Label the Bins: Clearly label every recycling bin to indicate what items go in the bin.
- Kick-Off the Recycling Program: Announce the office-recycling program through an event or a series of internal emails.
- Keep Up the Enthusiasm: Create employee recycling incentive programs to keep the momentum going.

2. Special Event or Public Venue Recycling

A new law (RCW 70.93.093) concerning event recycling became effective in Washington on July 22, 2007. The law states that "in communities where there is an established curbside service and where recycling service is available to businesses, a recycling program must be provided at every official gathering and at every sport facility by the vendors who sell beverages in single-use aluminum, glass, or plastic bottles or cans." Beverage vendors are responsible for providing and funding the recycling program. A recycling program must include and provide:

- Clearly marked recycling receptacles or reverse vending machines.
- Collection of aluminum, glass, or plastic bottles or cans that contained the beverages sold by the vendor.
- Transportation and recycling services for the collected materials.

Although the County is not required to comply with the law at this point, there are a number of special events and public venues in the region at which recycling opportunities could be provided.

These special events and venues present a different kind of recycling challenge:

- Substantial amounts of waste are generated in a short period of time.
- There is a need to coordinate with vendors, event organizers, and others involved with a given event.
- Education and monitoring is important, because contamination is a problem at most special events and public venues.

Generally, such events/venues generate significant volumes of corrugated cardboard from vendors. Generation of steel, aluminum, glass, and plastic containers may vary depending on what food/drink vendors are offering. Because it is difficult to anticipate volumes and exact types of materials, it is probably best to collect all recyclable containers commingled in public areas, and provide separate containers for cardboard generated by vendors in areas not open to the public.

Another option is simply to encourage vendors to reduce waste and encourage recycling through use of recyclable/refillable containers, minimal packaging, and bulk condiments in containers (rather than single serve packages).

The number and types of collection containers and how they are serviced will need to vary somewhat based on the size, area, and nature of the event. Even with specially designed containers, however, contamination will probably still be a problem. To reduce this problem, volunteers from organizations could act as monitors at recycling points to greet and educate the public about recycling educate participants and raise recycling awareness.

3. Evaluate Recycling Bin Program

Although the existing system is well utilized by the public, it is very expensive for the County to operate, especially with the volatility of the recyclable commodities market. The County has implemented new recycling fees to cover the costs of the program. Lincoln County and the cities should evaluate the existing system, and consider options to decrease County costs and increase participation. A number of options could be evaluated, including:

- Further increasing recycling fees charged to cities to insure financial viability of the recycling bin program.

- Consider the option of Contracting for the service of the bins to a private operator.
- Using volunteers or non-profit organizations to assist with recycling collection.

4. Recognition for Commercial Waste Reduction and Recycling Successes

Businesses are not always motivated solely by the "bottom line." Recognizing this fact, many communities publicly recognize and reward local businesses and organizations for their environmental achievements. The county and cities could take this approach and could provide recognition to groups or businesses that successfully prevent or recycle waste. For example, the City of Richland, Washington has a Green Business Award. The county and other cities could follow this lead and consider offering a similar award program. They could host special events, publish case studies on web sites, and help businesses and organizations attract positive press.

5. Business Education

Similar to education programs aimed at residents, the county and cities can develop educational materials for businesses regarding waste reduction and recycling opportunities. For outreach, businesses could be targeted by the type of waste they generate. One approach involves categorizing the types of businesses currently operating in the county and their related wastes. For example, the North American Industrial Classification System (NAICS) Codes are used throughout North America to group establishments into broad and specific industries. Industries within the same NAICS code are likely to exhibit similarities in the composition of their disposed waste streams. If one industry is particularly prevalent in a region, for example, it might be cost-effective to target businesses in that particular industry.

6. Commercial Waste Audit Assistance

Many industry associations have taken on the role of promoting recycling within their industries. This is particularly true for large businesses where waste reduction and recycling provide opportunities to reduce overhead costs and where disposal costs have risen substantially. It is often the smaller businesses that may lack information about opportunities and the role recycling may play in reducing disposal costs.

Lincoln County could provide businesses with free technical assistance, by providing waste audits. A waste audit is essentially a comprehensive study of wastes generated by a business or establishment. The information from the waste audit is the basis for identifying and developing the waste reduction and recycling options for the business.

7. Use Economic Development to Attract Recycling Businesses

Lincoln County could consider mechanisms to attract business that manufacture recycled products or assist its current businesses with methods to use recycled materials. This helps to close the loop for recycling and provides Lincoln County with markets for its collected recyclables.

The County and cities should be proactive in their work to attract businesses that manufacture products using waste materials, and also create jobs and tax revenue for the region, by offering profitable incentives to those manufacturers, such as:

- Technical Assistance: Businesses are provided information on sources of secondary materials and processes, markets, technology, and useful organizations.
- Marketing Support: Inclusion in the state-wide buy recycled directory.

3.4 ORGANICS MANAGEMENT

The planning guidelines require yard waste collection programs where there are "adequate markets or capacity for composted yard waste within or near the service area to consume the majority of the material collected."

3.4.1 Existing Programs

There are a number of organics programs and activities in the County.

Lincoln County. The County accept yard waste at the Transfer Station, including grass clippings, pine needles, vines, sod, leaves, thatch, cones, weeds, and branches and limbs no larger than 12 inches in diameter or longer than six feet in length. The County is planning to hold a composting work shop at the Transfer Station in the spring of 2009.

Almira. The Town has a no burn policy year round, and in cooperation with Ecology, allows yard waste to be placed at a town site. Town crews maintain the site, and in the past, the burn-ables have either been chipped or burned. Often wood is reused by residents for wood burning stoves.

Creston. The Town obtains a burn permit from Ecology, and opens up its burn pile for residents' yard waste two times per year.

Davenport. All yard waste and "clean green" is accepted at the closed City landfill site for annual chipping and mulching of the debris pile. The chipped product is then traded to the contractor for the use of the equipment.

Harrington. There is no formal organics program.

Odessa. There is no formal organics program.

Reardan. The Town permits open burning of yard waste during specific dates in the spring and fall.

Sprague. The City provides an opportunity for residents to bring their yard waste for burning one time per year. The cost to residents is $3.00 per truck load.

Wilbur. The Town provides a yard waste and brush site for residents at a nominal fee. The Town also chips materials from its own operations.

Inland Empire Oilseeds, LLC (IEO) was formed in 2006 in Odessa, Washington by local growers and grain cooperatives to process regionally produced oilseeds and to sell biodiesel and oilseed meal in Washington and nearby states. The biodiesel refinery began operation in November 2008 and the crushing facility will start processing in June 2009. The company is owned by Odessa Union Warehouse, Reardan Grain Growers, Reardan Seed Company, Green Star Products, Inc., Avista, and Michael Dunlap. IEO is one of the few plants in the US to combine oilseed crushing and biorefining in one location. Combining these operations gives the company a financial advantage due to reduced freight costs, streamlined logistics, process diversification, and the grouping of crush and biorefining margins in one facility.

3.4.2 Key Issues

Yard waste comprises a significant portion of the recyclable waste stream. The ban on outdoor burning in urban areas will increase this waste stream. Backyard composting and mulching lawnmowers can lessen the impact of grass clippings and leaves. Brush, limbs and other woody wastes need to be addressed. Community clean-up days where residents are allowed to self haul waste to disposal facilities show an estimated 40% of material is "woody waste." Chipping of this material reduces volume and creates a material that is reusable as mulch, animal bedding, and soil amendment.

Washington State has a statewide goal to eliminate yard debris from landfills by 2012 in those areas where alternatives exist. Additionally, one of the initiatives of the State's Beyond Waste Plan is to increase recycling for organic materials. Furthermore, as of December 30, 2000, burning of residential and land clearing debris is not allowed within the urban growth areas of cities or where there are reasonable alternatives. There also have been instances of illegal dumping of greenwaste within the County.

Many restaurants, institutions, supermarkets, and food suppliers often have leftover food which can be a good candidate for diversion, as well as provide greater uses for this resource. Food waste is often characterized as "pre-consumer" or "post-consumer." Pre-consumer food waste typically is generated as a result of commercial/industrial food production or preparation for consumption. Post-consumer food has been served to consumers and is not recoverable for human consumption.

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.3

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;

[3] 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.

however, the report notes the need for additional study for other products such as fuels and chemical byproducts.

The study results show that Lincoln County has an annual production of over 360,000 tons of underutilized dry biomass (primarily field residue) that is capable of producing, via assumed combustion and anaerobic digestion, over 258 million kWh of electrical energy. Lincoln County could further investigate the generation and availability of these feedstocks, and the potential for beneficial reuse of biomass within the county.

3.4.3 Options

1. Implement Yard Waste Chipping Program

Lincoln County could consider ways to expand ways to provide chipper rental at designated drop-off sites throughout the area. This would address the need for additional capacity to handle yard waste in the County. This option would only be implemented when appropriate end use markets are available for the chipped material, which may include public use for parks, medians or other landscaped areas, or in private operations.

2. Food Waste Management

The suggested order for management of food waste which cannot be prevented is: (1) food donation, (2) convert to animal feed and/or rendering, and (3) compost. Local establishments should be encouraged, through educational efforts, to follow this hierarchy when possible. Local haulers could also be encouraged to offer food waste collection services to commercial customers.

- Animal Feed: Food waste may be used as a source of nutrition for animals. Food waste can either be processed minimally and fed to animals or fully processed to remove excess moisture and condensed into small pellets. For this to be a viable option, the food waste must be free of contaminants such as plastics, beverage containers, straws, and utensils.

- Rendering: Rendering companies process animal by-products into saleable commodities. Grease, fats, and oils from restaurants are common by-products collected and processed. Many companies also will accept meat, fat, bone, and carcasses.

- Compost: Food waste that is not fit for food donation or consumption by animals can be suitable for composting. Food wastes require proper source-separation and proper containers to deter odors prior to collection. Again, the waste must be free from plastic contaminants. Food can be collected and sent to a composting facility generally as part of a separate collection route, as well as composted on-site with commercially available vessels.

3. Biomass Processing

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 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.

Given the rural nature of Lincoln 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.

4. Assess Feasibility of Using In- or Out-of-County Composting Facility

The County could evaluate using composting facilities located in Lincoln or other counties for composting of yard waste and other organic materials. The County could enter into a contract with an operator and a hauler for the collection and composting of yard waste and other organic materials generated in Lincoln County at a regional composting facility.

5. Backyard Composting

The County could implement a Backyard Composting education program for residents. The program would include demonstration workshops that teach how to compost greenwaste and other organics. As part of the program, the County could offer composters for sale to residents.

3.5 RECOMMENDATIONS

The options reviewed and evaluated for implementation represent an approach that will provide for continued progress towards meeting local and State goals regarding solid waste management, waste reduction and diversion. The recommended policies and programs will be implemented while maintaining a balance of costs and diversion benefits to County residents. The County and Cities will continue to monitor the results of Plan implementation to determine program results and effectiveness.

Public Education and Outreach

8. Publications
9. Website
10. Education and Technical Assistance to Schools and Businesses

Waste Reduction

1. Procurement of Recycled Products
2. Environmentally Preferable Purchasing
3. County/City Waste Reduction Policies
4. Methods to Measure Waste Reduction Results
5. ReUse and SWAP Shops
6. Producer Responsibility

Recycling

1. Internal Recycling Program
2. Special Event or Public Venue Recycling
3. Evaluate Recycling Bin Program
4. Recognition for commercial Waste Reduction and Recycling Successes
5. Business Education
6. Commercial Waste Audit Assistance
7. Use Economic Development to Attract Recycling Businesses

Organics

1. Yard Waste Chipping Program
2. Food Waste Management
3. Biomass Processing
4. Assess Feasibility of Using In-or-Out-of-County Composting Facility
5. Backyard Composting Program

Section 4

Collection Systems

4 COLLECTION SYSTEMS

4.1 INTRODUCTION

This chapter provides a discussion of refuse collection in Lincoln County, including background information on how refuse collection is regulated, the legal authority that counties and municipalities have in managing collection services for solid waste 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.

