



# Ferry County Solid Waste Management Plan

Preliminary Draft

March 2010



# **FERRY COUNTY SOLID WASTE MANAGEMENT PLAN**

March 2010

**Prepared for:**

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## **ACKNOWLEDGMENTS**

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- Solid Waste Advisory Committee members (see Section 1.8 for list of SWAC members).
- Washington Department of Ecology staff, especially Jim Wavada.

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## **EXECUTIVE SUMMARY**

### **ES 1 Introduction and Background**

This *Solid Waste Management Plan* (or “Plan”) was prepared to provide a guide for solid waste activities in Ferry County. This Plan addresses recent changes while also looking forward to the future needs of Ferry County. The Plan was developed through a team effort by Ferry County, the City of Republic, and the Solid Waste Advisory Committee (SWAC). The SWAC members represent the interests of their agencies and businesses, and as residents and members of the community they also represent the public’s interest.

This document was developed in response to the Solid Waste Management Act, Chapter 70.95 of the Revised Code of Washington (RCW), which states:

“Each county within the state, in cooperation with the various cities located within such county, shall prepare a coordinated, comprehensive solid waste management plan” (Section 70.95.080 RCW).

The minimum contents of this Plan are specified by state law (RCW 70.95.090) and further described in Guidelines for the Development of Local Solid Waste Management Plans and Plan Revisions issued by the Washington Department of Ecology (Ecology 1999). The Solid Waste Management Act specifies that this Plan must “be maintained in a current and applicable condition” through periodic review and revisions (RCW 70.95.110).

### **ES 2 Plan Organization**

Chapter 1 of this Plan describes the purpose and goals of this Plan, its relationship to other plans, and the process and schedule for updating the Plan. Chapter 2 provides information about demographics and economic conditions. Chapter 3 provides information about the waste generated in Ferry County. Chapter 4 provides an overview of the waste management system in Ferry County.

Chapters 5 through 13 discuss various elements of the solid waste management system in Ferry County, and provide the information and analysis that is the basis for the recommendations in this Plan. Chapter 14 provides additional information about the implementation schedule and other details for those recommendations.

### **ES 3 Plan Preparation and Adoption Process**

This copy of the *Ferry County Solid Waste Management Plan* is the “preliminary draft” that incorporates comments received on a “first draft” that was reviewed by

the SWAC in December 2009. This preliminary draft is being made available for review and comment by the participating jurisdictions, Ecology, WUTC and other interested parties. Comments received by the deadlines will be reviewed with the SWAC and revisions made in this Plan as appropriate.

## **ES 4 Goals and Objectives**

This Plan addresses issues of specific importance to the residents, businesses, and institutions of Ferry County. The vision for this Plan is also based on concepts adopted through the State's "*Beyond Waste Plan*." The following mission statement is endorsed by the SWAC and is intended to be implemented through this Plan:

"The mission of the Ferry County Solid Waste Program is to support the Washington State Solid Waste Management, Reduction and Recycling Act (RCW 70.95). The program strives to improve the quality of human life through waste reduction, recycling and reuse throughout Ferry County and the City of Republic."

This Plan is also based on the following general goals:

- Manage solid wastes in a manner that promotes, in order of priority: waste reduction; recycling, with source-separation of recyclables as the preferred method; energy recovery, incineration or landfilling of separated waste; and energy recovery, incineration, or landfilling of mixed wastes.
- Minimize adverse impacts on the environment and preserve public health through sound solid waste management operating procedures.
- Encourage public involvement and ensure the representation of the public in the planning process.
- Increase public awareness of the importance of waste reduction and recycling. Develop programs that promote recycling and help the state achieve its goal of a 50% recycling rate.
- Develop an educational program to inform the public about the solid waste system and opportunities for waste reduction and recycling.
- Reduce the solid waste generated in the County through public education and administrative programs.
- Provide recycling opportunities to waste generators in the County.
- Ensure that adequate disposal capacity exists for the present and future residents, businesses, and institutions of Ferry County.
- Emphasize local responsibility for solving problems associated with solid waste, rather than relying on the state or federal government to provide solutions.

- Contribute to the development of a regional solid waste management system that complies with state regulations for solid waste handling.

Furthermore, the SWAC has formulated a set of Guiding Principles for solid waste management in the County, as follows:

- Conduct solid waste management practices in the most efficient, cost – effective manner feasible given the unique conditions in the County.
- Assure a basic level of disposal and recycling service availability to residences, businesses, and institutions in the County.
- Seek expanded forms of partnership between Ferry County, neighboring counties, the City of Republic, the Confederated Tribes of the Colville Reservation, and private solid waste service providers along with businesses, institutions, community groups, and the general public throughout Ferry County.
- Strive to make the County’s solid waste system economically sustainable through a variety of methods including but not limited to customer rates, tipping fee revenues from the Torboy Transfer Station, state and federal grants, and other sources.

## **ES 5 Recommendations**

The recommendations proposed by this Plan are shown below, and are numbered using an abbreviation for the topic. For example, Recommendation #WR2 is the second recommendation for Waste Reduction. Additional details on the recommendations can be found in the appropriate chapter of the Plan, and are also summarized in Chapter 14.

### **Chapter 5: Waste Reduction**

Waste reduction is defined as those methods that prevent a waste from being created, or that reduce the toxicity of the wastes that are generated. Chapter 5 of this Plan discusses waste reduction techniques and provides the following recommendations:

- WR1) Continue and expand promotion of reuse by charitable organizations.
- WR2) Assess feasibility of establishing a materials reuse and exchange area at the transfer station or another suitable location.
- WR3) Organize and support periodic “swap events” for exchange of reusable and repairable products.

## **Chapter 6: Recycling**

Chapter 6 of this Plan discusses existing recycling programs and provides several recommendations for additional efforts:

- R1) Encourage recycling by businesses and institutions.
- R2) Utilize citizen volunteers for promotion and education when available and feasible.
- R3) Attempt to inventory undocumented recycling activities.
- R4) Periodically assess recycling program efficiency and effectiveness.
- R5) Suspend or reinstate collection of specific recyclable materials if warranted by market conditions or other relevant factors.

## **Chapter 7: Organics Management**

Chapter 7 of the Plan examines existing and potential activities for composting and other methods for handling organics such as yard debris and food waste. The following recommendations are made for improving organics management in Ferry County:

- O1) Continue and increase subsidized sales of home composting units.
- O2) Assess feasibility of establishing a drop-off site at transfer station or another suitable location for collection and storage of yard debris and wood waste.
- O3) Assess feasibility of techniques for diversion and beneficial use of food waste.

## **Chapter 8: Waste Collection**

Chapter 8 of this Plan examines the current system for collecting solid waste in Ferry County. In general, the existing solid waste collection system is functioning well, but two recommendations are being made for refinements to the current collection system:

- C1) Assess feasibility of mandatory refuse collection on countywide basis.
- C2) Periodically examine waste collection methods to monitor and improve efficiency and effectiveness.

## **Chapter 9: Handling and Transfer**

This Plan examines the transfer system currently used in Ferry County and provides the following recommendation:

- T1) Review and prepare report on the need for additional services or facilities for handling and transfer of waste as well as materials that can be diverted for recycling, reuse, or other beneficial uses.

## **Chapter 10: Disposal**

The current disposal system for Ferry County relies primarily on a “waste export” system to ship garbage from the Torboy Transfer Station to a landfill in southern Washington. A smaller amount of waste is also sent to the Stevens County Landfill. The contract for the waste export will expire in a few years, leading to the following two recommendations:

- D1) Develop an arrangement or agreement between Ferry County, the City of Republic, the Confederated Tribes of the Colville Reservation, and the private sector to cooperatively secure one contractor for waste disposal.
- D2) Issue a Request for Proposals for a Comprehensive Waste Services Package that includes transportation and disposal of the waste from Ferry County, and potential supplemental services such as: residential curbside recycling services, commercial/institutional recycling services, commingled or source-separated recycling, regional approaches for recycling, local or regional storage capabilities for recyclables, processing and marketing of recyclables, and yard debris processing.

## **Chapter 11: Special Wastes**

This Plan examines the sources and existing programs for four special waste streams, and concludes that two of these pose current or potential disposal problems. For these two waste streams, the following recommendations were developed.

- C&D1) Install a drop-off site at the transfer station for collection, storage and distribution of reusable building materials on a pilot project basis.
- C&D2) Encourage diversion of wood waste for the purpose of energy recovery.
- C&D3) Promote green building practices.
- JV1) Assess the feasibility of a coordinated / cooperative program to dispose or recycle junk vehicles / auto bodies involving Ferry County, City of

Republic, Confederated Tribes of Colville Reservation, other counties, and the private sector.

## **Chapter 12: Promotion and Public Education**

Discussion of public education programs concluded that these are very important, leading to the following recommendation:

- PE1) Continue current promotion and education activities and identify opportunities to expand such activities.
- PE2) Research, develop and implement a program to recognize / publicize existing and future recycling efforts by businesses and institutions.
- PE3) Promote increased recycling by businesses and institutions.
- PE4) Continue and increase promotion of yard debris diversion methods.

## **Chapter 13: Organization and Administration**

Discussion of the administrative needs for solid waste management led to several recommendations:

- OA1) Assure that regular adjustments to tipping fee(s) at Torboy Transfer Station can and should be made with involvement of the participating entities – Ferry County, City of Republic, private sector, and possibly the Confederated Tribes of Colville Reservation.
- OA2) Investigate and prepare a report on alternative solid waste system funding strategies and sources.
- OA3) Emphasize that planning and implementation for current and future management of solid waste will be accomplished through communication, cooperation, and coordination among the participating entities noted above.

## **ES 6 Implementation Considerations**

Chapter 14 of this Plan provides a summary of the implementation details for the recommendations, including the lead agency, level of priority, cost, funding sources (see Tables 14.1 and 14.3) and the proposed timeline for implementing the recommendations (see Table 14.2).

## **CHAPTER 1: INTRODUCTION**

### **1.1 Plan Purpose**

This *Solid Waste Management Plan* (Plan) was prepared to provide long-term guidance to Ferry County, including its residents, businesses and municipalities. The programs addressed in this Plan include garbage collection and disposal, recycling, composting, and administration of the waste management system.

This Plan has been developed in accordance with the Solid Waste Management Act, Chapter 70.95 of the Revised Code of Washington (RCW), which states:

“Each county within the state, in cooperation with the various cities located within such county, shall prepare a coordinated, comprehensive solid waste management plan” (Section 70.95.080).

The Solid Waste Management Act also specifies that these plans must “be maintained in a current and applicable condition” through periodic review and revisions (RCW 70.95.110), hence the need for this Plan. This document is an update of the 1993 *Ferry County Comprehensive Solid Waste Management Plan* and is intended to provide citizens and decision-makers in the region with a guide to implement, monitor, and evaluate future solid waste activities for a 20-year period. Recommendations developed for this Plan provide guidance for policy and financial decisions, including guidance for expending local funds and state grants for local solid waste projects.

This introductory chapter of the Plan provides information on the Plan’s legislative mandate and goals; the Solid Waste Advisory Committee (SWAC); the planning process; and historical information.

### **1.2 Plan Organization**

The remainder of the *Ferry County Solid Waste Management Plan* is organized into the following chapters, each addressing particular elements of the County’s solid waste management system:

- Chapter 2: Background of the Planning Area
- Chapter 3: Quantity and Composition of Solid Waste
- Chapter 4: Overview and Analysis of Existing Solid Waste Management System
- Chapter 5: Waste Reduction
- Chapter 6: Recycling
- Chapter 7: Organic Materials
- Chapter 8: Collection

- Chapter 9: Handling and Transfer
- Chapter 10: Disposal
- Chapter 11: Special Wastes
- Chapter 12: Promotion and Education
- Chapter 13: Organization and Administration
- Chapter 14: Implementation Strategy

Chapter 2 and 3 provide important information about demographics, waste quantities and other factors common to the remaining chapters. Chapter 4 provides an overview of current policies, programs, and facilities. System challenges and opportunities are also reviewed in Chapter 4. Chapters 5 through 13 address each component of the solid waste system in a format that:

- Reviews existing programs, activities and policies in Ferry County for each element of the solid waste system.
- Identifies planning issues (needs, problems, and opportunities) not addressed by existing activities and programs.
- Examines alternatives to meet the identified needs, problems and opportunities.
- Recommends future programs or actions as appropriate to the needs and abilities of the County's and City's residents, businesses and service providers.

Chapter 14 provides a summary of the implementation details (costs, schedule, and responsible parties) for each of the recommendations shown in Chapters 5 through 13. Finally, the appendices to this plan contain information relevant to the planning process, including the WUTC Cost Assessment Questionnaire and the SEPA Checklist.

### **1.3 Participating Jurisdictions**

As indicated above, RCW 70.95 delegates the authority and responsibility for the development of solid waste management plans to the counties, and the Ferry County Public Works Department has taken the lead role in developing this Plan.

The one incorporated city in Ferry County is Republic. By state law, Republic may fulfill their solid waste management planning responsibilities in one of three ways:

- 1) by participating with the County in preparing a joint plan,
- 2) by preparing their own plan for integration into the County's plan, or
- 3) by authorizing the County to prepare a plan that includes the City.

The City of Republic is actively participating in the countywide solid waste system through an Interlocal Agreement (ILA). At a meeting on May 4, 2009, the Republic City Council adopted resolution #2009-04 to authorize the County to prepare a solid waste plan that includes the City (option #3 above). An ILA was executed between the County and City on October 19, 2009, and a copy of that ILA is shown in Appendix A.

Other governing bodies (Tribes and federal agencies) can participate in the planning process or conduct their own plans. There is one Tribe in Ferry County, the Confederated Tribes of the Colville Reservation. The Colville Tribe is actively involved in solid waste management for their reservation, which is very large and contains parts of both Ferry County and Okanogan County. The Colville Tribe is interested in joint activities with Ferry County, and has a representative on the SWAC.

Federal agencies with significant activities in Ferry County include the U.S. Forest Service, the Department of the Interior (the National Park Service and Bureau of Land Management), and Homeland Security (for the border patrols). These federal agencies generally use the County's waste disposal system, but are encouraged to review this Plan and provide input as appropriate because this Plan may impact their current and future solid waste management options.

#### **1.4 Washington State's *Beyond Waste Plan***

The Washington State Department of Ecology prepared a statewide solid waste management plan, commonly referred to as the "*Beyond Waste Plan*," in 2004 and then updated this plan in 2009. The *Beyond Waste Plan* adopts a vision that society can transition to a point where waste is viewed as inefficient and most wastes have been eliminated. This transition is expected to take 20 to 30 years or more. In the short term, the *Beyond Waste Plan* provides goals for five areas: industrial waste, small volume hazardous waste, organic materials, green building, and measuring progress. The *Beyond Waste Plan* recommends actions that can be undertaken in the next five years to achieve the goals in five areas:

- Increased diversion of organic materials
- Increased use of green building methods
- Improved management of small-volume hazardous wastes
- Improved management of industrial wastes
- Measuring progress

The *Beyond Waste Plan* is discussed in greater details in several places of this Plan as appropriate to the topics in each chapter. Copies of the *Beyond Waste Plan* can be downloaded from Ecology's website (<http://www.ecy.wa.gov/>).

## 1.5 Required Minimum Contents of Plan

The minimum contents of this Plan are specified by state law (RCW 70.95.090) and further described in *Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revisions* (updated in 2010). To summarize, solid waste management plans must contain:

- An inventory of existing permitted solid waste handling facilities, including an assessment of any deficiencies in meeting current disposal needs.
- The estimated needs for solid waste handling facilities for twenty years.
- A program for the development of solid waste handling facilities that is consistent with this Plan and that meets all applicable regulations. The development program must also take into account land use plans, provide a six-year construction and capital acquisition program, and provide a financing plan for capital and operational costs.
- A program for surveillance and control.
- An inventory of solid waste collection needs and operations, including information on collection franchises, municipal operations, population densities, and projected solid waste collection needs for a period of six years.
- A comprehensive waste reduction and recycling element that provides for reduction of waste quantities, provides incentives and mechanisms for source separation, and provides opportunities for recycling source-separated materials.
- Waste reduction and recycling strategies, including residential collection programs in urban areas, drop-off or buy-back centers at every solid waste handling facility that serves rural areas, monitoring methods for programs that collect source-separated materials from nonresidential sources, yard debris collection programs and education programs.
- An assessment of the impact that implementation of the Plan's recommendations will have on solid waste collection costs.
- A review of potential sites for solid waste disposal facilities.
- Other details for specific programs and activities.