For purposes of this Plan, Lincoln County has established a goal to ensure access to collection services for residences, businesses, and industry.

4.2 BACKGROUND

The Washington Utilities and Transportation Commission (WUTC), the county, and the municipalities regulate refuse collection in Lincoln 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 refuse 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 franchise holder, the ability or inability of the existing franchise holder to provide service to the satisfaction of the WUTC. The Commission requires annual reports showing the refuse 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.

The Commission conducts open meetings for public discussion of rate increase requests or "rate cases." At these meetings, Commission staff presents their review of the hauler's request for a rate increase. Representatives of the haulers and the counties are welcome to attend and comment on the Commission staff's findings and present other information relative to the case. Hearings are scheduled during rate cases when there are unresolved issues between Commission staff and certificate haulers, or on other occasions when the Commissioners believe a case merits formal adjudicative handling. County expert witnesses may be called to testify, or may enter as an intervening party. County governments may offer written or oral comments during all rate cases affecting certificate haulers serving unincorporated areas of the county.

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. These carriers require a WUTC permit and proof of insurance to operate in the state. If the commercial recycling hauler also possess a certificate to operate as a solid waste company, WUTC is responsible for ensuring compliance with safety practices. For other commercial recyclable haulers, the Washington State Patrol oversees hauler traffic safety practices.

4.2.2 County Authority

The rights of the counties in terms of solid waste collection include 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 Lincoln County, all unincorporated areas are covered by WUTC certificate holder franchises; there are no solid waste collection districts. Although county authority to collect refuse in the unincorporated areas is limited, counties have the legal authority to assess fees on collection services provided in those areas. RCW 36.58.045 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 refuse 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 refuse collection license from the city and to conform to all city collection guidelines.

- The city may award contracts to private companies for refuse 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.

- 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 to options (Chapter 81.77.020 RCW). State law also allows municipalities to require residents and businesses to subscribe to designated refuse collection services.

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

4.3 EXISTING REFUSE COLLECTION SERVICES

4.3.1 Unincorporated Lincoln County

Trash collection service in the unincorporated portions of Lincoln County is voluntary. All areas of the County are under franchise granted by the WUTC. Rates for these areas are approved by the WUTC. Three haulers are franchised by the WUTC for Lincoln County. One hauler, Ada-Lin Waste Systems, Inc., d/b/a Sunshine Disposal and Recycling services the majority of the County. The remaining two haulers are limited to the northwestern corner of the County. The haulers franchised by the WUTC for Lincoln County are indicated in Table 14. Franchise areas are shown in Exhibits 7 through 9.

Table 14. WUTC Franchised Refuse Haulers

Certificate G000104 Ada-Lin Waste Systems, Inc., d/b/a Sunshine Disposal & Recycling North 2405 University Road Spokane, WA 99206 (509) 928-6272
Certificate G000201 Sunrise Disposal, Inc. Po Box 1267 Okanogan, WA 98840 (509) 422-4530
Certificate G000237 Waste Management of Washington, Inc. 13225 NE 126th Place Kirkland, WA 98034 (509) 468-8225

Exhibit 7. Ada-Lin Waste Systems, Inc. (d/b/a/ Sunshine Disposal and Recycling) Franchise Area (Certificate G000104)

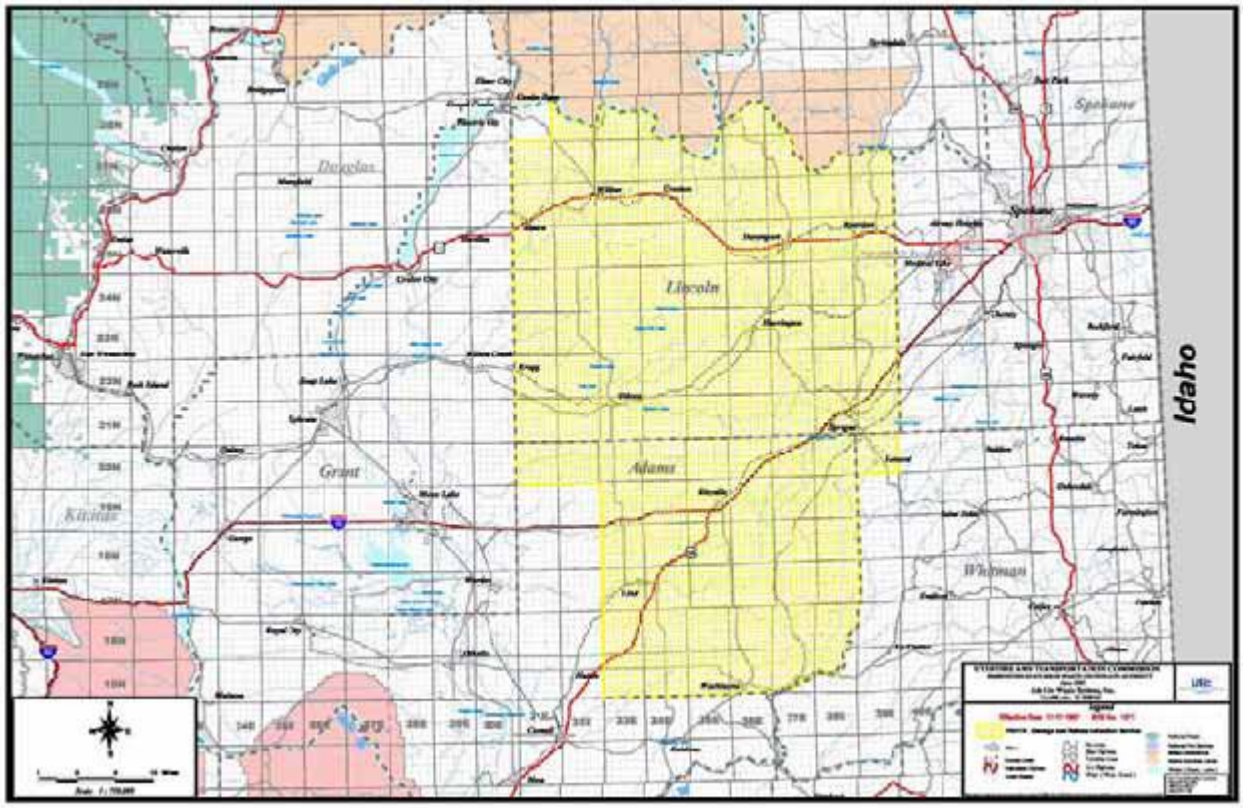


Exhibit 8. Sunrise Disposal, Inc. Franchise Area (Certificate G000201)

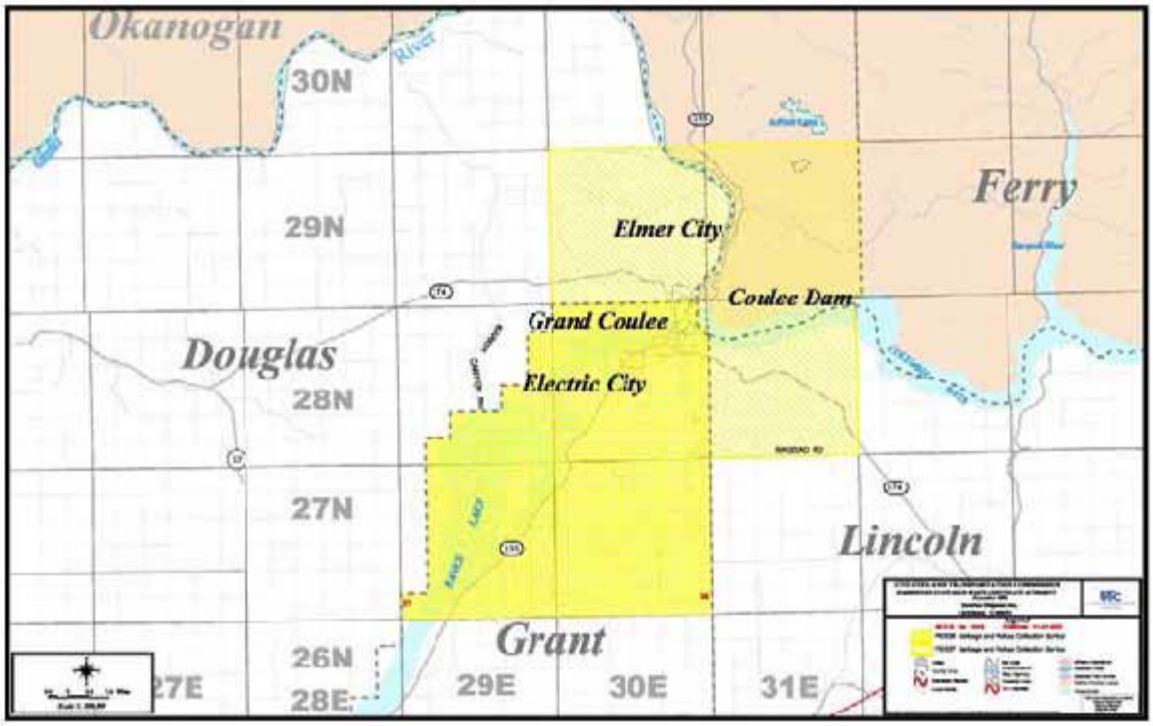
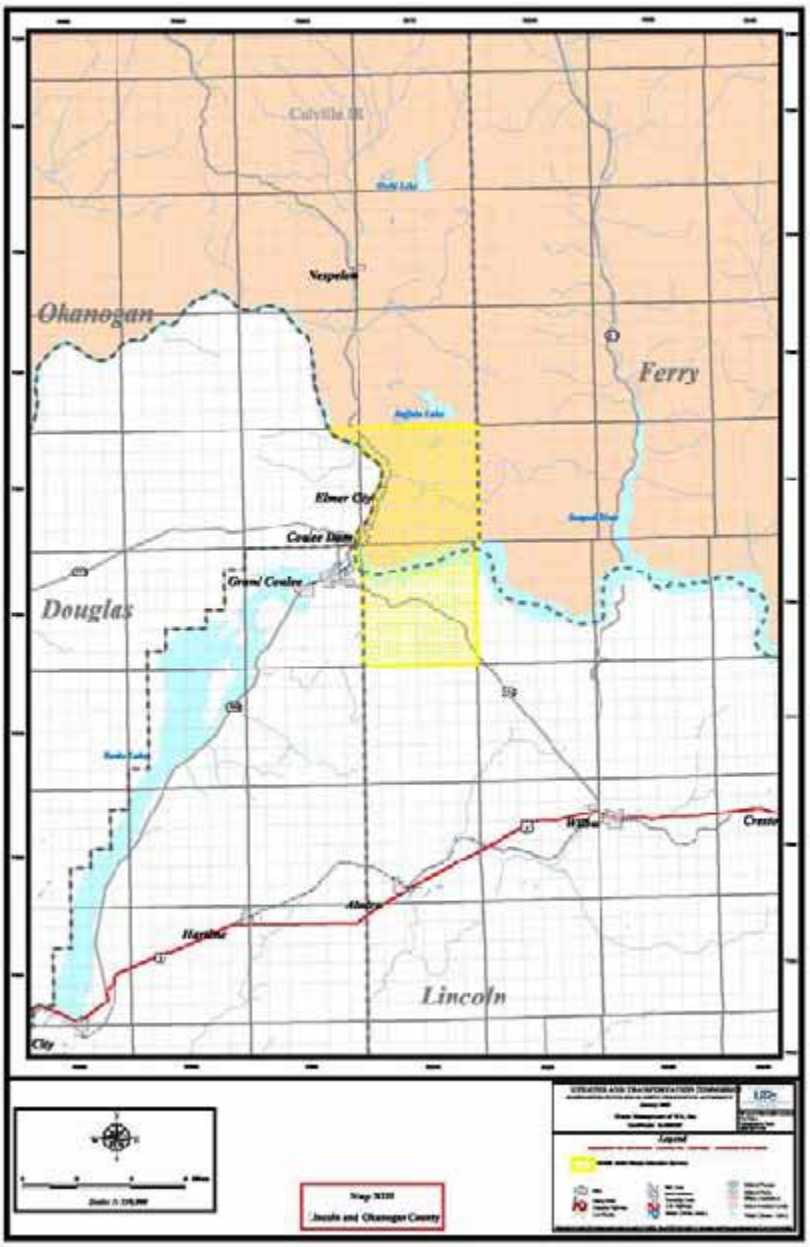


Exhibit 9. Waste Management of Washington, Inc. Franchise Area (Certificate G000237)



4.3.2 Municipalities

Each municipality has the right to regulate its own solid waste collection services. All of the municipalities in Lincoln County contract for their collection services. The cities/towns and their service providers are listed in Table 15.

Table 15. Municipal Service Providers

City/Town	Service Provider
Almira	Coffman Inc.
Creston	Coffman Inc.
Davenport	Sunshine Disposal and Recycling
Harrington	Empire Disposal, Inc
Odessa	Consolidated disposal Services
Reardan	Sunshine Disposal and Recycling
Sprague	Wheatland Waste Systems
Wilbur	Coffman Inc.

Collection services in the cities, towns, and in the unincorporated County are discussed below. A summary of the rates charged for refuse collection is provided in Table 16.

Town of Almira

The town contracts with Coffman Inc. for weekly curbside refuse collection. Collection is mandatory for residences and businesses receiving water service.

Town of Creston

The town contracts with Coffman Inc. for weekly curbside refuse collection and limited commercial collection. Rates charged are based on the number of 35-gallon containers set out for collection.

City of Davenport

The city contracts with Sunshine Recycling for weekly collection of residential and commercial refuse. Fees are based on the number of cans or dumpsters collected.

City of Harrington

The city contracts with Empire Disposal, Inc. for weekly collection of residential and commercial refuse. Rates are based on the size of the cart (30- or 90-gallon) or dumpster yardage.

Town of Odessa

The town contracts with Consolidated Disposal for weekly, automated curbside refuse collection. The town supplies carts and dumpsters for residents and businesses. Residents are given the option of a 65- or 95-gallon cart. There is an additional charge for extra waste that does not fit inside the cart.

Town of Reardan

The town contracts with Sunshine Recycling for weekly collection of residential and commercial refuse. Rates are based on the size of the container used; sizes offered include a 32-, 64-, or 96-gallon tote. Commercial rates are based on the size of the container.

City of Sprague

The City contracts with Wheatland Waste for weekly, semi-automated collection of residential and commercial refuse. Refuse is collected in 35-, 65-, or 95-gallon carts.

Town of Wilbur

The town contracts with Coffman, Inc. for weekly collection of residential and commercial refuse. Residents are charged based on the number of 32-gallon cans set out for collection. Commercial accounts are charged based on number or cans or dumpsters.

Table 16. Refuse Collection Rates

Agency	Monthly Rates				Dumpster Rate	
	1-can	2-cans	3-cans	4-cans	1-yd	2-yd
Cities and Towns						
Almira	$12.37	$14.49	$16.61	$8.38		$79.97
Creston	$18.58 (35 gal)	$19.81			$22.90	$54.89
Davenport	$13.13	$17.33	$21.56	$24.80	$59.29	$93.29
Harrington	$13.00 (30 Gal)	$15.00 (90 Gal)			$30.00	
Odessa		$21.57 (65 Gal)	$27.44 (95 Gal)		$24.15	$54.36
Reardan	$13.00 (32 Gal)	$19.46 (64 Gal)	$26.00 (96 gal)		$65.25	$94.00
Sprague	$9.00	$13.00	$17.00		$35.04	$68.51
Wilbur	$11.90	$14.83	$17.77			$70.33
Unincorporated County						
Sunshine Disposal and Recycling	$22.35					$146.01
Sunrise Disposal	$12.67					$101.71

4.4 EXISTING PROGRAMS FOR SELF-HAULED WASTE

Residents that choose to self-haul their waste utilize the Lincoln County Transfer Station, located on State Highway 2, west of the City of Davenport. It is estimated that approximately 70% of the waste received at the Transfer Station is brought in by self-haulers; the remainder is from commercial haulers collecting in Almira, Creston, and Wilbur.

4.5 COLLECTION OF RECYCLABLES

Legislation passed in 1989 (State of Washington Chapter 431, Laws of 1989) directs counties and cities to define minimum levels of service within the waste reduction and recycling elements of the solid waste management plan. In determining the level of recycling service to be provided, the counties and cities must develop clear criteria for designating areas as urban and rural.

Urban and Rural Designation

The 1989 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 [70.95.090(7)(b)(i)]. Municipalities designated as rural may choose to meet minimum service level requirements either independently or in cooperation with the county.

The 1999 planning guidelines issued by the Department of Ecology require local governments to develop clear criteria to determine the designations for urban and rural areas for disposal and waste reduction and recycling (RCW 70.95.092). Criteria to be considered include:

- Anticipated population growth.
- The presence of other urban services.
- Density of developed commercial and industrial properties.
- Geographic boundaries and transportation corridors.

Existing Residential Collection Programs for Recyclables

The principal method for collecting recyclables generated in Lincoln County is through a system of recycling bins. A discussion of the bin collection program was provided in Chapter 3.

Service Level Ordinance

Counties have the authority to define solid waste collection services by adopting a service level ordinance. The WUTC requires collection companies to "use rate structures and billing systems consistent with the solid waste management priorities set forth under RCW 70.95" and provide minimum levels of solid waste collection and recycling services pursuant to local solid waste management plans and municipal ordinances.

4.6 KEY ISSUES

Requirements for future solid waste collection will depend upon population growth rates. As required in RCW 70.95.090(5)(d), solid waste collection needs must be projected for the next 6 years. Estimated current population and housing densities are provided in Table 17. Forecasted growth in population for Lincoln County for the years 2010 through 2030 was provided in Table 8.

Table 17. Estimated Population and Housing Densities for Incorporated Areas

Jurisdiction	Land Area (sq.mi)	Population	Populaton Density (pop./sq.mi.)	Housing Units	Housing Density (houses/sq.mi.)
Almira	0.6	285.0	515.4	151.0	274.5
Creston	0.4	255.0	624.7	134.0	326.8
Davenport	1.5	1,745.0	1,143.7	765.0	500.0
Harrington	0.4	420.0	1,056.4	223.0	557.5
Odessa	1.0	955.0	980.0	477.0	491.8
Reardon	0.5	630.0	1,243.3	245.0	480.4
Sprague	0.5	495.0	970.6	243.0	476.5
Wilbur	1.2	900.0	747.2	482.0	401.7
Unincorporated	2,311.2	4,615.0	1.9	3,060.0	1.3

Requirements for future collection services will depend on population growth rates. In 2007, the population of unincorporated Lincoln County was 4,615 and incorporated Lincoln County was 5,685. Estimates prepared by the Washington State Office of Financial Management (medium series) project the total population to be 13,601 by the year 2030. This is an increase of 3,300 people, or almost a 32 percent increase over the period from 2008 to 2030. This level of growth will most likely not require additional collection routes.

4.7 OPTIONS

1. Contracting for Recycling.

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 [70.95.090(7)(b)(i)]. 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.

2. Service Level Ordinance

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.

4.8 RECOMMENDATIONS

The options reviewed and evaluated for implementation represent an approach that will provide for continued progress towards meeting local and State goals regarding solid waste management, waste reduction and diversion. The recommended policies and programs will be evaluated for implementation to maintain a balance of costs and diversion benefits to County residents. The County and Cities will continue to monitor the results of Plan implementation to determine program results and effectiveness.

1. Contracting for Recycling

2. Service Level Ordinance

Section 5

Transfer and Disposal

5 TRANSFER AND DISPOSAL

5.1 TRANSFER

Transfer stations are conveniently located facilities where solid waste, delivered by collection companies and citizens, is consolidated, temporarily stored, and loaded into semi-trailers for transport. The solid waste is then delivered to a processing facility or a disposal site. The primary reason for using a transfer station is to reduce the cost of transporting waste to disposal or other facilities. Transfer stations not only reduce overall transportation costs, but also air emissions, energy use, truck traffic, and road wear and tear. Transfer stations become cost-effective when the waste stream is large enough to support their construction, operation, and maintenance, and when the hauling distance to a disposal facility exceeds a certain distance (usually between 15 and 30 miles, depending on the volume of the waste stream).

5.1.1 Existing Conditions

There is one transfer station located in the County, which is owned and operated by Lincoln County and the Department of Public Works. The facility is located at 34735 SR 2E, approximately 3.5 miles west of Davenport. The Transfer Station facility is a 10-acre fenced site containing a scale house, office, transfer tipping floor, recycling/sorting building, recycling/household hazardous waste area, and areas for the temporary storage of scrap metal, white goods and woody debris for recycling. The facility is open to the public and accepts municipal solid waste, recyclables, moderate risk waste/household hazardous waste, and some construction and demolition material.

Municipal solid waste is accepted for a fee. Recyclable materials and moderate risk/household hazardous waste are accepted free of charge. The 2009 Transfer Station rate schedule is included as Table 18. MRW/HHW accepted includes batteries, motor oil, paints and solvents. A recently implemented re-use area allows citizens to drop off and take some of these items. Recyclable materials currently accepted include newspapers, magazines, telephone books, steel and aluminum cans, corrugated cardboard, scrap metal, wood, and PETE and HDPE plastic containers. Scrap auto bodies are accepted on a case-by-case basis, in accordance with applicable rules and regulations. As of January 2009, glass was no longer accepted for free. The Transfer Station is planning to implement a drop off and pickup area for useable items, such as bicycles and furniture.

Table 18. 2009 Transfer Station Fee Schedule

Waste Stream	Fee
Municipal Solid Waste	$85.00 per ton, plus tax
Municipal Solid Waste Minimum Charge (up to 240 lbs)	$9.00 plus tax
Yard Debris (Clean Organics - up to 2cu. yards)	$5.00 plus tax
White Goods (With Freon)	$20.00 each, plus tax
White Goods (Non-or Without Freon)	Free
Passenger / Small Truck Tire's (Off Rim)	$3.00 each, plus tax
Passenger / Small Truck Tire's (On Rim)	$7.00 each, plus tax
Bulk Load's & Large Tires	$245.00 per ton, plus tax
Used Oil	Free
Batteries	Free
Paint and Household Waste	Free
Recyclable Materials (Scrap Metal, Cardboard, Plastic, etc.)	Free

Average annual tons of municipal solid waste transferred from facility is shown in Table 19. Average annual types and quantities of recyclables accepted at the facility are shown in Table 20.

The mixed municipal solid waste is put into transfer trailers, and removed when it is either full or has reached predetermined allowable loads, whichever comes first. The transfer trailers are then transported to the Burlington Northern Yardley Intermodal facility for subsequent rail transport to the Roosevelt Regional Landfill, in Klickitat County.

Recyclables are either transported by the County to recyclers in Spokane County, or picked up by contracted recyclers. HHW is handled in accordance with the requirements of government agencies and transported to a proper facility for recycling or disposal. Yard waste is either chipped or turned into mulch or compost.