## 1.6 Previous Solid Waste Plan

Ferry County prepared their first solid waste plan in 1993. The major issues addressed by the 1993 plan were the closure of Torboy landfill and the development of a suitable long-term solid waste management system for the County. Many, but not all, of the recommendations from the 1993 plan have been implemented.

## 1.7 Relationship to Other Plans

This Plan must function within a framework created by other plans and programs, including policy documents and studies that deal with related matters.

### 1.7.1 Comprehensive Land Use Plans

The planning guidelines require that this Plan reference the comprehensive land use plans for all participating jurisdictions. Those plans include the comprehensive land use plan for Ferry County, the most recent version of which was adopted December 1, 2008, and the comprehensive plan for the City of Republic. The reason for considering the local plans is to ensure that the Plan is consistent with policies set forth in the other documents, and it is not intended that this Plan will take precedence over those land use plans. The most important aspect for consistency purposes is the siting of new facilities and ensuring that siting meets local land use policies.

### 1.7.2 Shoreline Plans

Shoreline 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. The shoreline plan in this area is the *Ferry County Shoreline Master Program*, as revised October 14, 2002. This plan establishes policies guiding development along shorelines and establishes goals for public access and recreational opportunities, among other goals.

## 1.8 Solid Waste Advisory Committee

The Solid Waste Advisory Committee (SWAC) is the focal point of the public involvement effort for this Plan. The SWAC membership, as shown in Table 1.1, includes representatives from citizen groups, recycling and environmental interests, business, agriculture, and local government.

The formation, membership, and role of the SWAC are specified by state law:

“Each county shall establish a local solid waste advisory committee to assist in the development of programs and policies concerning solid waste handling and disposal and to review and comment upon proposed rules, policies, or ordinances prior to their adoption. Such committees shall consist of a minimum of nine members and shall represent a balance of interests including, but not limited to, citizens, public interest groups, business, the waste management industry, and local elected public officials. The members shall be appointed by the county legislative authority.” (RCW 70.95.165 (3)).

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

<b>Official Members</b>	<b>Representing</b>
Jim Burnside	City of Republic (elected representative)
Kerri Clark	Citizen
Cliff Couse	Hauler
John Hamilton	Citizen
Don Hurst	Colville Nation
Cleve Ives	Citizen
Randy Kinney	Citizen
Lou Miller	Citizen
Kevin Mitchum	Kinross
Marty Padilla	Business
Alex Wirt	City of Republic (appointed representative)
<b>Ex Officio:</b>	
Bob Heath	Elected Official
Kristy Cromwell	Staff
Jim Wavada	Ecology
Brian Hunt	Health District

Two of the primary responsibilities of the SWAC are to advise on the development of this Plan and to assist in the Plan adoption process. The SWAC is anticipated to participate in the development of this Plan by:

- 1) reviewing draft documents;
- 2) providing input and comment on all issues covered by the Plan;
- 3) acting as a liaison to their constituents;
- 4) relaying information to the City and town councils;
- 5) reviewing the complete draft and final plans;
- 6) facilitating the public review process; and
- 7) recommending the SWMP for adoption by the participating jurisdictions.

A copy of the by-laws governing the SWAC is shown in Appendix B.

## **1.9 Process for Updating this Plan**

### **1.9.1 Plan Development Process**

The Plan development process involves the major steps shown in Figure 1.1. The preparation of the Plan began with a review of the current major issues and needs for the solid waste system. Alternative systems for meeting future needs and improving existing conditions were defined and evaluated. Based on this evaluation, recommendations were made. These recommendations will provide the guidance for decision-making by solid waste facility owners/operators, regulatory officials and planners. An implementation strategy was developed that contains a schedule as well as financial information.

During the course of the preparation of this draft, numerous SWAC meetings were held to obtain information and guidance. After reviewing each element of the Ferry County solid waste system, a complete draft of the Plan was prepared and reviewed by the SWAC on January 11 and 12, 2010. Following this review, the plan was revised and this draft (the "Preliminary Draft") was distributed for public review and comment as well as Ecology and WUTC review. A public hearing was held on the Preliminary Draft Plan as part of that review process.

Comments received on the Preliminary Draft will be reviewed with the SWAC, and then revisions will be made to produce the Final Draft. The Final Draft will be adopted by the County and the City (see Appendix E). When granted final approval by Ecology, this will become the Final Plan. Only after Ecology has approved of the Final Draft does the Plan become effective.

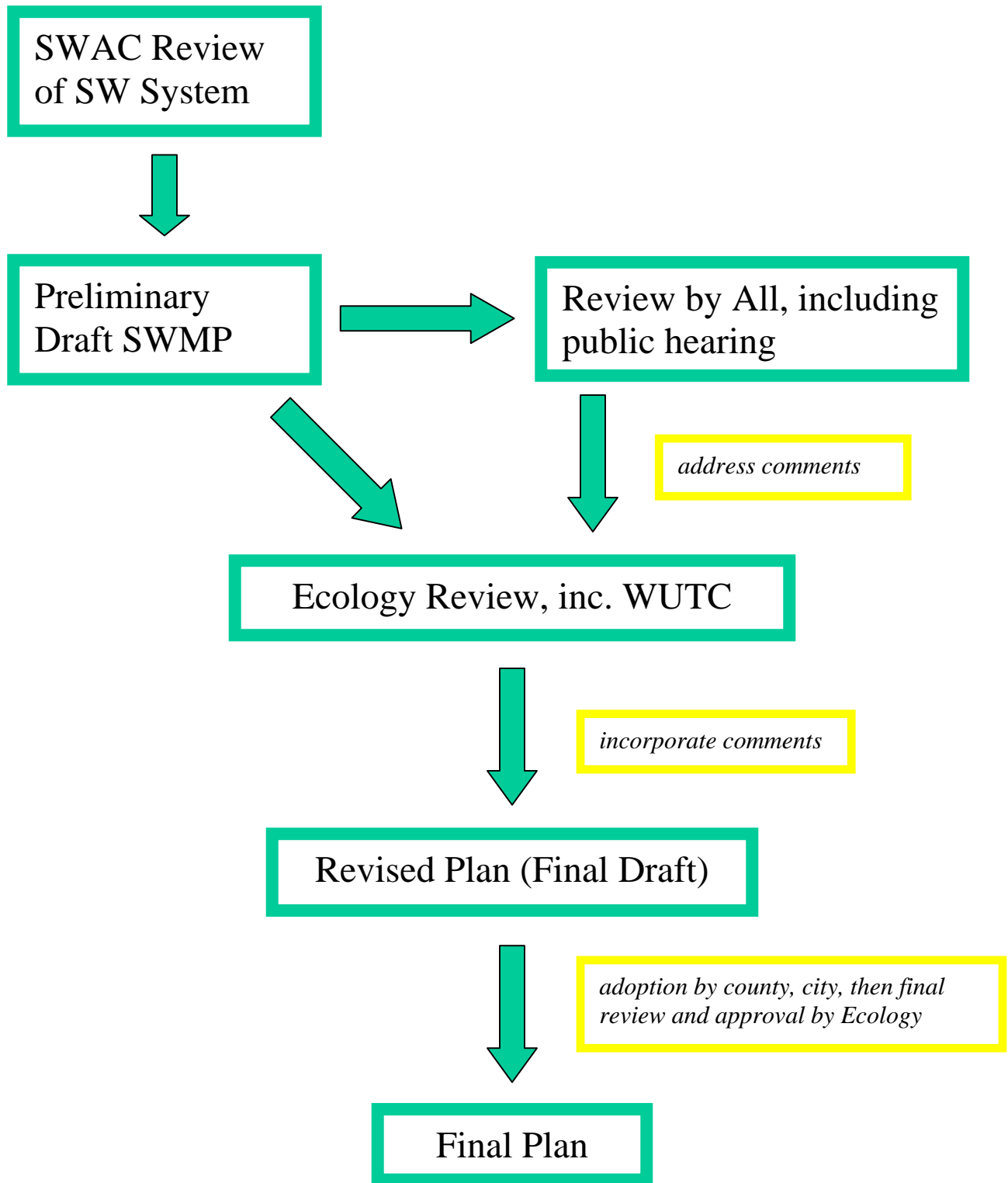
### **1.9.2 Plan Amendment Process**

During the Plan's implementation, changes may occur in planned activities, assigned roles and responsibilities, and budget requirements. These changes may occur as new information is gathered, as state legislation or regulations are revised or adopted, and as other events occur that influence planned activities. Changes that the SWAC determines to be minor and consistent with the Plan will not require a plan amendment.

This plan will also be reviewed periodically to determine if amendments or revisions are necessary. The Solid Waste Management Reduction and Recycling Act (RCW 70.95) requires local governments to maintain their solid waste plans in current condition. Plans must be reviewed and revised, if necessary, at least every five years. At a minimum, this 2010 Plan should be reviewed by 2015 to determine if it needs to be amended or revised. Before that time, the Plan can be kept in current condition through amendments. An "amendment" is defined as a simpler process than a revision. If there is a significant change in the solid waste system, however, a revision may be necessary before the five-year period is done.

Changes in the Plan may be initiated by Ferry County, working with the SWAC to

**Figure 1.1  
Planning Process**



develop and review proposed changes, or by outside parties. For the latter, individuals or organizations wishing to propose plan amendments before the scheduled review must petition Ferry County's Solid Waste Manager in writing. The petition should describe the proposed amendment, its specific objectives, and explain why immediate action is needed prior to the next scheduled review. The Solid Waste Manager will investigate the basis for the petition and prepare a recommendation for the Public Works Director.

If the Public Works Director decides that the petition warrants further consideration, the petition will be referred to the SWAC for review and recommendation. The Solid Waste Manager will draft the proposed amendment together with the SWAC. Whether the proposed amendment has been initiated by Ferry County or an outside party, the proposed amendment must be submitted to the legislative bodies of all participating jurisdictions and the Department of Ecology for review and comment. Adoption of the proposed amendment will require the concurrence of all affected jurisdictions.

The Public Works Director may develop reasonable procedures for submitting and processing proposed plan amendments, and may establish reasonable fees to investigate and process petitions. All decisions of the Director may be appealed to the Board of Ferry County Commissioners.

Implicit in the development and adoption of this Plan is the understanding that there may be a need for the participating jurisdictions to take emergency actions for various reasons in the future, and that these actions can be undertaken without the need to amend this Plan beforehand. In this case, Ferry County staff will endeavor to inform the SWAC and other key stakeholders as soon as feasibly possible, but not necessarily before new actions are implemented. If the emergency results in permanent and significant changes to the Ferry County solid waste system, an amendment to this Plan will be prepared in a timely fashion. If, however, the emergency actions are only undertaken on a temporary or short-term basis, an amendment will not be considered necessary. Any questions about what actions may be considered "temporary" or "significant" should be brought to the SWAC for their advice.

### **1.9.3 Environmental Review Process**

The State Environmental Policy Act (SEPA) requires an environmental evaluation of actions that involve decisions on policies, plans, or programs (WAC 197-11-310). The purpose of this evaluation is to determine if decisions on policies, plans, or programs could lead to actions that would have a significant adverse impact on the environment. A copy of the SEPA Checklist that addresses these issues is shown in Appendix C.



## **CHAPTER 2: BACKGROUND OF THE PLANNING AREA**

### **2.1 Introduction**

This chapter describes the existing physical and economic characteristics of Ferry County. This information is required by Ecology and it is also useful background information for several of the following chapters of this *Solid Waste Management Plan* (Plan). An understanding of the environmental, demographic and land use conditions in Ferry County is important because it provides a frame of reference for discussions about existing solid waste practices and future solid waste handling needs.

### **2.2 Current and Future Population**

The current (2008) population of Ferry County is estimated by the Washington State Office of Financial Management (OFM) to be 7,700 people. From 2000 to 2008, the County population grew by only 6.1%, or an average of 0.7% annually. There is only one incorporated city in Ferry County, which is the City of Republic. There are a number of unincorporated towns, including Curlew, Inchelium, Keller, Malo, and Orient. The towns of Inchelium and Keller are within the boundaries of the Colville Reservation and are not part of the area addressed by this Plan.

The OFM provides estimates by county and city for the years that fall between the national census data that is collected every ten years. The OFM's projections for current population (2008) are shown in Table 2.1. Also shown in Table 2.1 are population estimates by Census County Division (CCD), which are geographic subdivisions of the County. This data is provided by the U.S. Census Bureau and is only available for the years that the census was conducted.

Since the Colville Reservation is not officially a participating jurisdiction for this Plan (although they are participating as a SWAC member and may undertake joint solid waste activities in the future with the County), the current population for the planning area is estimated at 5,933 people (assuming that the population of the Colville Reservation continues to make 23% of the population, as it did in 2000).

The population of Ferry County is expected to continue to grow into the future (see Table 2.2). The figures shown in Table 2.2 are based on OFM's medium series projections for population growth. There are, however, several factors that could affect this rate of growth, including an increasing number of retirees and telecommuters moving to the County.

**Table 2.1  
Ferry County Population**

<b><u>By Area</u></b>	<b><u>1990<sup>1</sup></u></b>	<b><u>2000<sup>1</sup></u></b>	<b><u>2008<sup>1</sup></u></b>
Republic	940	954	1,000
Unincorporated	<u>5,355</u>	<u>6,306</u>	<u>6,700</u>
Ferry County, Total	6,295	7,260	7,700
<b><u>By Census County Division (CCD)</u></b>	<b><u>1990<sup>2</sup></u></b>	<b><u>2000<sup>2</sup></u></b>	<b><u>Percent Change</u></b>
Colville Reservation	1,552	1,666	7.3%
Curlew CCD	1,430	1,638	14.5%
Orient-Sherman CCD	782	1,112	42.2%
Republic CCD	<u>2,531</u>	<u>2,844</u>	<u>12.4%</u>
County Total	6,295	7,260	15.3%
County Total without Colville Reservation	4,743	5,594	17.9%

- Notes: 1. From *Population Estimates for the State, Counties, Cities and Towns* (OFM 2009).  
 2. Population figures by CCD are from the Census Bureau's web page.

**Table 2.2  
Ferry County Population Trends**

<b><u>Year</u></b>	<b><u>Total</u></b>	<b><u>Annual Percent</u></b>
1960	3,889	---
1970	3,655	-0.6%
1980	5,811	5.9%
1990	6,295	0.8%
2000	7,260	1.5%
2005	7,400	0.4%
2010	8,120	1.9%
2015	8,550	1.1%
2020	9,150	1.4%
2025	9,730	1.3%
2030	10,250	1.1%

- Notes: 1. Population figures for the years 1960 through 2000 are from *April 1 Intercensal Population Estimates* (OFM 2009).  
 2. Population figures for the years 2005 through 2030 are from *Projections of the Total Resident Population for the Growth Management Act*, medium series (OFM 2009).  
 3. Percent change is calculated by dividing the increase from the previous year by the amount in the previous year, and then expressed as a percentage. This is not an annualized figure.  
 For use in later tables, the estimated 2007 population is 7,832 people based on the above figures, or 5,920 for calculations exclusive of the Colville Nation population.

## **2.3 Economy and Employment**

Ferry County is economically based in timber and mining, although tourism and recreation are rapidly becoming prominent economic factors. The City of Republic is both the largest community in the County and the County seat. Founded in the late 19th century by gold prospectors, Republic (then called Eureka) was the site of a number of highly productive gold mines.

Ferry County employment falls mainly in the areas of agriculture, forestry, manufacturing of timber products, government, mining and support businesses. Mining interests in Ferry County are still substantial, employing 10 to 15% of the employable population.