Table 19. 2007 Transfer Station Data-MSW

Month	Tons	Loads	Avg Tons/Load	Month	Tons	Loads	Avg Tons/Load
January	121.43	5	24.29	July	238.09	10	23.81
February	98.02	4	24.51	August	283.51	12	23.63
March	194.48	8	24.31	September	208.59	9	23.18
April	166.79	7	23.83	October	193.35	8	24.17
May	230.02	10	23.00	November	160.59	7	22.94
June	191.39	8	23.92	December	91.14	4	22.79
				Total	**2,177.40**	**92**	**23.70**

Table 20. Transfer Station Data - Recyclables Commodities Summary, 2007 vs. 2008

Recyclable Items	2007 Totals	2008 Jan to June
Aluminum Cans (lbs)	6,880	6,509
Batteries (each)	193	72
Brass (lbs)	2	141
Cardboard (lbs)	70,860	105,560
Copper (lbs)	118	141
Glass (lbs)	36,019	8,710
Loose News Print #8 (lbs)	340,880	156,520
Misc. Aluminum (lbs)	1,120	1,000
Paper #6 (lbs)	101,660	63,260
Plastics (lbs)	39,610	13,240
Scrap Metal (lbs)	356,346	39,780
Tin (lbs)	5,240	20,900
Tires (each)	150	922
Waste Oil (gal)	1,878	2,049

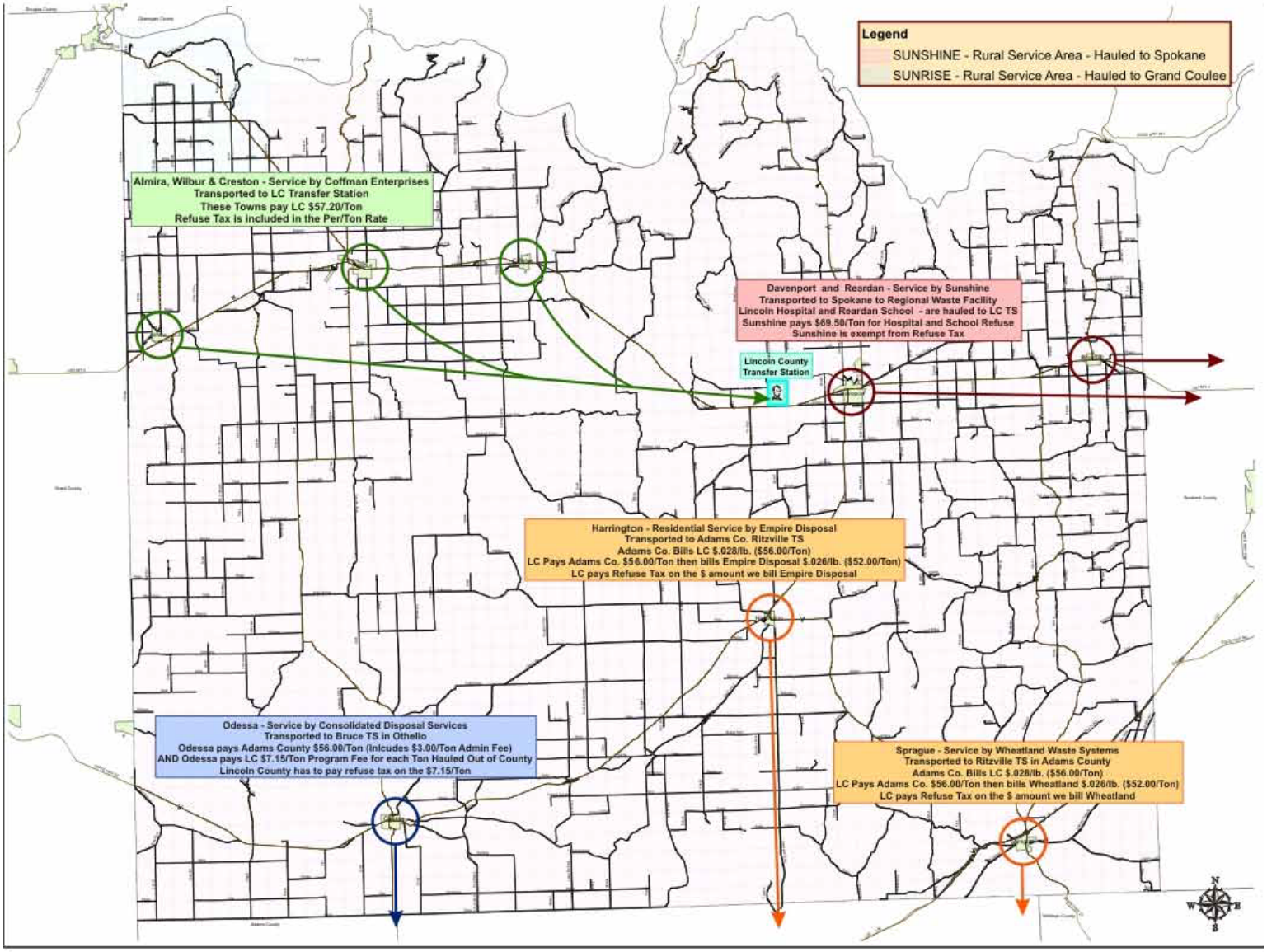
Waste Flows

As discussed in Section 4, waste collection in the county is accomplished by a number of different haulers, either under contract to a town or city or as WUTC licensed franchise. The haulers in turn dispose of waste at either the County transfer station or transport the waste outside of the county, to other transfer stations, disposal or processing facilities. A list of the waste origin, haulers, destination and tonnage of waste is included as Table 21. A diagram of the flow of waste within and outside the county is included as Exhibit 7.

Table 21. Waste Transfer by Origin, Destination, and Tonnage

Jurisdiction	Hauler	Transported To	Tons
Almira Residential Waste	Coffman, Inc.	Lincoln County TS	125
Creston Residential Waste	Coffman , Inc.	Lincoln County TS	117
Harrington	Empire Disposal	Adams Co TS, Ritzville	500
Odessa	Consolidated Disposal	Bruce TS, Othello	563
Sprague	Wheatland Waste	Adams Co TS, Ritzville	269
Wilbur Residential Waste	Coffman Enterprises	Lincoln County TS	434
Reardan	Sunshine	Spokane To Roosevelt LF	420
Davenport	Sunshine	Spokane To Roosevelt LF	1,157
Rural Lincoln County	Sunshine	Spokane To Roosevelt LF	800
Rural Lincoln County	Sunrise	Delano TS, Grand Coulee	Unknown
Incorporated and Unincorporated Areas	Citizens/Self-Haulers	Lincoln County TS	1,501
Total			**5,886**

Exhibit 10. Waste Flow (August 2008)



5.1.2 Key Issues

The adoption of the 1993 Lincoln County Solid Waste Management Plan established the need and predicated the construction of the Transfer Station and Recycling Facility. The 1993 Plan was endorsed and adopted by all cities and towns of Lincoln County. The initial operation of the Transfer Station, beginning in 1997, was contracted out. Tipping fees were established at that time and specific contractual requirements were implemented regarding transport and sale of recyclable materials to insure adequate revenue to cover the costs of the operations. Unresolved contractual issues with the contractor resulted in Lincoln County creating the Solid Waste Division and taking over the Transfer Station and recycling operations to prevent further loss of recycling revenues.

Adoption of the 1999 Solid Waste Management Plan Amendment established the need for and predicated increased recycling opportunities, as well as the addition of a Household Hazardous Waste Collection Program at the facility. The Amended Plan was endorsed and adopted by all the cities and towns of Lincoln County. Cost estimates at that time revealed the need to increase revenue to cover the extra costs of implementing the recycling program; landfill monitoring requirements; and additional Transfer Station operations. The cost projections outlined the need to increase tipping fees, and as a result implementation of program fees was endorsed and adopted by all the cities and towns of Lincoln County.

By 2001, the majority of waste and recyclables received at the facility was from the unincorporated County areas. Most cities and towns contracted for their solid waste to be hauled to facilities outside Lincoln County. In addition, the franchise hauler for unincorporated Lincoln County bypassed the Transfer Station and transported waste to Spokane, Airway Heights or Ritzville.

As a result of a lack of incoming material, the financial situation of the Transfer Station deteriorated rapidly. The County contacted the WUTC to see if Lincoln County could get the rural franchise hauler to insure waste generated in Lincoln County stayed in Lincoln County. No records can be located of any response from the WUTC regarding this issue.

The addition of recycling drop off containers resulted in the support of the recycling program by several cities and towns. The County's effort to continue to offer these services at no cost resulted in budget deficits during the period from 2000 to 2007. This forced the County to use Current Expense Funds to offset the losses experienced by the Solid Waste and Recycling Programs. The annual cost to the Current Expense Fund to adequately support and sustain the facility's operations ranged from $30,000 to $100,000.

In 2001, in the first attempt to insure the financial success of the facility, the Board of County Commissioners adopted fees to cover the costs of implementing the Recycling Program and other operational costs. The following fees were implemented:

- Tipping Fee: $68.50
- Program Implementation Fee: $12.00 per Ton
- Transfer Station Operations Fee: $6.00 per Ton

The Program Implementation Fee of $12.00 per ton was to be assessed and collected on all waste generated in Lincoln County to cover the costs of implementing the agreed upon programs. The cities and towns who signed agreements to be a part of the County Solid Waste Management Plan and continued to haul outside the County were subject to the fee as well as the franchise hauler serving the unincorporated areas of Lincoln County. The Transfer Operations Fee of $6.00 per ton was to be collected on all waste delivered to the Transfer Station. This fee was in addition to the Tipping Fee of $68.50 per ton.

File records indicate objections to the fees, and that no city, town or rural franchise hauler chose to comply and pay the fees as adopted. This resulted in the County's decision to suspend collection of the program implementation and transfer station operations fees.

Further objections by the cities and towns to the tipping fee increase resulted in the Board of County Commissioners adoption of a "reduced" tipping fee for municipalities hauling to the Transfer Station. A reduced fee of $58.25 per ton was set for municipalities. The fee reduction was an attempt to encourage city and town and rural hauler support and use of the facility. The tipping fee for rural county residents supporting the facility remained at $68.50 per ton. The implementation of the reduced municipality fee, combined with the closure of some out of county facilities, resulted in support from the towns of Almira, Wilbur and Creston to bring their waste to the County facility. The towns of Odessa, Harrington and Sprague signed agreements to pay a $3.00 per ton program fee to be allowed to haul solid waste to Adams County facilities. Davenport and Reardan continued to allow their contract hauler to transport waste out of County and did not pay program fees.

Presently, the majority (over 60%) of waste generated in the county is by-passing the transfer station, and being exported to out-of-county transfer stations, landfills or other facilities. Only three cities' haulers use the County Transfer Station: Almira, Creston, and Wilbur, which amounts to only 37% of the waste stream.

When the County developed the Transfer Station, the cities and towns agreed to utilize the facility for waste transfer. With less than half of the cities delivering waste to the facility, the County cannot fiscally maintain and operate the facility. In addition, some existing contracts and policies of the County, cities/towns, haulers and out-of-county facilities are resulting in losses to the County. The existing rate structure for contract haulers that use the facility and those that export is not adequate to cover the costs for waste operations. For example, the contract haulers for Sprague and Harrington transport their waste to the Adams County Transfer Station in Ritzville. Adams County in turn bills Lincoln County the per-ton rate, plus a $3.00 per ton administrative fee. Lincoln County submits a bill to the contract haulers, however the rate Lincoln County charges the hauler is $4.00 less than the Adams County rate. The existing rate structure for city/towns is included as Table 22, and shows the cost per ton and resulting deficits, both for 2008 and 2009 estimates.

Finally, a reduction in recycling revenue due to a downturn in recycling commodity markets has also further impacted the facilities financial condition. In the past year, revenues from the sale of recyclables have declined significantly. The County has ceased accepted glass for free at the Transfer Station, and has removed some recycling bins from drop-off sites (refer to Section 3).