## **2.4 General Physical Features**

Often described as one of the last frontiers of the American West, Ferry County combines a rugged mountain environment dominated by mining and logging industries with the breathtaking beauty of a wilderness retreat.

Originally a part of Stevens County, Ferry County was created on February 18, 1899 and named for Governor Elisha P. Ferry, the last territorial governor and first official governor of Washington State. Located in the northeastern corner of Washington State, the northern boundary of Ferry County is the Canadian border and its eastern boundary is the Columbia River. The south half of the County falls within the boundaries of the Colville Reservation and the north half is largely occupied by the Colville National Forest.

Ferry County's topography and climate make it an ideal recreation destination year round. Comfortably warm summers provide ample opportunities to swim and fish the County's largest lake, Curlew Lake, or one of the many rivers throughout the area, including the Kettle River, the San Poil River, and the mighty Columbia River itself. Washington State Highway No. 20 bisects the County from east to west and is designated a national scenic byway. Highway 20 also boasts the highest pass in the state (Sherman Pass at 5,575 feet) with year-round access.

### **2.4.1 Land Use**

Private land ownership represents approximately 16% of the 2,204 square miles in the County. Other land ownership includes the Colville Reservation (43%), federal agencies (38%) and state and local government (3%).

### **2.4.2 Climate**

Ferry County climate has characteristics of both continental and marine types. The summers are generally dry and sunny. This weather is attributed to the region's location beneath a semi-permanent high-pressure system during the months of

June through September. The occasional northward shift of this system will produce cool, rather moist summers and infrequently it is displaced by a short-lived thermal low, which gives the area record high temperatures. Winters tend to be moderately cold with considerable cloud cover, some fog and a liberal amount of snowfall. Temperatures are generally less severe than most areas of comparable latitude due to an easterly movement of moist Pacific Ocean air. However, extremely cold, severe winters do occur when cold arctic air masses spill over the protective Rocky Mountains and displace the marine pacific influence. The spring and fall weather typically reflects a gradual change between the warm, dry summers and cool, wet winters. Record low temperatures exceeding -25 degrees F are found in all locations and freezing weather is common for five months of the year (November - March).

Precipitation is light in the summer, increases in the fall and reaches a peak in the winter. It gradually decreases in the spring with an upswing in May and June followed by a sharp drop near the first of July. Maximum precipitation in the winter coincides with the greatest frequency of Pacific storms crossing the state. Late spring and summer rainfall frequently occurs as showers or thunderstorms, and amounts vary. Most of the valleys receive 15 to 25 inches annually. In the mountains, precipitation increases with altitude, and 30 to 40 inches can be expected on the higher ridges of the Kettle River Range.

### **2.4.3 Hydrology**

Ferry County's water resources are an important aspect of the County's scenic beauty, economic well-being, and recreational opportunities. While early settlers relied primarily on surface water for their domestic and irrigation needs, more recent demands have been placed on the County's groundwater supplies. Due to favorable hydrogeologic conditions, groundwater supplies in many parts of the County are sufficient to meet current demand.

Ferry County has an abundance of surface water in the form of rivers, streams, and lakes. The major river is the Columbia. The Columbia is impounded by Grand Coulee Dam forming the 914 million acre-feet Lake Roosevelt. Other major rivers are the Kettle River and the San Poil River. These streams contributed to the formation of river valleys and continue to influence land use and population patterns through their contribution to agriculture and recreation. Many small mountain streams flow from higher forested terrain to join with the major rivers.

Numerous lakes varying in size from 1 to 1,000 acres are found throughout the County. Some of the larger lakes have attracted sizable summer communities into their proximity; others complement major public recreation facilities; and most provide scenery and recreation opportunities.

Sub-surface water is found at varying depths throughout the area; however, good quality aquifers are often difficult to locate because of the unpredictable soil

stratum characteristics. Locations least likely to yield ground water are normally found on benches where glacial deposits of gravel with inter-mixed clay stratum may exceed 1,000 feet in depth.

#### **2.4.4 Flooding**

There are a number of streams and marshes within Ferry County that naturally drain upland areas. There are severe flood hazards along certain of these streams and marshes. Ferry County, through the flood hazard ordinance, declared that future development of flood hazard areas shall be done in a manner which will: 1) preserve the ability of all streams to safely pass any discharge that could reasonably be expected to occur in any given year; 2) minimize flood damage to all new construction; 3) protect former construction from flood damage; 4) make flood insurance available; 5) protect the public interest of the citizens of the County by minimizing the investiture of public funds in flood protection works; and 6) accomplish the purposes of RCW 86.16, the Flood Control Zone Act.

#### **2.4.5 Geology**

The known geologic history of the San Poil Curlew valley began about 360 million years ago, with the deposition of sediments in the great inland seas. A period of crustal disturbance lasted over 140 million years, and the region dramatically changed. The surface of the land was severely eroded, creating broad valleys in excess of 2,500 feet deep. Tertiary rocks deposited conformed to the uneven surfaces. These tertiary rock formations include the O'Brien Creek Formation, the San Poil volcanics, and the Klondike Mountain Formation.

Approximately 10,000 years ago, glaciers, estimated to be 5000 feet thick, carved the valleys. Huge ice-dammed lakes deposited immense quantities of sand, silt and clays in the valleys, streams and waterways. Geologic phenomena associated with this process results in landslide hazards. An ancient landslide is found about 2.5 miles south of Republic in the Klondike Mountain Formation. There was movement on this slide in the spring of 1987.

Along the edges of the San Poil and Curlew Lake Valleys, are benches of sand and gravel that formed along the edges of a huge glacial lake. These kames, moraines, and outwash plains are generally elevated high above the ground water table but there are many fault zones located throughout the County. Groundwater and moisture content of the soils is largely dependent on the winter snowpack.

#### **2.4.6 Topography**

The topography of Ferry County is mainly mountainous terrain with pine, fir, and tamarack forests. The Kettle River Range divides the County into distinct east and west sides that are linked by Sherman Pass, elevation 5575 feet, and Boulder Pass, elevation 4600 feet. State Route 21 travels north and south near the County's western border and State Route 20 cuts east and west across the

County traveling over Sherman Pass. State Routes 20 and 21 junction at the City of Republic.

#### **2.4.7 Soils**

The physical characteristics of the region reflect a complex geologic history that was influenced by events ranging from deposition of sedimentary materials by inland seas to the formation of metamorphic and igneous materials by the faulting, folding, and volcanic activities of early mountain building periods. Some outcroppings of pre-Cambrian age rock in the area are the oldest found in Washington State. Most recent landscaping is attributed to extensive glaciation and subsequent stream erosion. Mountainsides that were eroded bare by abrasive action of ice during the Pleistocene times can be noted throughout the area. Glacial deposits up to hundreds of feet deep can be found in other areas.

Many of the benches paralleling stream valleys are composed entirely of sediments deposited by debris-laden streams carrying glacial runoff during the melting stages of ice intrusions. These locations provide some of the better locations for solid waste facilities in the County. Ice obstruction in ancient drainage patterns created large lakes and the lacustrine deposits from these waters make up a portion of today's lowland soil. Subsequent stream erosion of these deposits and their displacement by coarser alluvium has left the valleys with variable soil associations. Some of the valley lands are located on flood plains that are subject to inundation during infrequent periods marked by high winter snow accumulation and hot spring weather. Flood plains are unacceptable locations for solid waste disposal facilities because of water contamination threats.

#### **2.4.8 Global Economic and Environmental Trends**

At the time this Plan was developed, the possibility and potential impact of significant climate changes were still being debated, but there is increasing evidence that some changes can be expected in the future. Based on studies conducted by the University of Washington, the state of Washington can expect the following climate impacts:

**Higher temperatures** – Increases in annual temperature of, on the average, 2.2 degrees F by the 2020's, 3.5 degrees by the 2040's, and 5.9 degrees F by the 2080's (compared to 1970 to 1992).

**Changes in precipitation patterns** – Wetter autumns and winters, drier summers, and small overall increases in annual precipitation in Washington (+1 to +2%).

**Lower water supply in summer months** – Decreases in snow pack by nearly 30% are projected across the state by the 2020's, 40% by the 2040's and 65% by the 2080's. Earlier snowmelt and earlier peak river flow are projected to affect agricultural water availability.

Changes in temperature, precipitation, and water availability are projected to result in the following:

**Risks to forestry** – The area burned by fire regionally is projected to double from current levels by the 2040's and triple by the 2080's. Mountain pine beetle outbreaks are projected to increase in frequency and cause increased tree mortality. Removal of dead or diseased trees could lead to significantly increased amounts of wood wastes.

**Benefits and risks to agriculture** – The impact of climate change on agricultural production in Eastern Washington is projected to be mild over the next two decades. Elevated carbon dioxide levels could offset some of the direct effects of climate and result in yield gains for some crops. The impacts are projected to be increasingly detrimental with time, with potential yield losses reaching 25% for some crops by the end of the century.



## CHAPTER 3: QUANTITY AND COMPOSITION OF SOLID WASTE

### 3.1 Introduction

This chapter describes the waste stream in Ferry County, and forecasts future disposal levels. An estimate of the composition and future quantities of solid waste in Ferry County is necessary to provide the basis for determining solid waste handling needs for the next twenty years.

#### 3.1.1 Definitions

Most of the solid waste in Ferry County is disposed in landfills and some is recycled or reused. The largest component of the waste stream is mixed municipal solid waste (MSW). MSW is generally disposed of at landfills, and consists of waste typically generated by residences, businesses and institutions. Wastes generated by industrial and agricultural sources are generally included to the extent that these are handled through the MSW disposal system, but these sources also generate wastes that require or benefit from special handling. Special wastes include materials such as biosolids, petroleum-contaminated soils, hazardous waste, biomedical wastes, and asbestos.

Figures used in this report reflect a key difference between disposed quantities and generated quantities. As used in this report, disposed solid waste is considered to be solid waste sent to landfills in or outside the County. On the other hand, waste generated in the County is the sum of disposed waste and recycled materials.

### 3.2 Historical Solid Waste Data

The Torboy Transfer Station receives the majority of Ferry County's municipal solid waste. About 5 to 10% (7.2% and 6.3% in 2007 and 2008, respectively) of the County's waste stream is delivered from the eastern side of the County to the Stevens County Landfill. An additional but unknown amount of self-haul from the eastern side of Ferry County is also delivered to the Stevens County Landfill.

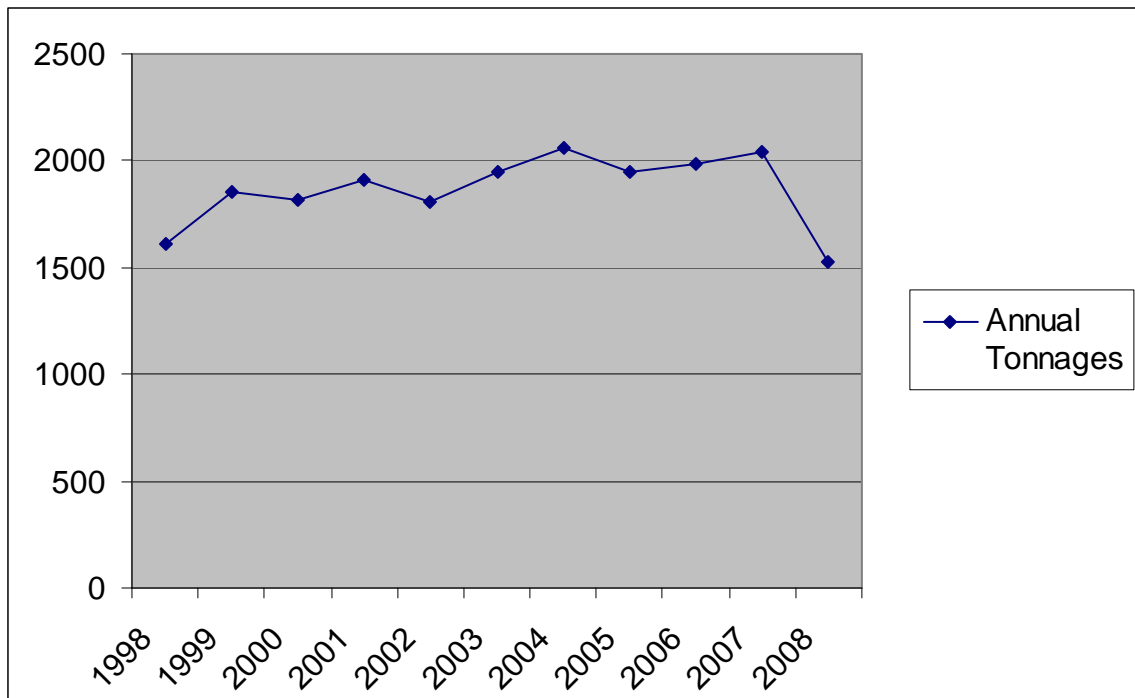
The amount of waste handled by the transfer station for the past ten years is shown in Table 3.1 and Figure 3.1. The data shown in both Table 3.1 and Figure 3.1 clearly demonstrates the impact of a temporary loss of Republic's waste that occurred for part of 2008. In 2008, 512 tons of waste from the City of Republic went to the Stevens County Sanitary Landfill.

Waste generated on the Colville Reservation is delivered to sites on the reservation, and is then sent to landfills in Okanogan or Stevens County. In 2007

**Table 3.1**  
**Annual Waste Quantities at Torboy Transfer Station**

<u>Year</u>	<u>Annual Amount, tons</u>
1998	1,610
1999	1,852
2000	1,814
2001	1,909
2002	1,810
2003	1,951
2004	2,058
2005	1,945
2006	1,990
2007	2,041
2008	1,529

**Figure 3.1**  
**Annual Waste Quantities at Torboy Transfer Station**

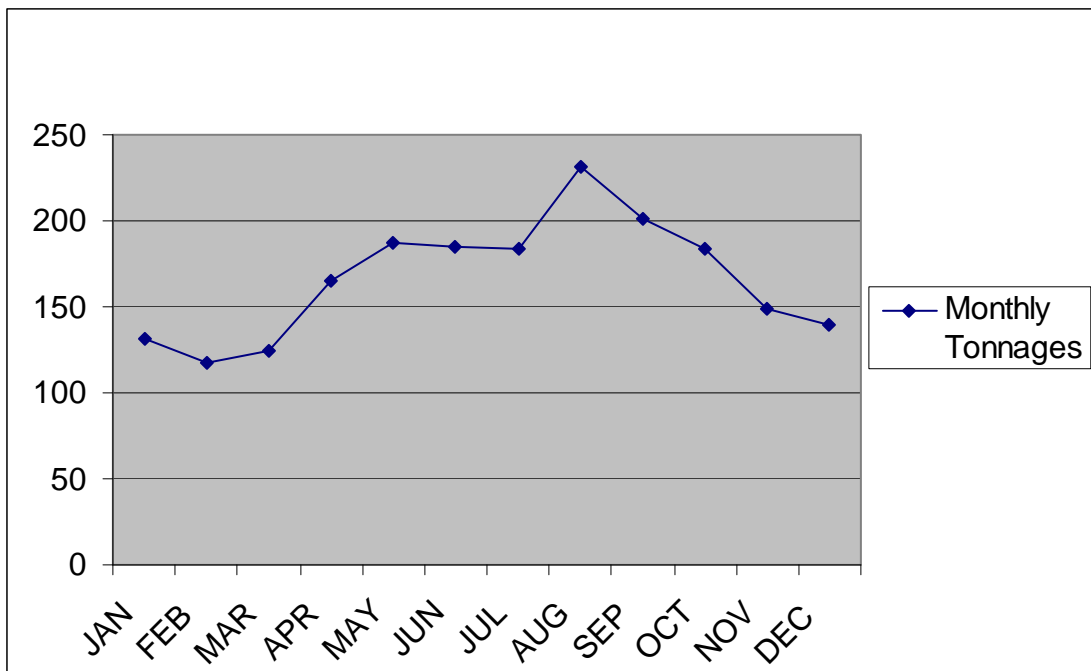


and 2008, just slightly less than 500 tons (498 tons in both years) went to the Stevens County Sanitary Landfill from the Reservation.

The rate at which solid waste is generated typically varies throughout the year due to seasonal differences in residential and commercial activities. In Ferry County, the summer months bring substantial increases in tourist, recreational and farm labor population. The population fluctuations are reflected by increases in solid waste quantities.

The variation in waste delivery amounts for the Torboy Transfer Station can be seen in Figure 3.2, which uses the average monthly amounts for a five-year period (2003 through 2007). Data from the 2008 was not used in this figure because of the temporary loss of Republic's waste for part of that year (see Table 3.1 and Figure 3.1). The data shows that the amount of solid waste brought to the transfer station varies significantly throughout the year. These variations in waste delivery must be considered when sizing waste disposal or processing facilities.

**Figure 3.2**  
**Seasonal Variations in Waste Quantities**



### 3.3 Current Solid Waste Stream

#### 3.3.1 Current Recycling Rate

The most recent recycling survey conducted by Ecology shows that 20% of Ferry County’s waste stream was recycled or composted in 2007. This figure is based on 541 tons reported as being recycled and composted in 2007, plus 2,200 tons disposed for a total of 2,741 tons of waste generated (see Table 3.2).

**Table 3.2  
Recycled Quantities (2007)**

Tons Recycled <sup>1</sup>	541
Tons Disposed, MSW <sup>2</sup>	<u>2,200</u>
Total Tons Generated	2,741
Recycling/Composting Rate	19.7%
Population, 2007 <sup>3</sup>	5,920
Waste Generation Rate, tons/person/year	0.46
Waste Generation Rate, pounds/person/day	2.50

- Notes:
1. The figure for the tons of recycled materials is from Ecology’s annual survey.
  2. The figure for disposed tonnages includes the tons handled at the Torboy Transfer Station (2,041 tons) and the tonnages brought to the Stevens County Landfill from the eastern side of Ferry County (159 tons).
  3. The estimated population is from Table 2.2, adjusted (reduced) for the amount of people living on the Colville Reservation (because their waste is not included in the MSW disposal figure above).

The waste generation rate shown near the bottom of Table 3.2 is the figure for the average number of tons of waste disposed and recycled by County residents and businesses annually. At 0.46 tons per year per person (or 2.5 pounds per person per day), this is significantly lower compared to other counties. The waste tonnage and population figures shown in Table 3.2 do not include the Colville Reservation, but part of the recycling tonnages may be from that area.

#### 3.3.2 Composition of Waste Disposed

Composition data for Ferry County’s waste stream is needed to assist in designing solid waste handling and disposal programs. No surveys or waste composition studies have been conducted specifically for Ferry County, but data from a study in Okanogan County can be used to estimate the breakdown by source for Ferry County’s waste stream (see Table 3.3).

**Table 3.3  
Estimated Solid Waste Composition in Ferry County**

Material	Entire Waste Stream	
	Percent by Weight <sup>1</sup>	Tons of Material <sup>2</sup>
<b>Paper</b>	<b>27.7%</b>	<b>609 T</b>
Cardboard	5.8	128
Newspaper	2.3	51
Other Recyclable Paper	9.6	211
Compostable Paper	6.9	152
Non-Recyclable Paper	2.4	53
<b>Plastic</b>	<b>12.0</b>	<b>264</b>
PET Bottles	0.8	18
HDPE Bottles	1.1	24
Film and Bags	4.8	106
Other Plastics	5.1	112
<b>Glass</b>	<b>6.1</b>	<b>134</b>
Recyclable Bottles	5.9	130
Non-Recyclable Glass	0.3	7
<b>Metals</b>	<b>10.5</b>	<b>231</b>
Aluminum Cans	0.6	13
Tin Cans	1.7	37
Computers, Electronics	0.7	15
Other Metals	7.4	163
<b>Organics</b>	<b>20.7</b>	<b>455</b>
Food Waste	15.7	345
Yard Debris	5.0	110
<b>Other</b>	<b>11.0</b>	<b>242</b>
Disposable Diapers	2.0	44
Textiles	1.0	22
Tires, Rubber Products	0.6	13
Other Materials	7.4	163
<b>Construction Debris</b>	<b>10.7</b>	<b>235</b>
Wood Waste	6.6	145
Construction Debris	4.1	90
<b>Special Wastes</b>	<b>1.9</b>	<b>42</b>
Animal Excrement	0.2	4
Other Special Wastes	1.7	37
<b>TOTAL TONS =</b>		<b>2,200</b>

- Notes: These figures are not precise and should only be taken as an indication of the relative amounts of materials that may be present in Ferry County's waste stream. Furthermore, under no circumstances would 100% of the materials be recoverable through a recycling, composting or other waste diversion program.
1. Percent by weight figures are from Okanogan County's data.
  2. Based on the 2007 tonnage for Ferry County (2,200 tons) and percentages shown in the column to the left.

Waste composition can be expected to change in the future due to changes in consumption patterns, packaging methods, disposal habits, tourism and other factors. These changes are very difficult to predict in the long term, and this Plan may affect the future waste composition in Ferry County by changing purchasing and disposal habits. Prior to any investments in Ferry County that depend on the composition of the waste stream, a detailed local study should be conducted.

### 3.4 Future Solid Waste Quantities

Table 3.4 shows the projected figures for the amounts of solid waste expected to be disposed and recycled for the duration of the planning period for this Plan. The methodology used to project solid waste generation rates for the next 20 years was based on population forecasts (see Table 2.2). These projections were developed under the following assumptions, any of which could change in the future due to the recommendations in this Plan or due to other factors:

- The waste generation rate (how much waste is generated per person, household or business) will remain the same through the planning period, at 0.46 tons per person per year (or 2.5 pounds per person per day).
- The future recycling/composting rate will remain at 20%.

The forecast presented in Table 3.4 shows that the amount of waste disposed in Ferry County, without taking into account any increases in recycling or composting, is expected to increase by 32% over the forecast period, from 2,178 tons in 2008 to 2,885 tons in 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 levels.

**Table 3.4  
Projected Waste Quantities for Ferry County**

Year	Population	Tons Generated (at 0.46 tons per person per year)	Recycling Rate	Projected Tonnages	
				Tons Recycled	Tons Disposed
2010	6,252	2,857	20%	571	2,286
2015	6,584	3,008	20%	602	2,407
2020	7,046	3,219	20%	644	2,576
2025	7,492	3,423	20%	685	2,739
2030	7,893	3,606	20%	721	2,885

Notes: The above figures assume the recycling rate remains steady at 20%, and that the overall waste generation also remains the same (at 0.46 tons per person per year).

## CHAPTER 4: OVERVIEW AND ANALYSIS OF EXISTING SOLID WASTE MANAGEMENT SYSTEM

### 4.1 Goals and Objectives

The broad vision for the Ferry County Comprehensive Solid Waste Plan is based on concepts legislated by the State of Washington and adopted through the State's Solid Waste Plan commonly referred to as the *Beyond Waste Plan*. In addition, the Ferry County Plan addresses issues of specific importance to the residents, businesses, and institutions of Ferry County. The State has created a framework by which county solid waste plans would be developed, adopted, and implemented. This Ferry County Solid Waste Management Plan is an outgrowth of that effort.

The following mission statement is endorsed by the SWAC and is intended to be implemented through this Plan:

“The mission of the Ferry County Solid Waste Program is to support the Washington State Solid Waste Management, Reduction and Recycling Act (RCW 70.95). The program strives to improve the quality of human life through waste reduction, recycling and reuse throughout Ferry County and the City of Republic.”

This Plan is also based on the following general goals:

- Manage solid wastes in a manner that promotes, in order of priority: waste reduction; recycling, with source-separation of recyclables as the preferred method; energy recovery, incineration or landfilling of separated waste; and energy recovery, incineration, or landfilling of mixed wastes.
- Minimize adverse impacts on the environment and preserve public health through sound solid waste management operating procedures.
- Encourage public involvement and ensure the representation of the public in the planning process.
- Increase public awareness of the importance of waste reduction and recycling. Develop programs that promote recycling and help the state achieve its goal of a 50% recycling rate.
- Develop an educational program to inform the public about the solid waste system and opportunities for waste reduction and recycling.
- Reduce the solid waste generated in the County through public education and administrative programs.
- Provide recycling opportunities to waste generators in the County.

- Ensure that adequate disposal capacity exists for the present and future residents, businesses, and institutions of Ferry County.
- Emphasize local responsibility for solving problems associated with solid waste, rather than relying on the state or federal government to provide solutions.
- Contribute to the development of a regional solid waste management system that complies with state regulations for solid waste handling.

Furthermore, the SWAC has formulated a set of Guiding Principles for solid waste management in the County, as follows:

- Conduct solid waste management practices in the most efficient, cost – effective manner feasible given the unique conditions in the County.
- Assure a basic level of disposal and recycling service availability to residences, businesses, and institutions in the County.
- Seek expanded forms of partnership between Ferry County, neighboring counties, the City of Republic, the Confederated Tribes of the Colville Reservation, and private solid waste service providers along with businesses, institutions, community groups, and the general public throughout Ferry County.
- Strive to make the County’s solid waste system economically sustainable through a variety of methods including but not limited to customer rates, tipping fee revenues from the Torboy Transfer Station, state and federal grants, and other sources.

#### **4.2 Description of Current System – Policies, Programs, Services, Operations, Facilities**

Ferry County’s solid waste management system consists of the following basic components:

- **Residential and Commercial Refuse Collection** – These services are provided by one private company, Couse’s Sanitation and Recycle Inc. Couse’s Sanitation operates under a contract with the City of Republic and through the WUTC certificate in the County unincorporated areas.
- **Residential and Commercial Recycling** – Mobile recycling depots are located at several places in the County. Pickup of recyclables from businesses / institutions is available also. Couse’s Sanitation has a contract with the County to collect materials from the depots and provide empty containers. Couse’s Sanitation off – loads and stores recyclables at their building in Republic for eventual transport to processors / markets in the Spokane area.

- **Torboy Transfer Station** – The transfer station is operated by the County. Refuse is hauled by a private trucking company to an intermodal facility in the Spokane area for transport by rail to a regional landfill in Klickitat County (see next item).
- **Waste Disposal** – Trash from Ferry County is disposed at Roosevelt Landfill operated by Regional Disposal Company (RDC or Rabanco), formerly owned by Allied Waste and now by Republic Services. The disposal contract between the County and RDC expires in October 2012.
- **Promotion and Education** – Promotion / education activities and events are primarily conducted by the Assistant Waste Management Coordinator employed by the County's Public Works Department.
- **Organization and Administration** – The County's solid waste management system is overseen by two employees of the County's Public Works Department – the Waste Management Coordinator and Assistant Waste Management Coordinator.

#### **4.3 Observations and Findings – Advantages, Disadvantages, Strengths, Weaknesses**

The main advantages / strengths and disadvantages / weaknesses of the solid waste management system in Ferry County are summarized below:

- Couse's Sanitation is a locally – owned company and experienced solid waste services provider with a long operating history in the County.
- Torboy Transfer Station and the land it occupies is a valuable resource whose utilization can be further developed to support some of the priorities of the State's *Beyond Waste Plan*.
- The County and City of Republic are both aware that given the limited amount of disposed tonnage produced, they will have greater control over management of waste and related costs through joint, ongoing planning and implementation efforts.
- Low volumes of material for both disposal and recycling due to a small, stable population makes achieving economies of scale difficult.
- Considering these small volumes, Ferry County is not an attractive target for investment by private solid waste / recycling firms, especially if each service is viewed separately rather than as an integrated package.
- Long distance to intermediate and end – use markets for recyclables – Spokane area is the location of most readily available outlets. Also, local storage capacity for recyclables is limited.

#### **4.4 System Needs, Challenges, and Opportunities**

The current disposal contract between the County and RDC expires in October 2012. This provides an excellent opportunity for the County, City and possibly other entities such as the Colville Nation and adjacent counties to cooperate in pursuing a regional approach to solid waste management. That regional approach would be expressed in the form of a long – term contract for a comprehensive variety of services “bundled” together under an agreement with one private company. Such an arrangement does not preclude this company from using local or other subcontractors but the County and City would deal only with the prime contractor.

Services that could be part of an integrated package include but are not limited to the following:

- Disposal of waste.
- Transport of refuse from transfer station to disposal site.
- Operation of transfer station.
- Curbside, residential recycling collection in Republic and commercial / institutional recycling collection for interested generators county – wide.
- Processing, storage, and marketing of recyclables.
- Periodic recovery and recycling of auto bodies and other scrap metals.

## CHAPTER 5: WASTE REDUCTION

### 5.1 Introduction

Methods for reducing the solid waste generated in Ferry County are discussed in this section, which describes current waste reduction programs and activities, outlines needs and opportunities, examines alternatives for addressing these issues, and makes recommendations for waste reduction programs.

Waste reduction is the preferred method for managing solid waste. It is recognized as a viable long-term option for handling part of the solid waste management problems facing communities across the state and nation. By decreasing the amount of waste that must be disposed of, waste reduction programs decrease the costs and environmental problems associated with waste collection, processing, and disposal. Successfully reducing waste depends on local, state and federal programs and policies, and the support of businesses, industry and citizens.

Waste reduction is accomplished by changing consumption patterns so that new habits or practices are developed that generate less waste. Reusing a grocery bag, buying materials in bulk to reduce packaging waste, and reselling or giving away unwanted items instead of discarding them, are typical examples of waste reduction practices. Waste reduction can also be accomplished through changes in the products and packaging offered to consumers, and through other means.

The basic methods for waste reduction are:

- 1) Decrease the amount of material used to produce or package products.
- 2) Increase the durability or lifetime of products.
- 3) Reuse products for their original or compatible purposes.
- 4) Reduce consumption by using alternatives that generate less waste.

Reducing the toxicity of waste products is sometimes defined as a fifth waste reduction method, but this Plan focuses on the four methods shown above. Public education and information programs can lead to changes in purchasing practices and product reuse, and so are an important part of waste reduction programs.

### 5.2 Existing Practices

Waste reduction practices have been implemented in many offices in both the public and private sectors, including reusing blank sides of paper for drafts, increased use of electronic mail (email), increased double-sided copying, increased use of recycled paper, and avoiding non-recyclable packaging. Ferry

County, for example, uses the blank side of paper for notepads and reuses office equipment.

There are a number of retail stores and personal activities that are occurring in Ferry County that promote the reuse of products and materials. These activities are creating a significant amount of waste reduction, but are difficult to measure. No data is available as to the quantity of waste diverted by these activities, which includes activities such as:

- repair services
- secondhand stores and consignment shops
- person-to-person transfers (sales or gifts)
- garage sales, want ads and swap meets
- antique stores
- charity and thrift stores
- bookstores
- clothing and food banks
- sales of surplus materials by contractors
- internet auction websites (e-Bay and others)

Locally, there are two Community Yard Sales held in the spring and fall at the Malo Grange. At these events, booths are made available for a small fee (\$5.00 for a 10' by 12' space).

Backyard composting is typically defined as a waste reduction method, but this approach is discussed in the chapter on organic materials (see Chapter 7).

### **5.3 Planning Issues**

Suitable waste reduction programs in Ferry County would help the County meet state solid waste management priorities, would protect environmental and natural resources, and would extend the life of disposal facilities.

Rural and urban waste reduction programs often rely mostly on education and information programs. These education and information efforts also increase general awareness of other waste disposal and resource depletion issues. Waste reduction can contribute to recycling and other solid waste management programs. It can help each agency, business, and household to improve the efficient and cost-effective operation of the system.

While waste reduction remains at the top of the solid waste management hierarchy, the general public has more difficulty understanding this approach than other management practices such as recycling, energy recovery, and landfilling. Opportunities remain to increase public understanding of the benefits to be gained

from waste reduction, or in other words, to promote the idea that using less packaging, nontoxic household products, and reusable products can serve community efforts to protect the environment, conserve natural resources, reduce landfilling costs, increase public knowledge of waste reduction techniques, and delay the need for development of new disposal options.