Table 22. Financial Analysis of Transfer Station Tipping Fees by Municipality/User

Municipality	Hauler	Transported To	Average Annual Tonnage	CURRENT					Estimated Per Ton Cost Increase Jan 09	2009 Estimate		
				Per Ton Rate Charged By LC TS	Average Per Ton Cost For Disposal	Per Ton Profit (Deficit)	Refuse Tax (.036) Pass Through (Deficit)	Total Per Ton Profit (Deficit)		Per Ton Profit (Deficit) As Of Jan 09	Refuse Tax Per Ton Profit (Deficit)	Total Per Ton Profit (Deficit) Jan 09
Almira	Coffman	LC Transfer Station	125	$57.20	$56.64	$0.56	$0.00	$0.56	$58.63	($1.43)	$0.00	($1.43)
Creston	Coffman	LC Transfer Station	117	$57.20	$56.64	$0.56	$0.00	$0.56	$58.63	($1.43)	$0.00	($1.43)
Wilbur	Coffman	LC Transfer Station	434	$57.20	$56.64	$0.56	$0.00	$0.56	$58.63	($1.43)	$0.00	($1.43)
Harrington	Empire	Adams Co TS Ritzville	250	$52.00	$56.00	($4.00)	($2.02)	($6.02)	$57.96	($5.96)	($2.09)	($8.05)
Sprague	Wheatland	Adams Co TS Ritzville	269	$52.00	$56.00	($4.00)	($2.02)	($6.02)	$57.96	($5.96)	($2.09)	($8.05)
Odessa	CDSI	Bruce TS Othello	338	$7.15	$0.00	$7.15	$0.00	$7.15	$0.00	$7.15	$0.00	$7.15
Davenport	Sunshine	Spokane	1157	$0.00	$0.00	$0.00	$0.00	$0.00				
Reardan	Sunshine	Spokane	420	$0.00	$0.00	$0.00	$0.00	$0.00				
Transfer Station												
LC TS Customers	Citizens	Regional Disposal	1345	$69.50	$56.64	$12.86	$0.00	$12.86	$58.63	$10.87	$0.00	$10.87
NPS (National Parks)		Regional Disposal	156	$58.25	$56.64	$1.61	$0.00	$1.61	$58.63	($0.38)	$0.00	($0.38)

Rural Haulers								
Sunshine - Rural LC	Sunshine	Spokane (Estimate)	800	$0.00	$0.00	$0.00	$0.00	$0.00
Sunrise - Rural LC	Sunrise	Grand Coulee (Estimate)	150	$0.00	$0.00	$0.00	$0.00	$0.00

A financial analysis of the Solid Waste operations was conducted by the County Public Works Department as part of the Plan update. Data was analyzed for each function of the e facility, and for all, the costs exceed expenses. A summary of the analysis for 2008 is included in Table 23.

Table 23. Financial Analysis of Solid Waste Operations (2008)[4]

2008 Summary	
Revenue	
DOE Grant	$59,359
Tipping Fees	128,052
Recycling	50,258
IntGovMSW	26,800
Fees From Odessa	4,215
Total	**$268,684**
Expenses	
Grant Match	$69,162
Labor	135,157
Equipment	37,538
Supplies/Etc	30,879
Waste Disposal	112,378
Facility Repair/Imp	8,808
IntGov MSW Agreements	30,000
Landfill Monitoring	10,500
Total	**$434,422**
Excess/(Deficit)	**$(165,738)**
Ways We are Covering Deficit	
ER&R Interfund Loan - Equipment	$37,538.00
PW Interfund Loan - Utilities/Rent	7,500.00
Current Expense(Budgeted)	89,000.00
Total	**$134,038.00**
Estimated Year End Deficit	**$(31,700.00)**

As indicated in Table 23, the 2008 deficit was predicted to be over $165,000. To reduce the anticipated deficit, the County has utilized interfund transfers; however the prediction is still for a deficit of approximately $30,000.

To offset some of the deficit, the County raised the tipping fee at the transfer station to $85.00 per ton as of January 1, 2009. As part of the Solid Waste Plan Update process, the County analyzed a number of scenarios for increasing the program fee to offset the losses. The scenarios included a $5.00 per ton program fee and a $15.00 program fee, along with a tipping fee of $85.00/ton at the Transfer Station. The scenarios also evaluated the differences if the entire

4 Lincoln County Public Works, August 2008.

county participated, or if only the municipalities participated. The scenario analysis is presented in Table 24. As indicated in Table 24, if all of the jurisdictions participated, and with a $15.00 per ton program fee, the budget deficit would essentially be eliminated, and if only the municipalities participated, it would still experience a deficit, however the loss would be significantly less. Both of these results assume a $15.00 program fee, coupled with an $85.00 per ton tipping fee.

The County will continue to evaluate the Transfer Station costs and revenues in order to determine the need for changes to the tipping fees and/or other program fees that may be necessary to insure the facility does not operate at a loss.

Table 24. Proposed Program/Tipping Fee Scenarios (as of August 2008)

Municipality	Population	Average Tons Per Year	Currently Paying	Scenario 1 $85.00/T and $5.00/T Program Fee		Cost Increase By Population		Scenario 2 $85.00/T and $15.00/T Program Fee		Cost Increase By Population	
				Pay Rate @ $85.00 Plus Tax or Program Fee of $5.00/T	Increase	Increased Cost Per Citizen Per Year	Increased Cost Per Citizen Per Month	Pay Rate @ $85.00 Plus Tax or Program Fee of $15.00/T	Increase	Increased Cost Per Citizen Per Year	Increased Cost Per Citizen Per Month
Almira	285	125	$7,150	$10,625	$3,475	$12.19	$1.02	$10,625	$3,475	$12.19	$1.02
Creston	255	117	$6,692	$9,945	$3,253	$12.76	$1.06	$9,945	$3,253	$12.76	$1.06
Wilbur	900	434	$24,825	$36,890	$12,065	$13.41	$1.12	$36,890	$12,065	$13.41	$1.12
NPS	Unknown	156	$9,087	$13,260	$4,173	Unknown	Unknown	$13,260	$4,173	Unknown	Unknown
Harrington	420	250	($1,505)	$1,250	$2,755	$6.56	$0.55	$3,750	$5,255	$12.51	$1.04
Sprague	495	269	($1,620)	$1,345	$2,965	$5.99	$0.50	$4,035	$5,655	$11.42	$0.95
Odessa	955	338	$0	$1,690	$1,690	$1.77	$0.15	$5,070	$5,070	$5.31	$0.44
Davenport	1,745	1157	$0	$5,785	$5,785	$3.32	$0.28	$17,355	$17,355	$9.95	$0.83
Reardan	630	420	$0	$2,100	$2,100	$3.33	$0.28	$6,300	$6,300	$10.00	$0.83
Sunshine - Rural LC	Unknown	800	$0	$4,000	$4,000	Unknown	Unknown	$12,000	$12,000	Unknown	Unknown
Sunrise - Rural LC	Unknown	150	$0	$750	$750	Unknown	Unknown	$2,250	$2,250	Unknown	Unknown
LC Transfer Station	4615	1345	$93,478	$114,325	$20,848	$4.52	$0.38	$114,325	$20,848	$4.52	$0.38

Total Tipping Fees	$185,045	$185,045
Municipal Program Fees	$12,170	$36,510
Rural Hauler Program Fees	$4,750	$14,250
Total With Everyone Participating	$201,965	$235,805
Estimated Annual TS MSW Budget	-$188,000	-$188,000
Profit/Deficit	$13,965	$47,805
Annual HHW/WR&Recycling Deficit	($37,000)	($37,000)
(Everyone Participating) Annual Profit/(Deficit)	($23,035)	$10,805
(With Only Municipalities Participating) Annual Profit/(Deficit)	($27,785)	($3,445)

5.2 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 the Department of Ecology through the Criteria for Municipal Solid Waste Landfills Chapter 173-351 WAC. This section will provide information on landfills regulations, landfill goals, local facilities, and an inventory of present capacity.

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 Criteria for Municipal Solid Waste Landfills (Chapter 173-351 WAC). In general, the 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 (173-350).

5.2.2 Existing Conditions

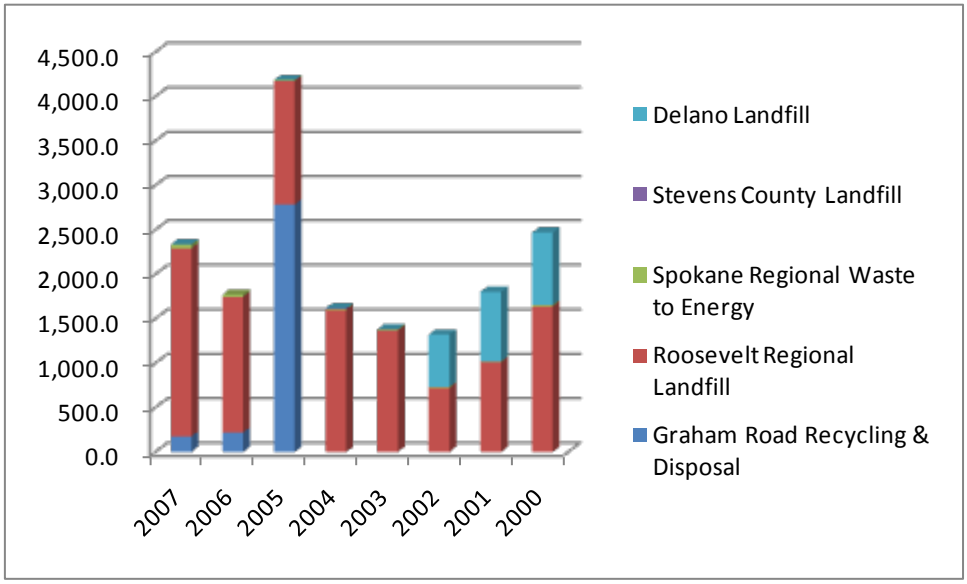
There are no operational landfills in Lincoln County.

Over the past eight years, four landfills and one waste to energy facility have been used to dispose of waste generated in Lincoln County. They include:

- Delano Landfill and Transfer Station, Grant County
- Roosevelt Regional Landfill, Klickitat County
- Spokane Regional Waste to Energy Facility, Spokane County
- Stevens County Landfill, Stevens County.
- Graham Road Recycling and Disposal Facility, Spokane County.

A summary of the facilities used for the disposal or transfer of waste over the past few years is shown in Exhibit 8. As indicated, the majority of waste is taken to two facilities: Roosevelt Regional Landfill and Graham Road Recycling and Disposal Facility.

Exhibit 11. Disposal Summary (tons per year)



Roosevelt Regional Landfill--

The Roosevelt Regional Landfill 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 a 40-year expected life span. The landfill is designed to meet all current solid waste landfill regulations, including the Criteria for Municipal Solid Waste Landfills (WAC 173-351). The landfill is operated by Rabanco. This landfill currently accounts for 79% of the State's disposal capacity and in 2005 received some type of solid waste from 30 counties in Washington.5

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.

5.2.3 Key Issues

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, Lincoln County will be required to continue to secure out-of-county disposal capacity. In the future, the County may consider the use of the East Wenatchee Landfill as a possible viable alternative for the transport and disposal of waste from the County Transfer Station.

5 Washington State Department of Ecology, *Solid Waste in Washington State--Fourteenth Annual Status Report.*

5.3 OPTIONS

1. Evaluate implementation of a flow control ordinance

The County is authorized by Chapter 36.58 RCW to designate disposal sites for all solid waste collected in the unincorporated areas of the county. The flow control ordinance could be established that requires all solid waste generated and collected in the unincorporated areas of Lincoln County to be disposed of at sites designated by the County. Waste flow control in the incorporated jurisdictions could be established through the Interlocal Agreements. These agreements could state that solid waste collected within the boundaries of each city will be delivered to the County for disposal.