Because it is difficult to measure waste reduction, local jurisdictions may encounter hardships when attempting to fund programs. The difficulty arises because it is not possible to simply measure a drop in the total waste stream generated because the waste stream is constantly increasing due to population growth and it is also impacted by household income and other socioeconomic factors. Instead, per capita waste stream reduction could be measured by surveying residents and private industry about their activities to reduce waste, or by conducting waste stream surveys for specific materials, products or packaging.

A more effective approach than quantifying the amount of waste reduction may be to gauge success using a “performance-based standard.” This is where waste reduction is presumed to be successful based on achieving a specific level of effort or on another criteria. An example of this approach is to use the number of backyard composting bins that might be distributed as a measure of the amount of yard debris that is kept out of the waste stream. Other criteria can be used and these need to be tailored to each specific waste reduction activity.

The collection and disposal of garbage is relatively inexpensive for residents. It has been proven that if residents paid more for collection, or paid on the basis of the volume of garbage disposed, it would provide incentive to reduce the amount of waste going into the garbage can or landfill. Residents in the City of Republic and Ferry County pay more for each additional can of garbage disposed. The rate structure could be reevaluated at opportune times and possibly re-structured to provide more incentive, and this approach is discussed in greater detail in Chapter 8.

## **5.4 Alternatives and Evaluation**

### **5.4.1 Alternatives**

Waste reduction could be increased through several approaches, which are generally not mutually exclusive:

**Alternative A – Promote Reuse by Charitable Organizations:** Could do more to promote donations to charitable organizations and non-profit thrift stores for reuse of clothing, rags, material and other resalable materials. A related idea is to conduct special collections on an as-needed basis (such as collections for fire victims).

**Alternative B – “Reuse Area” at Transfer Station:** Additional waste reduction can be accomplished by encouraging the reuse of materials and products through

a “reuse ranch” at the transfer station. A reuse ranch is where reusable materials are left in a designated area, typically at a disposal site, for pick-up by others. Alternatively, arrangements could be made with a charity to place a container or truck at disposal sites. Several counties in Washington are working with a charity to divert reusable materials through staffed trailers located near the entrance of a landfill or transfer station.

**Alternative C – Swap Events:** Swap events have proven to be very popular in other areas. This approach involves a one or two-day event where people are allowed to bring in and/or take away reusable materials and products (no garbage is allowed). Implementing this activity requires a large area for drop-off of reusable products (usually at a fairgrounds or other “free” space), publicizing the event, providing access control and monitoring of materials dropped off, and disposing of a small amount of residual garbage. If free space can be arranged and labor is provided through volunteers, then the cost for this event is minimal (limited to public information printing and distribution, at approximately \$500 per event, plus an additional few hundred dollars for signs for the first event). This event can also be combined with the collection of specific recyclables, such as scrap metal. Consideration should be given as to whether this is consistent or conflicting with the community yard sales already being held at the Malo Grange.

#### **5.4.2 Evaluation of Alternative Strategies**

The alternatives are compared with respect to the evaluation criteria below.

##### **Consistency with Guiding Principles**

All three alternatives are consistent with the guiding principles of this solid waste plan. They assure a basic level of waste reduction service, expand partnerships and are economically sustainable.

##### **Implementation Costs**

All three alternatives have low capital and operational costs, primarily requiring only basic promotional costs for the programs to succeed. Alternative B will also require some minimal additional infrastructure.

##### **Feasibility**

The feasibility of Alternative A is relatively straightforward. Alternatives B and C will take some political and technical coordination.

#### **5.4.3 Rating of Alternatives**

The alternatives are compared with respect to the evaluation criteria in the following table.

**Table 5.1  
Summary Rating of the Waste Reduction Strategies**

<b>Alternative</b>	<b>Consistency with Guiding Principles</b>	<b>Implementation Costs</b>	<b>Feasibility</b>	<b>Overall Rating</b>
A Promote Donations of Reusable Materials	H	L	H	H
B “Reuse Area” at Transfer Station	H	L	M	M
C Swap Events	H	L	M	M

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

## 5.5 Recommendations

The following recommendations are being made for waste reduction programs:

- WR1) Continue and expand promotion of reuse by charitable organizations.
- WR2) Assess feasibility of establishing a materials reuse and exchange area at the transfer station or another suitable location.
- WR3) Organize and support periodic “swap events” for exchange of reusable and repairable products.



## CHAPTER 6: RECYCLING

### 6.1 Introduction

This chapter of the *Ferry County Solid Waste Management Plan* (the Plan) discusses the regulatory framework for recycling, describes existing recycling programs in Ferry County, reviews the needs and opportunities for recycling, describes and evaluates alternatives, and provides recommendations.

#### 6.1.1 Definition of Recycling

“Recycling” refers to the act of collecting and processing materials to return the materials to a similar use. Recycling does not include materials burned for energy recovery, destroyed through pyrolysis and other high-temperature processes, or used as landfill cover.

The official definition of recycling (according to Ch. 173-350 WAC) is “recycling means transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration. Recycling does not include collection, compacting, repackaging, and sorting for the purpose of transport.”

Source separation is where the generator of the recyclable material keeps it separate from other wastes, and includes “single stream” recycling programs. Mixed waste processing is where garbage is processed to remove recyclables. Recycling strategies that rely on source separation must be addressed in solid waste plans.

#### 6.1.2 Overall Goals and Objectives for Recycling

Ferry County’s primary recycling goal is to increase recycling efforts and opportunities to achieve a 30% recycling rate by 2015, and increase the recycling rate annually thereafter. The ability to meet this goal will be contingent on the future availability of CPG funds.

The state’s *Beyond Waste Plan* notes that recycling has risen from 15% in 1986 to 35% in 2002, and that recycling is “a key foundation of the five initiatives proposed as the starting points for beginning the transition to Beyond Waste.” The state’s plan recommends in favor of a stronger recycling system and puts a priority on “closed loop recycling” and designing for recycling. Closed loop recycling is defined by the state as “a cycle or system where secondary materials (wastes) are reclaimed and recycled back into the process from which they were originally generated.” Examples of closed loop recycling would be turning glass bottles back into glass bottles, and an example of something that is not closed loop recycling would be turning high-grade paper into a disposable product such as tissues. Closed loop recycling is a more sustainable approach in the long term.

## 6.2 Existing Practices

### 6.2.1 Drop-Off and Buy-Back Recycling

Drop-off recycling is conducted using a roll-off type platform with bins placed on them for the different materials (see Figure 6-1). These drop-off containers are provided and maintained through a contract between Ferry County and Couse's Sanitation. Couse's Sanitation hauls the containers to their processing center in the Pine Grove area, where materials are baled (for cardboard), flattened (for aluminum cans), or simply consolidated for shipping to market. Ferry County owns three of the seven containers used for this program, and Couse's Sanitation owns four of the containers. Market revenues for the materials collected are retained by Couse's Sanitation.

**Figure 6.1**  
**Recycling Container used for Drop-Off Program**



A drop box container (without bins) is used at the transfer station to collect metals. When full, that container is hauled by Couse's Sanitation to Spokane, an activity that is separate from the recycling contract for the other containers.

The office and processing center for Couse's Sanitation, at 22 Smith Drive, also acts as a drop-off and buy-back center for cardboard, aluminum cans and other materials.

## 6.2.2 Curbside Collection

There are no curbside recycling programs operating in Ferry County at this time.

## 6.2.3 Commercial Collection Programs

Several commercial recycling programs operate in Ferry County, primarily through collection and marketing of materials by Couse's Sanitation. Couse's Sanitation transports metal to markets in Spokane for the area's largest company, Kin Ross. Couse's Sanitation currently (as of early 2010) collects cardboard from Anderson's Grocery and 17 other businesses.

The County Courthouse is currently using document destruction services provided by Data Base, a company that shreds and then recycles mixed paper.

## 6.2.4 Other Recycling Programs

Several other recycling programs are being conducted in Ferry County, including programs such as:

- **E-waste:** electronics that meet the definition of Washington State law (Chapter 173-900 WAC), including computer monitors and base units, laptops, televisions and other products with video displays greater than four inches diagonally, are collected at the Torboy Transfer Station. These electronics, or "e-wastes" are taken from Torboy and managed according to the "E-Cycle Washington" program. In 2009, Ferry County collected and shipped 5,895 pounds of e-waste.
- **Oil:** used motor oil is collected at the Torboy Transfer Station and by several County departments. The oil is used in certified burners for heating three County roads buildings.
- **Antifreeze:** antifreeze is also collected at the Torboy Transfer Station and by several County departments. The antifreeze is re-conditioned and put back into Ferry County vehicles.

## 6.2.5 Processing Facilities

"Processing" is defined by Ch. 173-350 WAC to be "an operation to convert a material into a useful product or to prepare it for reuse, recycling, or disposal." In this chapter, "processing" refers to operations that do more than remove incidental amounts of contaminants or that do more than simply accumulate source-separated recyclables. Processing includes manual and/or machine sorting and consolidating for shipment (this can include baling of materials such aluminum, paper, and plastic).

The private sector (Couse's Sanitation) handles the processing of most of the materials collected for recycling in Ferry County.

## **6.3 Planning Issues**

### **6.3.1 General Planning Issues**

The following planning issues have been identified to date:

- How to recycle in a cost-effective manner?
- What to do in case of bad markets?
- Recycling contract needs to be renewed or revised.
- May need more public education about contamination.

Ferry County's existing recycling rate is estimated to be 20% (see Table 3.2). Increasing this rate would provide benefits to the environment and economy of the County and the region. Broad benefits to the residents and businesses in Ferry County would occur through increased sustainability of future activities. Ideally, local recycling activities could also have a more immediate benefit to the County's residents and businesses, by providing options for proper management of various waste materials and through partnerships with businesses to help them with their operations.

To increase the recycling rate, recycling programs must be planned, implemented, and continued throughout the 20-year planning period. The County should make an effort to coordinate any current and new recycling programs into an integrated system that best serves the needs of County residents and businesses in an efficient and cost-effective manner. Programs should be organized so that any current or future educational and promotional efforts by individual jurisdictions and other organizations can be consistent throughout the region. In today's political climate of reducing government spending and taxes, these programs must also be as cost-effective and financially self-sustaining as possible.

Washington State's goal of 50% recycling, composting and waste reduction must be addressed in solid waste plans, but each county is expected to set their own goal based on local conditions and constraints. State planning guidelines also require solid waste plans to establish urban-rural boundaries and to designate a list of recyclable materials that must be collected by programs in the County (see the next two sections of this chapter, Sections 6.3.2 and 6.3.3). Solid waste plans must also address markets for recyclable materials, which in this plan is included with the discussion of designated recyclable materials (see Section 6.3.3).

Several other state rules and regulations affect the manner in which recycling can be conducted in Ferry County, including RCW 70.95, RCW 70.95C, RCW 81.77, and various WAC's (especially the recently adopted Chapter 173-350 WAC). Counties have no authority over most solid waste management options but are allowed to contract for the collection of residential recyclables, or request the Washington Utilities and Transportation Commission (WUTC) to carry out the

recycling provisions of this Plan. Cities and private companies have more flexibility, and can conduct their own recycling programs or contract with various companies for recycling services. One opportunity that ties into the WUTC's jurisdiction is the establishment of rate incentives to encourage recycling. Through this Plan, an "incentive rate" structure can be established in the certificate (franchise) areas (see Chapter 8). Cities can also set rates that encourage recycling and waste reduction.

Another opportunity to assist recycling that is noteworthy is the grants available from the Washington State Department of Ecology (Ecology), which provides grants to local agencies to assist with activities that collect or process recyclable materials.

Finally, state law also requires a program "to monitor the collection of source separated waste at nonresidential sites where there is sufficient density to sustain a program" (RCW 70.95.090.7.b.ii), although federal law prevents any actual control over these activities. In Ferry County, monitoring commercial recycling activities is being accomplished by the Solid Waste Coordinator and others, who periodically collect information on services offered by the private sector and the City in order to help promote those. This monitoring should be continued and any problems detected should be reported to the SWAC.

### **6.3.2 Designation of Urban-Rural Boundaries for Recycling Programs**

State law (RCW 70.95.092) requires that criteria be adopted to designate all areas within the County as either urban or rural, and that recycling and other services be provided as appropriate for each type of area. For urban areas, the recommended minimum service level for recycling is curbside collection (alternatives are allowed if these can be shown to be more appropriate). For rural areas, the minimum service level recommended is drop-off or buy-back centers at all disposal facilities and other convenient locations.

There are several methods that can be used for developing criteria for urban or rural designations. Ecology's planning guidelines suggest using land-use plans, utility service plans, population densities and growth projections, and other relevant data. The designation criteria should also include a process for periodic review and adjustment of urban-rural boundaries. Most of these requirements are satisfied by the existing efforts conducted for another document: the *Ferry County Comprehensive Plan*.

This Plan satisfies the requirements for establishing urban and rural boundaries by adopting the urban boundaries shown in the *Ferry County Comprehensive Plan*. By incorporating by reference the urban boundaries shown in the Comprehensive Plan, including any future revisions, the programs and policies of this solid waste plan are consistent with that important document, and are automatically updated as the urban boundaries are revised in the County's Comprehensive Plan.

For recycling programs, however, the minimum service levels for urban areas in Ferry County are intended to be same as the requirements for rural areas. The small size of the City of Republic, distance from recycling markets, and other factors lead to the conclusion that all of Ferry County should be treated the same in respect to recycling service levels.

### **6.3.3 Designation of Targeted Recyclable Materials**

State regulations (RCW 70.95.090.7.c) require “a description of markets for recyclables.” State planning guidelines also require designation of what materials will be collected for recycling, with marketability being one of the factors to consider in this designation process. The designation of recyclable materials has taken on more importance with the recent adoption of Ch. 173-350 WAC, which defines recyclable materials as being those materials “that are identified as recyclable materials pursuant to a local comprehensive solid waste plan.” Recycling facilities that handle material(s) designated by a solid waste management plan can be permitted more easily than facilities handling other types of recyclable materials. In the latter case, the facilities generally need to meet solid waste handling and permitting requirements.

A description of markets for materials collected in Ferry County is provided below. This is intended to be only a brief report of current conditions (current as of late 2009). It should be noted that market conditions for recyclables can change drastically in a short amount of time, which is a problem for a long-range document such as this plan. Rather than provide an exhaustive review of current market conditions, this Plan will be more useful in the future if it can be responsive to changing conditions. Hence, the list of designated materials includes a description of the process for revising that list.

**Market overview:** A significant factor for the market conditions and the list of designated materials is the fact that Ferry County is a long distance from all recycling markets. This is a serious barrier for recycling in Ferry County. The cost of transporting the materials to markets in Spokane and more distant locations often exceeds the value of the materials themselves. The low market value of many recyclable materials limits the number of materials that can be cost-effectively moved to markets.

A second significant factor for Ferry County and others is the current economic recession and the decrease in demand for recyclable materials. As of this point in time (late 2009), there are signs of economic recovery and prices are beginning to increase for some recyclables, but the markets are still recovering from the shock of moving from all-time high market prices in mid-2008 to rock-bottom prices six months later. This swing in market prices underscores the need for caution when implementing new or expended programs, as well as the need for flexibility.

Additional factors affecting specific materials are shown in Table 6-1.

**Table 6.1  
Current Markets for Recyclable Materials**

<b>Material</b>	<b>Primary Market(s)</b>	<b>Comments</b>
<b>Paper</b> , including cardboard, mixed waste paper and newspaper	Regional paper markets, paper mills (Albany, Oregon), and export.	Markets for recycled paper are weaker than for the past few years due to decreased demand for consumer goods.
<b>Plastics:</b>  Bottles 1-7	Regional markets in western Washington and Oregon (export).	The markets for PET and HDPE bottles are currently weak, and even weaker for bottles 3-7.
Other Plastics	Primarily export.	Markets are spotty and sometimes unreliable.
<b>Metals</b> , including aluminum and tin cans, white goods (appliances), and ferrous and non-ferrous scrap	Regional markets in western Washington and Oregon.	Markets are currently weaker for all metals than in recent years, but are starting to recover.
<b>Glass</b> , including clear, brown and green glass	Markets in western Washington and Oregon.	Prices are very poor for all colors of glass.
<b>Organics:</b>  Wood	Hog fuel, mulch.	More information is provided in the next chapter on the markets for organic materials.
Yard Debris	Compost.	

Note: Information is current as of 2009.

**Designated recyclable materials:** State law and Ecology’s guidelines require that counties adopt a list of recyclable materials that are designated as the materials to be commonly recycled in the county. In this case, the list is not intended to create the requirement that every recycling program in Ferry County collect every designated material. Instead, the intent is that through a combination of programs offered throughout the County, residents and businesses should have an opportunity to recycle all of the designated materials through at least one program. In other words, if plastics are on the designated materials list, then at least one program in the County should collect plastics. In some cases, this program might only be an annual collection event.

Table 6-2 shows an evaluation of the recyclability of various materials according to these four criteria:

- **Potential waste stream diversion;** the main factor considered for evaluating a material’s potential for waste stream diversion is the percent (by weight) of

**Table 6.2  
Evaluation of Recyclable Materials**

Recyclable Material	Diversion Potential	Collection Efficiency	Ease of Processing	Market Factors
<b>Paper:</b>				
Cardboard *	High	High	High	High
Newspaper *	Medium	High	High	High
Other recyclable paper *	High	High	High	Medium
<b>Glass:</b>				
Clear glass bottles *	High	Medium	High	Low
Brown glass bottles	Medium	Medium	High	Low
Green glass bottles	Low	Medium	High	Low
<b>Metals:</b>				
Aluminum cans *	Low	Medium	Medium	High
Tin cans *	Medium	Medium	Medium	High
Electronics *	Low	Low	High	High
White goods *	Low	Medium	Medium	Medium
Ferrous metals *	Medium	Medium	Medium	High
Non-ferrous metals *	Low	Medium	Medium	High
Mixed metals *	High	Medium	Medium	High
<b>Plastics:</b>				
PET bottles *	Low	Low	Low	High
HDPE bottles *	Medium	Low	Low	High
Other bottles (3-7)	Low	Low	Low	Low
Plastic film, bags *	High	Low	Low	Low
<b>Organics:</b>				
Yard debris *	High	High	Medium	High
Food waste	Very high	Low	Low	Low
<b>Other:</b>				
Textiles *	Medium	High	Medium	Medium
Wood waste *	High	High	Medium	Medium
Construction debris	High	Medium	Medium	Low
Motor oil *	Low	High	High	High
Automobile batteries *	Low	High	High	High
Fluorescent light bulbs *	Low	Medium	Medium	Medium
Tires *	Low	Medium	High	Low

The rating system for the above criteria is:

Diversion potential; high = more than 3% remaining in the waste stream, medium = 1-3%, and low = less than 1% in the waste stream.

Collection efficiency; the rating is a relative assessment of the ease of preparation and handling.

Processing requirements; the rating is a relative assessment of the ease of processing the material (note: this approach assumes some degree of separation by the waste generator, not single stream or mixed waste processing. For single stream systems and mixed waste processing, all processing = high and market factors are generally diminished by one grade).

Market factors; the rating system shows high for high-value materials, low for materials hard to transport.

\* Shown on the list of designated recyclable materials (see Table 6-3).

the material in Ferry County’s total waste stream, but with consideration given to volume in the case of PET and HDPE plastic bottles.

- **Collection efficiency and feasibility;** the primary consideration used to evaluate the collection efficiency of a source-separated recyclable material is a relative assessment of how easily the material can be handled, both in preparation and collection/loading.
- **Processing requirements (including costs);** processing requirements were evaluated by assessing the relative degree of difficulty and the reliability of the technology used to prepare the material for market.
- **Market conditions;** the assessment of market factors is based on the preceding discussion of markets.

The evaluations shown in Table 6-2 assume a traditional source separation approach, and would be different for mixed waste processing or other approaches.

Based on the evaluation shown in Table 6-2 and information presented in other parts of this Plan, the proposed list of designated recyclable materials is shown in Table 6-3. This list of designated recyclables should be used to help guide program development and implementation, but is not intended be universally

**Table 6.3  
List of Designated Recyclable Materials**

Priority Level	Material
<p><b>High Priority Materials:</b> Materials that should be collected by all standard curbside and drop-off programs throughout the County.</p>	<p>Aluminum Cans Cardboard Mixed Paper Newspaper Tin Cans</p>
<p><b>Medium Priority Materials:</b> Materials that should be collected at select locations throughout the County.</p>	<p>Electronics Ferrous Metals, White Goods Fluorescent Light Bulbs Mixed Metals Motor Oil Non-Ferrous Metals Tires Vehicle Batteries Yard Debris</p>
<p><b>Low Priority Materials:</b> Hard to recycle materials that will be recycled only if markets are available.</p>	<p>Glass (clear only) Plastic Bottles, #1 and #2 Plastic Film Textiles Wood Waste</p>

mandatory. Residents and businesses in Ferry County should have the opportunity to recycle these items through at least one program in the County, but not every program needs to collect every material.

Table 6-3 is based on existing conditions (collection programs and markets), and future markets and technologies may warrant changes in this list. The following conditions are grounds for additions or deletions to the list of designated materials:

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

These criteria can also be used to temporarily suspend the collection of specific materials.

Any proposed changes in the list of designated materials should be submitted to the Solid Waste Advisory Committee (SWAC) for their discussion. With the concurrence of the SWAC, followed by the approval of the Public Works Director, minor changes in the list could be adopted without formally amending the Plan. Thus, minor changes can be addressed in about 60 to 75 days, depending on the schedule of SWAC meetings at the time of the proposed change. Should the SWAC conclude that the proposed change is a “major change” (what constitutes a “major change” is expected to be self-evident at the time, although criteria such as the length of the discussion by the SWAC, inability to achieve consensus, and/or significant changes in recycling levels could be used as indicators of what is a “major change”), then an amendment to the Plan would be necessary (a process that could take 120 days or longer to complete).

## **6.4 Alternatives and Evaluation**

### **6.4.1 Alternatives**

**Alternative A – Local or Regional Storage for Recovered Materials:** Providing additional local or regional storage for recyclables could be a possible method to combat fluctuating market prices. Recyclables could potentially be stored until

market prices increase or until a sufficient amount of material has been collected to transport it to a market more cost-effectively. Key considerations for this approach would include the availability of inexpensive storage space and the ability to accumulate materials as inexpensively as possible. In the latter case, having storage containers that could be used to move materials to market, and using unloading and loadings methods that is quick and efficient would be important to making this approach feasible.

**Alternative B – Curbside Recycling:** Curbside recycling in Ferry County could be implemented based on criteria such as population density, profitability and projected subscription rates. The most densely populated area, the City of Republic, may be the most likely candidate for curbside collection of recyclables. Some of the conditions that would help make curbside recycling more cost-effective in Ferry County include an increase in market prices, grants or other funding sources to cover or reduce the expense of capital equipment (primarily collection trucks and containers), a market for commingled materials, and other factors. Alternatively, curbside recycling could be one of the services included in a package of services for the waste export contract. Including curbside recycling in this package could be helpful in that capital costs could be amortized over a longer period of time (thus reducing the monthly service cost), additional transportation solutions might be possible, or other benefits could be incurred that would make curbside recycling more feasible.

**Alternative C – Regional Approach for Recyclables:** A regional or statewide approach could be implemented for scrap metals or other materials. This alternative could be as simple as a joint marketing approach, where a contract is issued for two or more counties (or statewide) for a material such as scrap metal. Such an approach should streamline the marketing process and may increase the level of service available. It may also increase the prices paid for the material(s) or the stability of those prices.

Other regional approaches could involve collecting materials in one location. This could be done for the purpose of increasing the market prices and/or for reducing transportation costs.

These options would likely only apply to materials collected through public sector activities or contracts. Including privately-collected materials in a regional or statewide approach would probably not be feasible, although private parties might be able to negotiate parallel agreements if they wish.

**Alternative D – Local Markets for Recyclables:** One option for addressing problems with market prices and transportation costs would be to develop local markets. This approach could conceivably also create jobs and thus benefit the local economy. Possible local markets for some materials include making building materials (such as tiles or trench-marking material) and art objects from glass, using paper to manufacture animal bedding and insulation, and other ideas. Unfortunately, these ideas are generally not that easy to implement and few areas

have been able to create local markets, but the potential benefits could warrant some time and energy to explore possible local applications.

**Alternative E – Commingled Recycling:** Commingling of materials typically increases convenience and participation for recycling programs, leading to significant increases in recycling collection tonnages (although commingling may also reduce the amount and/or market value of material that actually gets recycled). Collection costs are generally reduced significantly as well. This approach could also reduce handling and transportation costs, although it may also reduce the market value of the recyclables. In addition, the decision to begin commingling recyclable materials should not be undertaken lightly, as once commingling is implemented then it will be difficult or impossible to return to a source separation approach later.

Commingled recyclables would need to be processed at material recovery facilities (MRFs) that are equipped to separate the mixed materials. At this time, there are no nearby options for this type of processing. As these capabilities are developed in the future, commingling could be considered and the advantages weighed against potential disadvantages such as market value.

**Alternative F – Lobby for Additional Funding and Other Actions:** Ferry County, Republic, and their residents and businesses could lobby for state and federal changes in a variety of areas. One such area could be for market development of recyclable materials. Another area could be increased funding or tax breaks to support local recycling efforts.

**Alternative G – Recycling Cooperative for Commercial Recycling:** Local businesses could organize recycling collections and shipments. This approach could increase recycling by making it more available to small businesses, while also reducing costs by making collection and transportation more efficient. A similar approach used to be conducted informally by Anderson's Grocery, which allowed other businesses to bring their cardboard to the store for recycling (this practice was ceased when market prices for cardboard dropped to the point where the store had to pay to recycle it). When market prices improve, local businesses could again pool their cardboard and possibly other materials for recycling. This could be done with one store taking the lead (such as Anderson's Grocery again) or by creating a central recycling depot (see Alternative J).

**Alternative H – Suspend Collection of Recyclable Materials:** The list of designated recyclable materials could be reviewed periodically to evaluate diversion potential, collection efficiency, processing requirements and market factors. The list could be revised based on this analysis, including possibly suspending or terminating the collection of problem materials. This alternative would potentially reduce recycling levels and increase disposal costs for generators, but the recycling program would benefit from the savings in transportation costs and avoiding negative market prices for the materials.

**Alternative I – Adopt Minimum Service Level Ordinance for Recycling:** One alternative to the current collection system in Ferry County is to adopt a service level ordinance. This approach could be used to institute new programs or services in the unincorporated areas of the County and also possibly in Republic. A service level ordinance could be used to change billing practices by “embedding” the cost of recycling into garbage collection fees. Also called a “recycling discount,” this approach helps to encourage recycling because it appears that people are receiving a discount from their garbage bill by agreeing to recycle. Pierce County uses this approach, as do several other areas. Implementing either the mandatory pay/voluntary participation approach or recycling discounts in the certificated areas would require the County to adopt a service level ordinance that provides the foundation for this approach. The service level ordinance could also address yard debris collection.

**Alternative J – Commercial Recycling Centers:** Commercial recycling could be increased in Ferry County by supplying drop boxes or “mini-recycling centers” in two or three locations throughout the County. One or more drop boxes or recycling sites should be located in Republic, and then one or more other locations in the County where these would be convenient to local businesses. The sites should be located in highly visible areas (to discourage abuse and other problems), or could be hosted by a business. This approach would provide significant opportunities to for small businesses (large businesses can generally set up their own recycling programs). Ferry County, a recycler, or others could identify potential businesses in need of recyclables collection and coordinate service opportunities with local recyclers.

**Alternative K – Citizen Action Volunteer Group:** A citizen action volunteer group could promote waste reduction, recycling, composting and other programs. Activities undertaken by local citizens could be determined by the recycling programs to be implemented. Some examples of services that could be provided include:

- Implementing education programs (source reduction, recycling, backyard composting).
- Conducting commercial waste audits.
- Providing technical assistance.
- Operating a recycling assistance “hotline.”

Developing and maintaining a volunteer group would take a significant amount of staff time, but this could also be one of the best ways to get various messages out to the community and to accomplish other activities.

**Alternative L – Determine Accurate Recycling Rate:** A more accurate assessment of the recycling rate in Ferry County could be established to allow better and more timely monitoring of recycling performance. The County could

establish a database for measuring recycling activities and monitoring the residential and commercial waste streams. A data collection program could gather data on a monthly or annual basis from certificated (franchised) collection companies, buy-back centers, and other private and nonprofit recycling activities. At a minimum, the data collection program should collect information on types of materials collected, tonnages, customers (residential vs. commercial, in-county or out-of-county), and end markets. For this approach to be useful, it should tie into public education or other efforts to address any problems noted.

**Alternative M – Periodically Assess Recycling Program:** Annually (or as needed), the SWAC could evaluate the success of local recycling programs and identify any needs or issues. There could be numerous goals for this evaluation, including identifying methods to increase the success or effectiveness of recycling programs, identifying public education needs, reviewing the list of designated recyclable materials (see also Alternative H), and addressing other issues.

#### **6.4.2 Evaluation of Alternative Strategies**

The alternatives are compared with respect to the evaluation criteria below.

#### **Consistency with Guiding Principles**

All alternatives are consistent with the guiding principles of this solid waste plan. Alternatives A, D and F meet the guiding principle of cost effective solid waste management practices. Alternatives B, I and J meet the need to assure a basic level of disposal and recycling services. Alternatives C, G, and K clearly show expanded avenues of partnerships.

#### **Implementation Costs**

Customers generally prefer low-cost alternatives, and hence may not like Alternatives B. While the capital costs of setting up a curbside recycling program can be possibly met with grants, there still remains a balance to set up and maintain such a program. The other alternatives call for a varied amount of staff time, yet do not involve high capital costs.

#### **Feasibility**

The political feasibility of Alternatives C, F, G, J and K are all high. While most of the remaining alternatives are politically and technically neutral, Alternative H has a low political feasibility.

#### **6.4.3 Rating of Alternatives**

The alternatives are compared with respect to the evaluation criteria in Table 6-4.

**Table 6.4  
Summary Rating of the Recycling Strategies**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Local or Regional Storage for Recovered Materials	H	M	M	M
B Curbside Recycling	H	H	M	M
C Regional Approach for Recyclables	H	L	H	H
D Local Markets for Recyclables	H	L	M	H
E Commingled Recycling	M	M	M	M
F Lobby for Additional Funding and Other Actions	H	L	H	H
G Recycling Cooperative for Commercial Recycling	H	M	H	H
H Suspend or Terminate Collection of Recyclable Materials	M	L	L	L
I Adopt Minimum Service Levels for Recycling	H	L	M	H
J Commercial Recycling Centers	H	M	H	H
K Citizen Action Volunteer Group	H	L	H	H
L Determine Accurate Recycling Rate	M	L	M	H
M Periodically Assess Recycling Program	M	L	M	H

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

## 6.5 Recommendations

The following recommendations are being made for recycling programs:

- R1) Encourage recycling by businesses and institutions.
- R2) Utilize citizen volunteers for promotion and education when available and feasible.

- R3) Attempt to inventory undocumented recycling activities.
- R4) Periodically assess recycling program efficiency and effectiveness.
- R5) Suspend or reinstate collection of specific recyclable materials if warranted by market conditions or other relevant factors.

## CHAPTER 7: ORGANIC MATERIALS

### 7.1 Introduction

This chapter of the Ferry County Solid Waste Management Plan (Plan) discusses the goals and regulatory framework for composting and other organics management methods, describes existing composting programs in Ferry County, reviews the needs and opportunities for expanding upon existing practices, describes and evaluates alternatives, and provides recommendations.

Composting has long been of interest to the businesses and municipalities in Ferry County. Increased local interest in organic farming (which increases demand for compost), increased interest in more cost-effective garbage collection (which underscores the need for a separate handling system for yard waste), increased local and statewide interest in sustainability and related issues, and other trends all point to increased diversion of organic materials as a desirable goal.