2. Contract out operation of Transfer Station

Private operation of the Transfer Station could result in cost savings to the County. The County could consider entering into an agreement with a private company to operate the Transfer Station. The County could issue a Request for Qualifications/Proposals for the operation of the facility, and evaluate the responses for possible negotiation with one or more vendors. The negotiations would consider length of the contract, tipping fees, facility maintenance and enhancement, revenues from recyclables, and other important issues.

3. Develop satellite Drop Box Site

The County could develop a satellite drop box site, which could be used to consolidate waste prior to transport to other processing or disposal facilities.

4. Grant opportunities for Transfer Station

The County should continue to seek grant opportunities from Ecology and other sources for Transfer Station operations and maintenance. Grant monies could be used for enhancements to the station's equipment, programs, and other aspects of the facility.

5.4 RECOMMENDATIONS

The options reviewed and evaluated for implementation represent an approach that will provide for continued progress towards meeting local and State goals regarding solid waste management, waste reduction and diversion. The recommended policies and programs will be implemented while maintaining a balance of costs and diversion benefits to County residents. The County and Cities will continue to monitor the results of Plan implementation to determine program results and effectiveness.

1. Evaluate implementation of a flow control ordinances

2. Issue a request for proposal for contracting out the Transfer Station operations.

3. Actively pursue grant opportunities for the transfer station operations, maintenance, and other programs.

Section 6

Miscellaneous Waste

6 MISCELLANEOUS WASTE

This section includes discussions of various waste types generated in Lincoln 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, key issues, alternative management approaches, and recommendations.

Management goals for these waste types are similar to those for other waste materials:

- Satisfy state priorities for waste management.
- Provide for efficient collection and transfer of waste materials.
- Continue public outreach and education efforts regarding waste reduction, reuse, recycling and disposal.

6.1 SPECIAL WASTE

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.

Under Washington State law, any generator wishing to manage hazardous wastes as special wastes should consult with the Washington State Department of Ecology (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 County Transfer Station in Davenport.

6.2 CONSTRUCTION AND DEMOLITION DEBRIS

Construction and demolition (C&D) debris consists of the materials generated during the construction, renovation, and demolition of buildings, roads, and bridges. The primary difference between demolition and inert waste is that demolition waste is considered susceptible to decomposition, whereas inert waste is considered resistant to decomposition. This waste stream often contains:

- Concrete.
- Wood (from buildings).
- Asphalt (from roads and roofing shingles).
- Gypsum (the main component of drywall).
- Metals.
- Bricks.
- Glass.
- Plastics.
- Salvaged building components (doors, windows, and plumbing fixtures).
- Trees, stumps, earth, and rock from clearing sites.

That is why the new regulations WAC 173-350 require liners and leachate collection systems for Limited Purpose Landfills that dispose of CDL, while liners and leachate collection is not required of inert landfills.

Under WAC 173-350-400, Limited Purpose Landfills include, but are not limited to, landfills that receive segregated industrial solid waste, construction, demolition and landclearing debris, wood waste, ash (other than special incinerator ash), and dredged material. Limited Purpose Landfills do not include Inert Waste Landfills, Municipal Solid Waste (MSW) landfills regulated under WAC 173-351, landfills disposing of special incinerator ash regulated under WAC 173-306, landfills regulated under 173-303 WAC (Dangerous Waste Regulations), or chemical waste landfills regulated under Title 40 CFR Part 761 (see Exhibit 11-1 for a listing of waste material types that are acceptable for disposal at Limited Purpose Landfills based on their definitions).

Inert Waste Landfills are landfills that receive only inert wastes regulated under WAC 173-350-410 (solid wastes that meet the criteria for inert waste in WAC 173-350-990). Refer to Exhibit 11-1 for a listing of waste material types that are acceptable for disposal at Inert Landfills based on their definitions.

It is important to note that in accordance with RCW 70.95.305 and SRHD 1.06.410, facilities with a total capacity of 250 cubic yards or less of inert wastes are categorically exempt from solid waste handling permitting and other requirements of this section, provided that the inert waste landfill is operated in compliance with the performance standards of WAC 173-350-040 (Washington State Legislature, 2006).

In general, various types of materials come from CDL activities and those different types of materials are managed and regulated differently. Table 25 lists the types of waste, their definition and the regulations that apply to each type of waste).

Table 25. CDL Waste Definitions

Type of Waste	Washington Administrative Code Definition
Demolition/Construction Disposed in Limited Purpose Landfills per WAC 173-350-400	Washington State Regulations define demolition waste as "consisting of, but not limited to, concrete, brick, bituminous concrete, wood and masonry, composition roofing and roofing paper, steel, and minor amounts of other metal like copper. Plaster (i.e., sheetrock or plaster board) or any other material other than wood, that is likely to produce gases or a leachate during the decomposition process and asbestos wastes are not considered to be demolition waste."
Inert Disposed in Inert Landfills per WAC 173-350-410	Cured concrete that has been used for structural and construction purposes, including embedded steel reinforcing and wood, that was produced from mixtures of portland cement and sand, gravel, or other similar materials; asphaltic materials that have been used for structural and construction purposes (e.g., roads, dikes, paving) that were produced from mixtures of petroleum asphalt and sand, gravel, or other similar materials. Waste roofing materials are not presumed to be inert; brick and masonry that have been used for structural and construction purposes; ceramic materials produced from fired clay or porcelain; glass, composed primarily of sodium, calcium, silica, boric oxide, magnesium oxide, lithium oxide or aluminum oxide. Glass presumed to be inert includes, but is not limited to, window glass, glass containers, glass fiber, glasses resistant to thermal shock, and glass-ceramics. Glass containing significant concentrations of lead, mercury, or other toxic substance is not presumed to be inert; and stainless steel and aluminum.
Municipal Solid Waste Disposed as municipal solid waste per WAC 173-351	All putrescible and nonputrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.
Hazardous Disposed in hazardous waste facilities per WAC 173-303	All dangerous and extremely hazardous waste, including substances composed of both radioactive and hazardous components.
Wood (Landclearing) Disposed in Limited Purpose Landfills per WAC 173-350-400	Solid waste consisting of wood pieces or particles generated as a by-product or waste from the manufacturing of wood products, construction, Demolition, handling, and storage of raw materials, trees and stumps. This includes, but is not limited to, sawdust, chips, shavings, bark, pulp, hogged fuel, and log sort yard waste, but does not include wood pieces or particles containing paint, laminates, bonding agents or chemical preservatives such as creosote, pentachlorophenol, or copper-chrome-arsenate.

State law prohibits the open or unregulated burning of "treated wood, metal, and construction debris," among other things. Lincoln County is not fully planning under the WA State Growth Management Act, therefore is not subject to the new burning rules that impact urban growth areas associated with incorporated communities.

"Outdoor Burning" means the combustion of material of any type in an open fire or in an outdoor container without providing for the control of combustion or the control of emissions

from the combustion. In Lincoln County, "outdoor burning" means all types of outdoor burning, EXCEPT agricultural burning and silvicultural/forest practices burning, which is regulated pursuant to the Washington Clean Air Act, Chapter 70.94 RCW and WAC173-425.

"Residential Burning" means the outdoor burning of leaves, clippings, prunings and other yard and gardening natural refuse originating on lands immediately adjacent and in close proximity to a human dwelling and burned on such lands by the property owner or his or her designee. Burning a pile not over 4ft. x 4ft. x 3 ft. is allowed, unless prohibited by Lincoln County Fire Districts and/or Washington State during times of high fire danger and/or an air pollution episode.

6.2.1 Existing Conditions

A waste composition study conducted for Eastern Washington in 1992 concluded that 21 % of waste disposed was comprised of construction and demolition debris. For Lincoln County, this represents about 500 tons per year. Furthermore, the majority of the C&D waste is comprised of wood waste, which is estimated at 13% of the total waste disposed.

There are limited recycling and reuse opportunities for C&D waste in Lincoln County. It is estimated the majority of C&D materials are delivered to the County Transfer Station, where the materials are reused, recycled, or disposed. In 2007, the transfer station received approximately 175 tons of scrap metal, and in the first half of 2008 about 40 tons. According to Department of Ecology data, over 1,700 tons of scrap metal were diverted in the County in 2007, as well as 0.5 tons of wood and 1.6 tons of asphalt and concrete.

The Graham Road Limited Purpose Landfill, located in Spokane County, is owned and operated by Waste Management of Washington, Inc. Graham Road accepts construction and demolition debris, including wood, concrete, asphalt, creosote-contaminated wood, and railroad ties. In 2007, 173 tons of waste from the county was disposed at the Graham Road facility.

6.2.2 Key Issues

C&D waste consists largely of common materials, such as wood, asphalt, concrete, rock, gypsum, and various metals, that have multiple potential uses. Many of these materials are cost-effectively recovered, processed, and used as raw materials for new (or renewed) end uses. Concrete and asphalt pavement can be crushed and used as base material for new construction or as aggregate in new asphalt. Wood waste can be processed and sold for landscaping mulch or used to produce new wood products. It is often used for hog fuel for steam-generated electricity. Gypsum from wallboard can be ground and used to manufacture new wallboard, and fertilizer. Architecturally valuable timbers, hardware, doors and windows can be salvaged and reused with minimal or no processing. When recovered, these materials are not regulated as disposed waste. Such activities reduce pressure on waste disposal facilities, reduce dependence on "virgin" raw materials, and decrease energy use. In addition, the economic value of this market activity is enormous. C&D materials are now recognized as having significant potential to contribute to recycling goals and reduce waste overall.

6.3 AGRICULTURAL WASTES

Agricultural wastes are by-products of farming and ranching that include crop harvesting waste and manure.

6.3.1 Existing Conditions

As presented in the economics discussion in Section 1, agriculture is the number one industry in the county, and nearly 55 percent of the land area is used for farms. The county is the world's second largest wheat producing region.

Agricultural wastes consist of primarily crop residues and manure. A rural waste characterization study conducted for the Washington State Department of 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.

6.3.2 Key Issues

The 2005 biomass inventory and bioenergy assessment completed for Washington State was seen as a first step toward a sustainable energy policy and vision within the state. 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 bioproducts. Further information on biomass processing is included in the discussion in Section 3.4, Organics Management.

There is a good deal of plastic and cardboard generated from pesticide applications. Extra effort should be made to ensure that these products are recycled rather than ending up in the waste stream.

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.

6.4.1 Existing Conditions

The County Transfer Station accepts passenger tires for a fee. For tires off the rim, they charge $3.00, and on the rim $7.00. For bulk loads and large tires, there is a charge of $245.00 per ton. In 2007, the facility received 150 tires, in the first half of 2008 the facility had received over 900 tires.

Most large tire retailers contract with a tire collector for transport away from the site and eventual disposal/recycling. The majority of tires are transported out of the county or state.

6.4.2 Key Issues

The illegal disposal of tires represents a significant impact to public health and safety and the environment. At present, tire disposal does not appear to be a significant problem, although beneficial uses are still scarce in Eastern Washington. Tires will continue to be accepted at the Transfer Station 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.

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

- 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.

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 (RCW 70.95.500, 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.

RCW 70.95.510 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.

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 RCW 70.95K.010:

- 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).
- Lincoln Health District.
- 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.

6.5.2 Key Issues

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.

Furthermore, a large-scale pandemic could create unsafe conditions, should infectious diseases cause widespread death among the population. In an emergency situation, response for human pandemic diseases is organized under existing federal, state, and local health district policies.