#### 7.1.1 Scope of this Chapter

This chapter addresses various types of handling methods for organic materials, such as composting, chipping of brush and other woody materials, and land application. Both small-scale (such as backyard composting) and large-scale methods are evaluated. The materials addressed in this chapter include yard waste (grass clippings and brush), agricultural wastes (manures and orchard wastes such as prunings and surplus fruit), biosolids and food waste.

Composting is defined as “the biological degradation and transformation of organic solid waste under controlled conditions designed to promote aerobic decomposition” (Chapter 173-350-100 WAC). Ch. 173-350 WAC also defines crop residues as “vegetative material leftover from harvesting of crops, including leftover pieces or whole fruits or vegetables, crop leaves and stems,” but not including food processing wastes and spoiled fruit from warehouses (which are defined as “industrial solid waste”). “Home composting” is defined as “composting of on-site generated wastes, and incidental materials beneficial to the composting process, by the owner or person in control of a single-family residence, or for a dwelling that houses two to five families, such as a duplex or clustered dwellings.” Yard debris is defined as “plant material commonly created in the course of maintaining yards and gardens and through horticulture, gardening, landscaping or similar activities,” such as “grass clippings, leaves, branches, brush, weeds, flowers, roots, windfall fruit and vegetable garden debris.”

“Biosolids” are defined as “municipal sewage sludge that is a primarily organic, semisolid product resulting from the wastewater treatment process, that can be beneficially recycled. Composting of wastewater residuals is one of the acceptable treatment methods to prepare biosolids for land application.

Ch. 173-350 WAC classifies organic materials according to four types of feedstocks for composting. The organic materials are classified largely on the basis of their potential for carrying human pathogens. The feedstock grades are:

**Type 1 feedstocks: source-separated** yard and garden wastes, wood wastes, agricultural crop residues, wax-coated cardboard, pre-consumer vegetative food wastes, and other materials that the local health department determines to have a relatively low risk of containing hazardous substances, human pathogens, and physical contaminants.

**Type 2 feedstocks:** manure and bedding from herbivorous animals that the local health department determines to have a comparably low risk (comparable to Type 1 feedstocks) of containing hazardous substances and physical contaminants.

**Type 3 feedstocks:** meat and postconsumer source-separated food wastes or similar source-separated materials that the local health department determines to have a comparably low risk of containing hazardous substances and physical contaminants, but that may contain human pathogens.

**Type 4 feedstocks:** mixed municipal solid waste, post-collection separated or processed solid waste, industrial biological treatment sludges, and similar compostable materials that the local health department determines to have a comparably high risk of containing hazardous substances, human pathogens and physical contaminants.

These types of feedstocks, as well as the sources and volumes handled, are taken into consideration when establishing permitting, monitoring and other regulatory standards for a particular facility or process.

### 7.1.2 Goals and Objectives for Organics Management

Ferry County's primary interest in managing organics is to make efficient use of local resources. Composting organics will also help to achieve the goal of 30% recycling and composting by 2015.

The state's *Beyond Waste Plan* identifies "recycling of organic materials" as one of the five primary initiatives, or areas of focus, that need to be addressed to move the state toward a more sustainable waste management system in the future. The "organic materials initiative" was selected because:

- Organic materials represent a significant portion (about 21% by weight) of the waste stream (see Table 3-3),
- The potential for beneficial use of organics is very high,
- Statewide, much is already being done with organics, and

- Recycling organics provides significant environmental and human health benefits, especially in comparison to the alternatives (burning orchard and crop debris, landfilling, etc.).

The state's goals, as expressed in the *Beyond Waste Plan*, is to see that "robust" markets are developed for organic materials (markets such as soil amendments, recycled products and green energy), and that collection and processing system are optimized and organics are directed to the highest and best use. The organic materials addressed by the *Beyond Waste Plan* include yard waste, food waste, manures, crop residues, soiled/low-grade paper, wood and biosolids.

## **7.2 Existing Practices**

### **7.2.1 Yard Debris**

There are currently no drop-off or curbside collection programs for yard debris in Ferry County, but the County encourages waste reduction for yard debris through a variety of public education efforts. In addition, the County has distributed compost bins in the past to encourage residents to use these. In April 2009, 100 bins were sold at a reduced rate.

### **7.2.2 Food Wastes**

A few programs and activities for food waste are being conducted in Ferry County, although generally on an unofficial basis. One such program is that Anderson's Grocery provides outdated and spoiled food to farmers. There are also some people locally that are collecting grease and using this to make biodiesel.

### **7.2.3 Wood Wastes**

Wood waste is generated in huge volumes by the logging industry, but much of this wood is not collected or removed from the logging site. Some of the slash piles, however, are being chipped to create hog fuel.

### **7.2.4 Biosolids**

In Ferry County, biosolids are generated primarily by the City of Republic and a few septic tank services. The Department of Ecology reports that 9,000 gallons of septic waste was delivered to the City of Republic's wastewater lagoon in 2008. Biosolids are also being managed at the lagoon operated by the Inchelium Water District, but the biosolids have not had to be removed from that lagoon.

### **7.2.5 Agricultural Wastes**

A huge volume of agricultural wastes are generated wherever farming is taking place, but rarely are these wastes removed from the property where the wastes are created. Vegetative wastes (crop stubble, tree prunings, etc.) are generally left at or near the field or orchard where they are generated. Likewise with animal manures, although these are increasingly being collected in Washington State to avoid surface water contamination or to convert the manure to methane and/or compost.

### **7.2.6 Market Assessment for Yard Debris**

State legislation (RCW 70.95.090 (7)(b)(3)) requires programs to collect yard waste where there are adequate markets or capacity for composted yard waste within the service area to consume the majority of the materials collected. The law implies that when cost-effective, source-separated yard waste should be processed into a compost product for beneficial use.

Yard waste program cost components include collection, transportation, processing, product storage, and product marketing and sales. The avoided costs for waste disposal also provide economic benefits for yard waste programs. Avoided disposal costs include collection, transfer, and transport and disposal costs for waste materials. There are three primary potential sources of revenue for yard waste programs: collection rates, tipping fees for yard waste disposal and sales revenues for the compost product.

Adequate markets are available when the tipping fees, product sales revenue, and avoided disposal costs exceed the yard waste program costs by an amount that an investor determines is a reasonable rate of return. The return reflects both financing costs and the risk profile of the specific operation. There are no known problems with current markets for reasonably priced compost and related materials. Future market demand for compost is anticipated to be adequate, depending on the price of it relative to other soil amendments. Processing capacity is a larger potential barrier for increased composting than is market demand, and the County is addressing this issue by encouraging private composting operations as appropriate.

Yard and woody debris can be processed into three primary products: (1) compost, (2) mulch, and (3) hog fuel. Compost can be used as a soil amendment, growing media, or ground cover. Mulch is used as a top dressing to aid in moisture retention. Woody fractions of the yard debris may be converted into hog fuel, which is a feedstock that can be used to run industrial boilers. The value of mulch and hog fuel is relatively low, and both of these use the woody fractions of the organic materials that might be better used as bulking agents for other organic materials. Some types of wood, such as plywood, cannot be used in composting, however, so converting some wood to hog fuel should be an option at any future processing facility.

The primary markets for yard debris that is composted includes large landscaping firms, nurseries and orchards. Large users of organic material could also include local jurisdictions, such as parks, roads and public works departments, if procurement policies are written to allow or even promote the use of compost and related materials. Individual residents may also be an important market, although they would purchase compost in smaller amounts.

In Ferry County, a number of organic orchards represent a huge market for compost, manures and related products. There appears to be little doubt that orchards and farms in Ferry County and neighboring areas could absorb all of the compost potentially produced from the organic materials generated in Ferry County.

## **7.3 Planning Issues**

### **7.3.1 Specific Planning Issues**

Current planning issues related to organics in Ferry County include:

- More education could be conducted by the County, cities and private companies on the benefits of backyard composting and related issues.
- A composting study conducted in 2003 by Parametrix concluded that Ferry County does not have sufficient organics to operate a composting facility cost-effectively (only 400 to 900 tons per year available versus 1,000 tons minimum required). A cost estimate prepared for that study projected the capital costs for a local composting facility to be \$361,000 and the annual operating costs to be \$100,000 (2003 dollars).
- Agricultural waste is not being disposed in landfills, but as a resource some of it could be managed better.
- The Beyond Waste concept of transitioning to a society that views wastes as a misplaced resource applies especially well to the organics discussed here.
- Improved management of organics could have significant benefits for reducing global warming emissions.

### **7.3.2 Quantities Disposed**

There is a significant amount of tonnage of organic materials that is currently being generated in Ferry County. Table 7-1 shows an estimate of the amounts of organic materials generated in Ferry County.

As shown in Table 7-1, there is estimated to be a huge amount of agricultural waste generated in Ferry County. Most of this “waste,” however, does not leave the farm or ranch where it is generated and is never collected in any fashion.

**Table 7.1  
Annual Quantities of Organic Materials Generated in Ferry County**

<b>Material</b>	<b>Amount (tons per year)</b>	<b>Generated at Specific Location?</b>	<b>Seasonal? (yes/no)</b>	<b>Possible Processing Method</b>
Yard Waste (grass clippings and brush)	102	No	Yes	Composting and shredding (for brush)
Food Wastes	320	No	Partly	Composting
Wood, Construction Debris	135	No	Partly	Reuse, composting, hog fuel
Wood, Logging Slash	Large but unknown amount	No	Partly	Hog fuel
Biosolids	Varies	Yes, but several locations	No	Composting, land application, soil blending*
Agricultural Wastes	53,500	Yes, but many locations	Yes	Composting, land application

Notes: Amounts shown for the first three materials are 2007 figures (see Table 3-3). The agricultural waste amount is based on typical waste generation rates and data from the 2007 agricultural census.

### 7.3.3 Regulations

The primary regulations dealing with composting are in Chapter 173-350 WAC. These regulations establish minimum operating conditions and other requirements based on the type of feedstock (discussed earlier in this chapter), quantities and sources of material. These regulations also establish limits on the amount of contamination by metals, “sharps” (syringes) and bacteria. Specific types of composting are exempted from regulation because those activities have been determined to present little or no risk to the environment or to human health.

Activities that do not require a permit include:

1. On-site production of mushroom substrate.
2. Vermicomposting (composting with worms), using Types 1, 2 and 3 feedstocks generated on-site.
3. Less than 40 cubic yards per year of Type 1 and 2 feedstocks generated and composted on-site.
4. Less than 10 cubic yards of food waste per year generated and composted on-site, with composting conducted inside of a container.
5. Agricultural composting if raw materials are generated on-site and the finished product is used on-site.

6. Agricultural composting, less than 1,000 cubic yards per year, materials may be generated off-site but all of the finished product must be used on-site.
7. Agricultural composting at dairies according to a nutrient management plan, and finished product is sold for use off-site.
8. Between 40 and 250 cubic yards per year of Type 1 and 2 feedstocks generated and composted on-site.
9. Between 40 and 1,000 cubic yards per year of agricultural wastes composted according to a “farm plan” and finished product is sold for use off-site.
10. Vermicomposting of Type 1 and 2 feedstocks generated off-site.

State standards for biosolids, shown in Chapter 173-308 WAC, are the same as federal standards. Management of biosolids are handled through a statewide permit that applies to virtually all public and private facilities (except those on Tribal lands), and addresses pollutant concentrations, pathogen reduction, vector attraction reduction, agronomic rates of application, methods and timing of application, buffers to wells and other sensitive areas, crop harvest restrictions, and site management and access. Biosolids applied to areas where human exposure cannot be controlled, such as lawns and golf courses, must meet higher standards than biosolids applied to areas where access control and crop harvest restrictions can be used to prevent human exposure.

Biosolids regulations require that biosolids be put to a beneficial use. Disposal as a waste material, either in a landfill or a “mono-fill” (a landfill dedicated to a single material), is not allowed except on an emergency basis (for up to one year), a temporary basis (for a period of one to five years), or unless it can be demonstrated that no economically-feasible options exist.

## 7.4 Alternatives and Evaluation

### 7.4.1 Alternatives

**Alternative A – Continue or Increase Subsidized Sales of Backyard Home Composting Units:** Subsidized sales of home composting units have proven very popular with Ferry County residents and in other areas as well. These sales should be continued and possibly expanded into more units or different types of home composting units or worm bins. This alternative is consistent with the State’s *Beyond Waste Plan* (see Recommendation ORG2).

**Alternative B – Evaluate Food Waste Management Options:** There is more food waste in Ferry County’s waste stream than any other material (an estimated 345 tons per year, see Table 3.3). This material could potentially be handled in a variety of ways, such as composting, animal feed and other uses, but developing these alternatives will require addressing health concerns and other issues.

**Alternative C – Brush Chipping Operation:** There is some interest locally in implementing a brush chipping program. This program would be open to the public and would allow a hard-to-handle material (brush) to be converted into a potentially useful material (wood chips). The wood chips generated in this fashion do not make the best material for mulching and other landscape applications, since the chips from brush are generally coarse, stringy and may contain leaves and other green materials, but the chips may be acceptable to Avista for use as hog fuel.

The costs for implementing this alternative would include a chipper (from \$20,000 for a small used unit up to \$120,000 for a more powerful unit), possibly a few hand tools or other equipment, any costs associated with setting it up on a fixed parcel of land (or costs associated with moving it to smaller piles accumulated in Republic neighborhoods and other areas, if that approach is used), and the cost of labor, fuel and other operational expenses.

Alternatively, chippers owned by private parties could be hired to periodically process materials collected at one or more central sites. A company that is already active in Ferry County was recently given grant monies to purchase a chipper and two trailers for processing slash piles at logging sites to convert that material into hog fuel. They or others may be willing to process brush as well.

**Alternative D – Ensure Adequate Collection Capacity for Yard Debris:** A drop-off site for yard debris and/or brush could be established at the Torboy Transfer Station and/or other locations. These sites could be used for collection and temporary storage of yard debris, or the collected materials could be offered to farmers and ranchers (as a rough form of mulch) or could be periodically ground and then transferred to a variety of applications.

**Alternative E – Evaluate Ban on Burning:** There is already a burn ban in Republic but implementing a burn ban in the rest of the County would lead to an improvement in air quality in Ferry County. This ban should not be implemented without also implementing one of the previous alternatives for brush. Any publicity for the burn ban should also publicize the options for handling brush and other yard debris.

**Alternative F – Examine Co-Composting of Yard Waste with Biosolids or Other Organics:** Co-composting of yard debris and biosolids has worked well in other areas, such as Port Townsend. This approach not only handles the yard debris, but it also provides an effective method for disposing of biosolids. The compost resulting from this mixture is a high-quality material that is very much in demand and can be sold at a moderate price (\$9 to \$12 per cubic yard in 2009).

#### 7.4.2 Evaluation of Alternative Strategies

The alternatives are compared with respect to the evaluation criteria below.

### Consistency with Guiding Principles

All six alternatives are consistent with the guiding principles of this solid waste plan. Alternatives A, C and D provide a basic or expanded level of solid waste services, Alternative B expands partnerships, and Alternatives E and F examine and evaluate solid waste practices.

### Implementation Costs

Alternatives A, C, D and F could result in a significant capital costs to the County, although the cost for some of these alternatives may be able to be subsidized with State grant dollars.

### Feasibility

Alternatives A, B, C, and D are all politically and technically feasible. Alternatives E and F could invite opposition, yet are technically feasible.

### 7.4.3 Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in Table 7-2.

**Table 7.2  
Summary Rating of the Organics Strategies**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Continue or Increase Subsidized Sales of Backyard Home Composting Units	H	H	H	M
B Evaluate Food Waste Management Options	H	M	H	H
C Brush Chipping Operation	H	H	M	M
D Ensure Adequate Collection Capacity for Yard Debris	H	M	M	M
E Evaluate Ban on Burning	H	M	M	M
F Examine Co-Composting of Yard Waste with Biosolids or Other Organics	H	M	M	M

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

## **7.5 Recommendations**

The following recommendations are being made for organics programs:

- O1) Continue and increase subsidized sales of home composting units.
- O2) Assess feasibility of establishing a drop-off site at transfer station or another suitable location for collection and storage of yard debris and wood waste.
- O3) Assess feasibility of techniques for diversion and beneficial use of food waste.