Large-scale need for diseased animal disposal is handled through policies from the United States Department of Agriculture; Washington State Department of Agriculture, Department of Fish and Wildlife, Department of Ecology; and in coordination with the Lincoln Health District. Policies and procedures depend on the type of disease, its presentation, and consensus between agencies and facility operators to determine adequate final disposition at any given incident.

6.6 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.

6.6.1 Existing Conditions

PCS generated in Lincoln 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 or to the Roosevelt Landfill in Klickitat 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 six years, the average annual PCS has ranged from a low of 9 tons in 2004 to over 2,500 tons in 2005.

6.6.2 Key Issues

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. Present disposal options for PCS appear to be adequate.

6.7 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.

6.7.1 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. The Graham Road facility accepts ACM s (non-friable asbestos). Typically, less than 10 tons per year of asbestos is disposed at the facility from Lincoln County. Asbestos waste generators can also haul their waste to either the Columbia Ridge Landfill (Oregon) or the Roosevelt Regional Landfill (located in Klickitat County) for disposal. Both sites have approved programs for asbestos waste disposal.

6.7.2 Key Issues

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. The Graham Road Limited Purpose landfill is the only local facility that can accept non-friable ACM for disposal.

6.8 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 will oversee 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.

6.8.1 Existing Conditions

Beginning January 2, 2009, the County became a registered collection site under the State's E-Cycle program. The E-Cycle program offers FREE, convenient and environmentally responsible recycling program for computers, monitors, laptops and televisions. Households, small businesses, schools & school districts, small governments, special purpose districts, and charities can recycle electronic products free of charge in this program.

The electronic equipment this program collects is taken apart and separated into materials such as glass, plastic, metal and toxic chemicals. All recycling will follow performance standards set up by the Department of Ecology.

6.8.2 Key Issues

Many electronics, especially TVs and computers, contain toxic materials such as lead, cadmium and mercury. Reusing and recycling electronics keeps these toxic materials out of our landfills and incinerators and also recovers valuable resources.

While end-of-life electronics currently comprise only a small amount of the municipal waste stream, that percentage is expected to grow dramatically in the next few years. The average life span of a personal computer is currently about 2 to 3 years. Electronics that break often are not repaired due to the relatively low price of replacement equipment. When the equipment breaks or becomes obsolete, it is commonly discarded. Many state and local government agencies are concerned about how to ensure proper management of older electronic equipment.

Before recycling, consumers should consider reuse of electronics. If a computer or TV is working and in good condition, someone else may be able to use it. There are several ways to pass on electronic items for reuse:

- Contact charities or non-profits to see if they would be able to use or resell your computer or TV.
- Call local solid waste or public works office to find out what options are available in your community for donating or reuse.
- Sell the item through local classifieds or use an online website.

6.9 MISCELLANEOUS WASTE OPTIONS

The following options were evaluated for miscellaneous wastes:

Construction and Demolition Debris

1. Expand C&D diversion at Transfer Station

The County could develop and operate a facility for processing and recycling construction and demolition material generated from building and demolition projects in the County. The facility would accept clean and sorted loads of select types of construction and demolition materials,

including aggregates, wood, and metals. The facility would divert these materials from the landfill, and save hauling costs and natural resources.

2. Establish C&D and inert waste diversion specifications for County or City projects

Another method for encouraging C&D and inert waste diversion is to include C&D and inert waste diversion requirements/procedures into project specifications, which are part of the contract between the contractor and the project owner. Because specifications are a major communication tool to convey the requirements of a construction or demolition project, specifications that contractors are required to follow could also include conditions and requirements for diverting C&D and inert materials. If the conditions are not met, the contractor could be held accountable.

3. Provide education programs for contractors

A straightforward method to help divert C&D and inert waste is to provide general contractors with educational material and information about alternative facilities that take C&D and inert waste. This could be as simple as providing a brochure listing the diversion facilities in the region, with hours, location, cost, and material types accepted. Providing information on reuse opportunities, such as exchange programs, can also be useful. A key opportunity for informing contractors about reduction and recycling opportunities is during the permitting process.

In addition to general reduction and recycling opportunities, contractors could be provided information about deconstruction and green building practices:

- Deconstruction: This involves dismantling of a structure, salvaging building contents and components, and finding viable markets and outlets for materials. This practice can be used to varying degrees, which can range from reuse of an entire structure or foundation, to select assemblies and systems, to the careful removal of specific materials or items.

- Green Building: A green building, also known as a sustainable building, is a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water, and other resources more efficiently; and reducing the overall impact to the environment. Builders could be provided with information on methods to incorporate environmentally friendly practices into the construction of a home.

4. Develop a Disaster Management Plan for the County

In the aftermath of a disaster, the primary focus of government response teams is to restore and maintain public health and safety. As a result, debris diversion programs such as recycling and reuse can quickly become secondary. Advance planning, through a Disaster Management Plan, can help the County identify options for collecting, handling, storing, processing, transporting, diverting, and disposing of debris. Preparing a plan before an emergency happens can save valuable time and resources if it is needed.

5. Create markets for C&D by promoting reuse and recovery.

Options are available to the County to create markets for C&D recovery through economic incentives (e.g., tax incentives or land use designations). Jurisdictions could help create markets for construction and demolition debris by using the "Recycling Market Development Zone" concept. The County and cities could offer incentives to attract businesses to the region that process construction and demolition debris or that manufacture products using materials typically found in construction and demolition debris. This program could provide technical assistance and free product marketing to businesses that process construction or demolition debris, or use these materials to manufacture their products.

Wood Waste

6. Support diversion at transfer station

This option would provide incentives at the transfer for users to bring in clean loads of wood waste for diversion. The transfer station rates could be structured to allow users to pay a reduced fee for clean loads. Clean loads would facilitate the efficient recycling or diversion of the material, and costs associated with handling of this material would be reduced.

7. Provide public education on wood waste diversion

Information should be provided to the public on the benefits of reusing, reducing, or recycling wood waste, and facilities that accept clean wood waste for recycling or composting.

Agricultural Wastes

8. Support research and development of alternative energy industries using agricultural waste

Several technologies, traditionally used for biosolids management, are being adapted for managing municipal solid waste, primarily for organics processing. While their use is not currently widespread for municipal solid waste, they show promise for being commercially developed.

Some of these methods include:

- Anaerobic digestion: This process breaks down organic material through the action of microorganisms. The process occurs in the absence of oxygen in an airtight vessel, called a reactor or digester. Several different digester technologies have been developed. Most common are cylindrical vessels with a turbine to mix the material. Following the anaerobic process, the solids may be cured in standard composting type systems. The biogas generated from this process can be used as an energy source. This system is commonly used for sewage sludge, but treatment of municipal solid waste is a relatively new application of the technology.

- Biorefining: This process breaks down organic material through chemical or physical reactions such as hydrolysis by acids, enzymes, or steam rather than by

microorganisms. Biorefining typically is used with agricultural wastes to produce ethanol; however, processes are emerging for producing ethanol from municipal solid waste.

- Thermal transformation: Waste is heated in a controlled oxygen environment to drive off reduced or only partly oxidized gases. A variety of different technologies, all of which drive off biogas from the waste, fall within this group, including:
- Pyrolysis, which heats the waste in the absence of oxygen.
- Gasification, which heats the waste and reacts it with a controlled input of oxygen.
- Plasma arc, which runs high-voltage electricity through the waste, in the absence of oxygen.

The products of thermal transformation are a biogas fuel, and can include energy and a compost product.
At present, these technologies are not fully commercialized in the United States for municipal solid waste; however, the County could track ongoing research and development of these technologies for possible implementation at some point in the future if the technologies become more feasible.

There is a good deal of plastic and cardboard generated from pesticide applications. Extra effort should be made to ensure that these products are recycled rather than ending up in the waste stream.

Tires and Automobiles

9. Implement public education programs for proper maintenance of tires, and handling of old tires

Consumers can be educated on tire maintenance, tire repair, and lifecycle costs to encourage purchase of longer-life tires. One specific target for educational materials is companies that operate commercial fleets. Information can also be provided on facilities that accept old tires, to eliminate illegal dumping or tire piles.

10. 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.

Biomedical Wastes

11. Develop and distribute education materials for correct management of residential medical waste

Educational materials should inform residents about the risks associated with their wastes and the services available to properly store and dispose of them. Residential sharps generators can use information about correct containers and collection opportunities. 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.

Electronic Wastes

12. Monitor and Evaluate E-Waste Program

As of January 2009, the County is collecting E-Waste at the Transfer Station for recycling. Materials accepted include TVs, computers, laptops, and monitors. The County is contracting with Washington Materials Management and Financing Authority for the recycling of the waste. The County should monitor the program for effectiveness, and modify as necessary.

6.10 MISCELLANEOUS WASTE RECOMMENDATIONS

The options reviewed and evaluated for implementation represent an approach that will provide for continued progress towards meeting local and State goals regarding solid waste management, waste reduction and diversion. Ongoing programs will continue as planned, and new policies and programs will be implemented while maintaining a balance of costs and diversion benefits to County residents. The County and Cities will continue to monitor the results of Plan implementation to determine program results and effectiveness.

6.11 MODERATE RISK WASTES

Moderate Risk Waste is a class of solid waste that covers Household Hazardous Waste and Conditionally Exempt Small Quantity Generator Waste. "Moderate Risk" does not mean that the material is moderately hazardous. Rather it is generated in small volumes and is therefore not regulated in the same way as larger volume hazardous waste from businesses.

Local governments are required by the Washington State Hazardous Waste Management Act (HWMA, Chapter 70.105 RCW) to address moderate risk waste management in their jurisdictions. 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.

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.

6.12 MRW EXISTING CONDITIONS

The County Transfer Station has a newly expanded facility for the collection of MRW. The facility is open Tuesday, Thursday and Saturday from 9:00a.m. until 5:00p.m. The list of MRW materials accepted at the facility is included in Table 26. In 2007, the facility accepted over 1,800 gallons of used motor oil. In the first half of 2008, the facility has accepted 2,000 gallons of used motor oil.

Ecology receives annual reports for all Moderate Risk Waste (MRW) programs in the state. This information includes the amounts of household hazardous waste (HHW), used oil, and conditionally exempt small quantity generator (CESGQG) waste collected by the programs, more specific details of the types of materials collected, amounts, participation rates and costs by county, and percent of the methods of management (disposition) of the waste. According to data from Ecology, for the previous three year average (2003-2005) the total amount of MRW collected was 9,164.67 pounds. The County has recently implemented an MRW swap operation, where residents can both drop-off and take MRW for reuse.

Table 26. MRW Materials Accepted at Lincoln County TS

Material	Material
Antifreeze	Oil-based paint
Bases	Pesticides
Diesel	Photo chemicals
Gasoline	Rechargeable battery
Heating oil	Solvent/thinner (
Latex paint	Vehicle battery
Mercury	Vehicle fluids
Mercury Thermostats	Wood preservatives
Motor oil	

In addition to the County's facility, Carl's Tire in Wilbur accepts used motor oil for recycling.

6.13 MRW KEY ISSUES

Use of the MRW facility at the Transfer Station continues to grow, and the facility is adequate to meet the needs of County residents.

6.14 MRW OPTIONS

1. Expanded public education

For education, current household hazardous waste efforts appear to be comprehensive. These efforts need to be continued on an ongoing basis to reach new residents.

2. Provide education on alternative products

In addition to the message about proper disposal of household hazardous waste and used oil, the County could distribute educational messages on alternatives to hazardous household products. Much of this type of information can be found on the Washington Toxics Coalition's Home Safe Home Program website. The Home Safe Home Program has produced a series of fact sheets that identify hazards with various types of products and suggest alternatives.

3. Use mobile collection centers to target rural areas

Expanded collection capabilities and increased collection events may help extend opportunities for proper disposal to more residents. In addition to permanent collection facilities, many communities use mobile facilities that travel to areas where residents do not have easy access to permanent facilities. Residents can bring their household hazardous waste to the mobile facility when it is in their community. Often communities will place a limit on the amount of waste that may be brought in by an individual, usually 5 gallons or 50 pounds total per vehicle per trip. The County could consider offering this type of service in the rural areas of the county. It is very expensive to acquire the equipment and to staff these events. The County could also consider providing funding to hire a private contractor to set up and run mobile events in different communities in the County on an experimental basis to determine demand.

4. Business Technical Assistance

The County could provide free technical assistance to businesses wanting to learn how to reduce and manage hazardous waste.

5. Enforcement Efforts

With respect to businesses generating hazardous wastes, the County has relied primarily on educational efforts and collection opportunities to obtain compliance with state laws. The County also uses a load inspection program to identify wastes that have been sent to County facilities for disposal, which should be managed through other appropriate means. The County should continue with these efforts.

6.15 MRW RECOMMENDATIONS

The options reviewed and evaluated for implementation represent an approach that will provide for continued progress towards meeting local and State goals regarding solid waste management, waste reduction and diversion. Ongoing programs will continue as planned, and new policies and programs will be implemented while maintaining a balance of costs and diversion benefits to County residents. The County and Cities will continue to monitor the results of Plan implementation to determine program results and effectiveness.

Section 7

Administration and Enforcement

7 ADMINISTRATION AND ENFORCEMENT

The Washington State Solid Waste Management Act, RCW 70.95, 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 Lincoln County.

7.1 EXISTING CONDITIONS

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

Lincoln County Public Works Department

RCW 36.58 authorizes Lincoln 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 Interlocal Agreements between Lincoln County and the incorporated cities was approved in 2008, and will remain in effect until rescinded, terminated, or until adoption of a subsequent Plan update. A copy is included in Appendix B.

Lincoln County exercises its solid waste responsibilities through the Lincoln County Public Works Department. The Public Works 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.

Incorporated Cities

Under RCW 35.21.152 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 eight incorporated cities and towns in Lincoln County. All of the cities/towns contract with a hauler for solid waste collection.

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 (RCW 70.95). The Lincoln County SWAC is an advisory board to the Lincoln 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. SWAC members represent citizens, public interest groups, business, the waste management industry, and local government. The SWAC has a significant role in developing and updating Lincoln County's Comprehensive Solid Waste Management Plan.

Lincoln County Health Department

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." (RCW 70.95.160)*

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 RCW 70.95.010 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 facilities, transfer stations, and landfills.

The Lincoln County 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 Health Department works to assure compliance with RCW 70.95 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 Lincoln County.
- Oversight of one existing permitted facility:
  - The Lincoln 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

The Washington Department of Ecology (Ecology) has the primary authority for solid waste at the state level. 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. RCW 70.95.163 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 biosolid and septage permitting and enforcement.

The Eastern Regional Office (ER) of the Department of Ecology is responsible for controlling the emission of air contaminant from sources in Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, **Lincoln**, Pend Oreille, Stevens, Walla Walla, and Whitman Counties with authority derived from federal and Washington State Clean Air Acts. Relevant laws are the Code of Federal Regulations (40 CFR) and RCW 70.94, respectively. . The 173-400 series of the Washington Administrative Code (WAC) is the principal source of regulatory implementation of Washington State air pollution laws.

In terms of solid waste management, the issue is principally one of media transfer in which potential air pollutants are not allowed to be released into ambient air. Consequently, some materials that can no longer be burned, and specific prohibited materials that could never have been burned legally are diverted to the solid waste stream. Per Washington State law, no outdoor burning is allowed within Urban Growth Boundaries except agricultural burning and specifically exempted burning. However, Lincoln County is not fully planning under the State Growth Management Act, and therefore is not subject to the Urban Growth Boundaries burn ban. In Lincoln County, outdoor burning means all types of outdoor burning, EXCEPT agricultural burning and silvicultural/forest practices burning, which is regulated pursuant to the Washington Clean Air Act, Chapter 70.94 RCW and WAC173-425.

Residential Burning means the outdoor burning of leaves, clippings, prunings and other yard and gardening natural refuse originating on lands immediately adjacent and in close proximity to a human dwelling and burned on such lands by the property owner or his or her designee. Burning a pile not over 4ft. x 4ft. x 3 ft. is allowed, unless prohibited by Lincoln County Fire Districts and/or Washington State during times of high fire danger and/or an air pollution episode.

Another specifically regulated material that is solid waste is asbestos containing material for which Ecology requires proper removal, handling, transport, and landfill disposal. Ecology is also responsible for regulating odor and any hazardous or toxic emissions from any material of biological or non-biological origin. A specific example of the latter is composting facilities. In so far as these materials are involved with diversion or recycling, the requirements for compliance with air regulations may affect the feasibility of such efforts, operation of relevant materials handling facilities, and whether these materials may be in or out of the solid waste stream.

Washington Utilities and Transportation Commission

The Washington Utilities and Transportation Commission (WUTC) regulates solid waste collection activities under RCW 81.77, through the issuance of certificates entitling private companies to provide solid waste collection services within specified geographic areas of the state. RCW 70.95.096 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 RCW 81.77 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.

7.2 KEY ISSUES

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 Lincoln 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 (RCW 70.93) prohibits the deposit of garbage on any property not properly designated as a disposal site. Revisions (RCW 70.93.060) 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.

7.3 OPTIONS

1. Facilitate interagency cooperation

The different agencies and jurisdictions responsible for solid waste management in Lincoln County makes 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. In addition, coordination can be achieved if technical staff work 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 Lincoln 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.

2. Develop a coordinated public outreach and education program

Education is an important aspect of addressing solid waste issues. The purpose of a public outreach program is to raise public awareness. Each jurisdiction could pool their efforts for coordinated outreach.

7.4 RECOMMENDATIONS

The options reviewed and evaluated for implementation represent an approach that will provide for continued progress towards meeting local and State requirements and goals regarding solid waste management, waste reduction and diversion. Ongoing programs will continue as planned, and new policies and programs will be implemented while maintaining a balance of costs and diversion benefits to County residents. The County and Cities will continue to monitor the results of Plan implementation to determine program results and effectiveness.

Section 8

Implementation

8 IMPLEMENTATION

The purpose of this chapter is to outline the actions and budget necessary to implement the recommendations contained in this plan.

8.1 SIX-YEAR CAPITAL AND OPERATING FINANCING

The RCW (Section 70.95.101(3)(c) requires the solid waste management plan to contain a six-year construction and capital acquisition program for public solid waste handling facilities, including development and construction or purchase of publicly financed solid waste management facilities. The legislation further requires plans to contain a means for financing both capital costs and operations expenditures of the proposed solid waste management system. Any recommendation for the development, construction, and/or purchase of public solid waste management and recycling facilities or equipment should be included in this discussion. Financing operation expenditures should also be added to this section of the plan.

Capital and operating expenses to implement the Plan recommendations over the next 6 years are summarized in Exhibit 12. Actual budgets to carry out the recommendations 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.

Exhibit 12. Six Year Capital and Operating Expenses

Activity	Projected Cost	Funding Mechanism (tip fees/grants/others)	Implementation Year
Operate Transfer Station	$265,458	Tipping/Program Fees	ongoing - 2010-2015
Issue RFP for TS Operation	$5,000	Program Fees/Solid Waste Fund	2010-2011
Waste Reduction & Recycling	$84,038	Grants/Program & Recycling Fees/Local Match	ongoing - 2010-2015
Operate MRW Program	$9,900	Grants/Program & Recycling Fees/Local Match	ongoing - 2010-2015
Public Education and Outreach	$5,000	Grants/Program Fees/Local Match	ongoing - 2010-2015
Landfill Monitoring	$4,500	Tipping/Program Fees	ongoing - 2010-2015
Capital Improvements	$35,000	Grants/Program & Recycling Fees/Local Match	ongoing - 2010-2015 as grants/fees/local match may be available
Projected Total	**$408,896**		

Estimates in year 2008 Dollars Projected Costs listed should be increased a minimum of 3% per year in consideration for inflation and annual cost increases

8.2 IMPLEMENTATION SCHEDULE

The implementation of the recommendations contained in this Plan will begin upon approval of the Plan by the jurisdictions and Ecology. The schedule for implementation is included as Exhibit 13. The schedule may be revised as the Plan is updated, and as the objective and needs of the County and jurisdictions change. As indicated, for some recommendations, the programs are ongoing. For new programs, some will be implemented within a few months, and for others implementation will span many years.

Exhibit 13. 20- Year Projected Needs and Schedule

PROGRAM	ACTIVITY	YEAR	COST/YR	REVENUE/ YR	TOTAL COST/YR
Operate Transfer Station			$265,458	$250,000	($15,458)
General Operations					
	1. MSW Collection Service	2010-2030			
	2. Employee Training/Education	2010-2030			
	3. Facility Maintenance/Utilities	2010-2030			
	4. Equipment Rental	2010-2030			
	5. Operating Supplies	2010-2030			
Transfer and Disposal - Plan & Program Options					
	1. Evaluate implementation of a flow control ordinance	2010-2030			
	2. Issue a request for proposal for contracting out the Transfer Station operations.	2010-2011	$5,000	$0	($5,000)
	3. Actively pursue grant oppor tunities for the transfer station operations, maintenance, and other programs.	2010-2030			
Waste Reduction & Recycling & Organics			$84,038	$84,038	$0
General Operations					
	1. Recycling Collection Services	2010-2030			
	2. Employee Training Education	2010-2030			
	3. Facility Maintenance/Utilities	2010-2030			
	4. Equipment Rental	2010-2030			
	5. Operating Supplies	2010-2030			
	6. Professional Services	2010-2030			
Recycling & Reuse - Plan & Program Options					
	1. Procurement of Recycled Products	2010-2030			
	2. Environmentally Preferable Purchasing	2015-2030			
	3. County/City Waste Reduction Policies	2015-2030			
	4. Methods to Measure Waste Reduction Results	2015-2030			
	5. ReUse and SWAP Shops	2010-2030			
	6. Producer Responsibility	2020-2030			
	7. Internal Recycling Program	2010-2030			
	8. Special Event or Public Venue Recycling	2010-2030			
Waste Reduction & Recycling & Organics					
	9. Evaluate Recycling Bin Program	2010-2030			
	10. Recognition for commercial Waste Reduction and Recycling	2015-2020			
	11. Business Education	2015-2030			
	12. Commercial Waste Audit Assistance	2015-2020			
	13. Use Economic Development to Attract Recycling Businesses	2010-2030			
	14. Contracting for Recycling	2012-2030			
	15. Service Level Ordinance	2012-2030			
Organics	1. Yard Waste Chipping Program	2010-2030			
	2. Food Waste Management	2020-2030			
	3. Biomass Processing	2020-2030			
	4. Assess Feasibility of Using In-or-Out-of-County Compos ting Facility	2015-2030			
	5. Backyard Composting Program	2015-2030			
Miscellaneous Waste Programs					
	1. Continue existing programs	2010-2030			
Operate Moderate Risk Waste Program			$9,900	$9,900	$0
	1. Continue existing programs	2010-2030			
Public Education and Outreach			$5,000	$5,000	$0
	1. Publications	2010-2030			
	2. Website	2010-2030			
	3. Education and Technical Assistance to Schools and Businesses	2010-2030			
Landfill Closure/Monitoring			$4,500	$0	($4,500)
	1. Continue Landfill Monitoring	2010-2030			
Capital Improvements/Facility Upgrades			$35,000	$0	($35,000)
	1. Facility Upgrades/Improvements	2010-2030			

NOTE: Cost Estimates listed should be increased a minimum of 3% per year in consideration for inflation and annual cost increases. Tipping fees and program fees would increase to offset inflation and cost increases.