## **CHAPTER 8: COLLECTION**

### **8.1 Introduction**

This chapter of the *Ferry County Solid Waste Management Plan* (Plan) discusses solid waste collection activities in Ferry County, including the regulatory framework, existing systems, needs and opportunities, alternatives, and recommendations for future improvements.

Solid waste collection programs are an important element of the solid waste system. The manner in which garbage is collected from households and businesses in Ferry County has a significant impact on the overall system efficiency and effectiveness.

#### **8.1.1 Existing Rules and Regulations for Solid Waste Collection**

The Washington State Department of Ecology (Ecology), the Washington Utilities and Transportation Commission (WUTC), Ferry County, cities and towns, and the Colville Tribe share the legal authority for solid waste collection within the County.

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

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

1. Municipal collection: collect waste using municipal employees.
2. Contract collection: the municipality conducts a competitive procurement process and selects a private company to provide collection services.
3. Franchise: if a city does not wish to manage garbage collection within its boundaries, the hauler with a WUTC certificate for the area can provide those services. The city may pass an ordinance requiring that certain services be provided and require a certificated hauler to secure a license from the city.

**Unincorporated Areas:** Through its G-certificate program, the WUTC grants exclusive rights to specific haulers in unincorporated areas. RCW 81.77.030 allows the WUTC to supervise and regulate waste collection companies:

1. By fixing and altering its rates, charges, classifications, rules and regulations;
2. By regulating the accounts, service, and safety of operations;

3. By requiring the filing of annual and other reports and data;
4. By supervising and regulating such persons or companies in all other matters affecting the relationship between them and the public that they serve;
5. By requiring compliance with local solid waste management plans and related implementation ordinances; and
6. By requiring certificate holders under chapter 81.77 RCW to use rate structures and billing systems consistent with the solid waste management priorities set forth under RCW 70.95.010 and the minimum levels of solid waste collection and recycling services pursuant to local solid waste management plans.

Washington Administrative Code (WAC) 480-70 implements RCW 81.77 by establishing standards for public safety, fair practices, just and reasonable charges, nondiscriminatory application of rates, adequate and dependable service, consumer protection, and compliance with statutes, rules and commission orders.

## **8.2 Existing Practices**

Solid waste is collected in the City of Republic through a contract, and in other parts of the County through a state-issued certificate (which is similar to a franchise). A single hauling company, Couse's Sanitation and Recycle (22 Smith Drive, Republic, WA 99166), provides all of the garbage collection services in Ferry County. Waste on the Colville Reservation is collected through two transfer stations and a garbage collection service provided by the Colville Tribe.

### **8.2.1 City of Republic**

The City of Republic has a mandatory garbage ordinance (which requires that all residents and businesses in the city subscribe to garbage collection), and contracts with Couse's Sanitation to provide collection services to homes and businesses within the City. The City of Republic conducts the billing for these services, and rates are based on the volume of garbage service (see Table 8-1).

### **8.2.2 Unincorporated Ferry County**

In the unincorporated areas of Ferry County, collection services are provided under a certificate granted by the State, through the Washington Utilities and Transportation Commission (WUTC). Any changes in rates or services in certificated areas must be approved by the WUTC.

The WUTC certificate (Certificate G-169) grants Couse's Sanitation the exclusive right to provide waste collection services to residents and businesses in the unincorporated areas of the County (except in the Colville Reservation). The Colville Tribe provides collection services for residents of the Reservation on a subscription basis.

**Table 8.1  
Monthly Collection Rates in Ferry County**

<b>Alternative</b>	<b>City of Republic</b>	<b>Ferry County</b>
<b>Residential Rates:</b>		
Micro Can (10 gallons or less), once per week	NA	\$10.38
One Can, once per month	\$10.04	\$7.52
One Can, once per week	\$18.04	\$16.23
Two Cans, once per week	\$23.09	\$21.15
Three Cans, once per week	\$28.15	\$26.17
<b>Commercial Rates:</b>		
2-Yard Dumpster, once per month, leased container	\$49.04	\$45.91
2-Yard Dumpster, once per month, self-owned container	\$28.30	\$28.63
2-Yard Dumpster, once per week, leased container	\$138.85	\$141.34
2-Yard Dumpster, once per week, self-owned container	\$120.69	\$124.06
6-Yard Dumpster, once per month, leased container	\$109.41	\$99.64
6-Yard Dumpster, once per month, self-owned container	\$69.03	\$68.01
6-Yard Dumpster, once per week, leased container	\$330.17	\$326.34
6-Yard Dumpster, once per week, self-owned container	\$294.40	\$294.71
<b>Population Densities:</b>		
Population	1,000	6,700
Land Area, square miles	1.6	2,202
Density, people per square mile	625	3.0

Notes: Rates are current as of late 2009. Not all rates are shown (only a few representative rates are shown to provide examples). Rates shown are for permanent service (not temporary service, which would entail delivery and daily rental charges)

Residential collection services offered by Couse’s Sanitation in the unincorporated parts of the County include options for garbage collection on a weekly, every-other-week or once-monthly basis. The rates currently charged in unincorporated Ferry County (as of 2009) are shown in Table 8-1.

### 8.3 Planning Issues

Issues that are specific to Ferry County’s collection system include:

- The subscription rates in rural areas are low.

- Collection subscription fees must cover the cost of providing service while avoiding illegal dumping and junk on properties.
- There are significant access constraints in some parts of the County during winter.

The current collection system provides adequate capacity for the County's and City's residents and businesses, although these services are not always utilized as much as they should be (as evidenced by the illegal dumping and "junk property" problems in the County). Future waste quantities have been estimated (see Table 3.4), and the existing collection system is anticipated to be able to handle the projected increase.

## **8.4 Alternatives and Evaluation**

### **8.4.1 Alternatives**

Possible alternatives to be considered:

**Alternative A – Consider Mandatory Collection:** A possible alternative for collection in Ferry County is mandatory garbage collection service. Currently about 13% of the County's population is in areas where payment for collection service is mandatory (Republic), and the other 87% of the population is in largely rural areas where subscription to collection services is voluntary. Mandatory collection in unincorporated areas could be provided through a solid waste collection district. State law (Ch. 36.58A RCW) enables a county to establish such a district.

Mandatory collection programs throughout the rest of Ferry County would provide some benefits, but not without possible drawbacks. Benefits include a reduction in illegal dumping; a reduced need for enforcement of illegal dumping, littering and other laws; and greater ability to provide curbside recycling programs (assuming a combination of recycling and garbage services). Mandatory collection, however, can act as a disincentive for those who are actively trying to reduce wastes if the rate structure is too rigid and can be potentially very difficult to implement.

**Alternative B – Adopt a Service Level Ordinance:** Residents in Republic currently receive more solid waste services than residents of rural areas, although in many cases this is because rural residents choose not to subscribe. A minimum service level standard would help address such inequities, and could also increase recycling and yard debris collections. A minimum service level standard could be established through a service level ordinance. This approach could be used to institute new programs or services in the unincorporated areas of the County and also possibly in Republic (with their consent). A service level ordinance could be used to change billing practices, such as "embedding" the cost of recycling into garbage collection fees (see also Alternative I in the Recycling chapter).

**Alternative C – Examine Collection System:** A periodic review of the waste collection system, including frequency, location of containers, quantity limitations, and container requirements, could be conducted to evaluate the need for changes and updates. These changes would generally be prompted by other changes, such as changes in recycling and disposal programs or in rates and other financial factors. Any changes in the rural areas would need to be approved by the WUTC and may require a service level ordinance (see Alternative B), but changes in Republic could be implemented through the City’s waste collection contract.

#### **8.4.2 Evaluation of Alternative Strategies**

The alternatives are compared with respect to the evaluation criteria below.

##### **Consistency with Guiding Principles**

All alternatives are consistent with the guiding principles of this solid waste plan. Alternatives B and C help to assure a basic level of disposal and recycling services to all residences, businesses and institutions in the County.

##### **Implementation Costs**

Customers generally prefer low-cost alternatives, and hence may not like Alternative A, as there could be an added cost to implement mandatory recycling in the County.

##### **Feasibility**

Alternatives A and B are politically challenging. The difficulty in Alternative A is getting the support from the County users. This alternative is also challenged to keep costs low and equally serve the rural areas of the County. Alternative C is not controversial and are technically feasible.

#### **8.4.3 Rating of Alternatives**

The alternatives are compared with respect to the evaluation criteria in Table 8.2.

### **8.5 Recommendations**

The following recommendations are being made for collection programs:

- C1) Assess feasibility of mandatory refuse collection on countywide basis.
- C2) Periodically examine waste collection methods to monitor and improve efficiency and effectiveness.

**Table 8.2  
Summary Rating of the Collection Strategies**

<b>Alternative</b>	<b>Consistency with Guiding Principles</b>	<b>Implementation Costs</b>	<b>Feasibility</b>	<b>Overall Rating</b>
A Consider Mandatory Collection	M	H	L	L
B Adopt a Service Level Ordinance	H	M	M	M
C Examine Collection System	H	M	H	H

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

## CHAPTER 9: HANDLING AND TRANSFER

### 9.1 Introduction

This chapter discusses the various components and options for the transfer system in Ferry County.

#### 9.1.1 Background for the Waste Transfer System

A transfer station is a facility that accepts many smaller loads of solid waste from a variety of customers, and consolidates those into a few large loads. The large loads are usually placed in a transfer trailer that hauls a net payload ranging from 18 to 27 tons. In this chapter, the term “self-haul” means garbage brought in by residents driving cars and pickup trucks, and small businesses and contractors using various types of trucks and trailers.

Transfer stations are an important element of the solid waste system, especially in an area such as Ferry County that lacks an in-county landfill. The disposal and other services provided by the transfer station are critical components affecting Ferry County’s system efficiency and cost-effectiveness.

#### 9.1.2 Rules and Regulations for the Waste Transfer System

The siting, design, and operation of transfer facilities are addressed in WAC 173-350-310, which regulates intermediate solid waste handling facilities. The regulations specify standards for design, construction, operations and records. Permitting and oversight of solid waste transfer stations rests with the Northeast Tri-County Health District (NETCHD).

Counties have the authority to site, own and operate solid waste transfer facilities, or to contract for such facilities and services. Waste hauling from county solid waste transfer facilities is not regulated under the Washington Utilities and Transportation Commission (WUTC) solid waste hauler regulations if it meets the definition of a solid waste transfer station (fenced, staffed during open hours and fees charged to cover the cost of service) and is part of the county solid waste system. Counties may specify within their solid waste hauling contracts where the collected materials are to be disposed.

A recent state regulation, RCW 46.61.655, applies to people that are self-hauling their garbage (and other materials). This regulation requires that loads be secured, and increases the fines for loads that are not secured. A previous regulation (RCW 70.93.097) requires that a county with a staffed transfer station or landfill adopt an ordinance requiring waste be covered or secured. This regulation specifies that a fee should be imposed in cases where loads are not properly secured or covered.

## 9.2 Existing Practices

Ferry County owns and operates one transfer station, the Torboy Transfer Station (see Figure 9-1). This transfer station is located at 584 Torboy Dump Road, which is a few miles north of Republic, at the site of an old landfill. Waste from this station is placed into 40-foot trailers and transported out of county to an Allied Waste landfill in Roosevelt, Washington (See Chapter 10 for more details about the waste disposal system). This transfer station is equipped with a scale for weighing incoming loads of waste, but the scale is only 30 feet long and so outgoing trailers must be weighed in Spokane. Trailers must weigh a minimum 24 tons to avoid financial penalties for transportation (under-weight containers are still charged as if they weighed 24 tons). The operations plan for this transfer station was updated in 2009. Table 9-1 shows the current rates for the Torboy Transfer Station.

**Figure 9.1  
Torboy Transfer Station**



**Table 9.1  
Rates at the Torboy Transfer Station (2010)**

Type of Material	Cost
Garbage, per ton	\$134.00
Minimum charge (for 120 pounds or less)	\$8.00

The Confederated Tribes of the Colville Reservation also operates two transfer stations, in the Inchelium area and at the West Fork San Poil site. Waste from these stations is delivered to the Stevens County Landfill. A third transfer station is operated by the Colville Tribe in the Keller area, and waste from that station is brought to the Okanogan Landfill.

### **9.3 Planning Issues**

Current planning issues for the transfer system in Ferry County include:

- Could do more at transfer station (such as recycling, building material reuse, and yard debris separation).
- 24-hour access for Couse's Sanitation could increase flexibility and convenience for their customers.
- Burying and burning of garbage on private property is a common practice in Ferry County. Depending on the materials being handled this way, this practice could be causing significant problems for air and ground water quality.
- Ferry County is currently not in compliance with RCW 70.93.097 (the state law requiring counties to adopt a secure load ordinance), but this is in process.

### **9.4 Alternatives and Evaluation**

#### **9.4.1 Alternatives**

Only one alternative is being considered for this element of the solid waste system, but see also the proposed packaging of solid waste services (Alternative B, Section 10.4.1), which could also affect the operation of the transfer station, as well as alternatives discussed under waste reduction, recycling, composting and special wastes.

**Alternative A – Review Need for Additional Services or Facilities:** Periodic review of the need for additional public or private transfer facilities or for additional services at transfer station should be conducted by the SWAC and/or by the Solid Waste System Governance Board. This review could be conducted annually or upon request by an interested party. The costs, schedule and other parameters of this alternative would be highly dependent on what recommendations (if any) result from this review.

#### **9.4.2 Evaluation of Alternative Strategies**

The alternative is compared with respect to the evaluation criteria below.

### Consistency with Guiding Principles

Any proposed changes that result from this alternative would presumably be consistent with the guiding principles of this solid waste plan.

### Implementation Costs

The cost for this alternative cannot be defined at this time.

### Feasibility

The feasibility for this alternative cannot be defined at this time.

### 9.4.3 Rating of Alternatives

The alternative is compared with respect to the evaluation criteria in the following table.

**Table 9.2  
Summary Rating of the Handling and Transfer Strategies**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Review Need for Additional Services or Facilities	H	Unknown	Unknown	Uncertain

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

### 9.5 Recommendations

The following recommendation is being made for handling and transfer programs:

- T1) Review and prepare report on the need for additional services or facilities for handling and transfer of waste as well as materials that can be diverted for recycling, reuse, or other beneficial uses.

## CHAPTER 10: DISPOSAL

### 10.1 Introduction

This chapter of the *Ferry County Solid Waste Management Plan* (the Plan) addresses both waste export, where waste from Ferry County is sent outside of the County for disposal purposes, and landfilling activities in general.

Landfilling activities have undergone major changes in Ferry County and other parts of the United States over the past few decades. Until environmental regulations were enacted in the 1970's, in response to growing recognition of the impacts of landfills on groundwater, "landfills" in Ferry County and other areas were simply open dumps that were periodically burned. Then garbage began to be buried in these landfills, according to the requirements of Chapter 173-301 WAC, to reduce rodents and in an effort to reduce the impacts of these dumps on the environment. The open dumps and early landfills were typically free, due in part to the fact that the cost of operating these sites was very low. Washington State adopted the Minimum Functional Standards (Ch. 173-304 WAC) in 1985, which further refined landfill requirements. Increasing recognition of the impacts of landfills on groundwater, surface water and air quality led to even more stringent federal regulations in 1991, which were then enacted in State regulations through Ch. 173-351 WAC. These regulations shifted the economics and desirability of landfilling activities away from having many local landfills to a few large regional landfills. Like Ferry County, many of the counties in the state no longer have a landfill in their county but instead ship wastes to a regional landfill.

### 10.2 Existing Practices

**Existing disposal activities:** Most of the solid waste from Ferry County is exported out of the County to the Allied Waste Landfill in Roosevelt, Washington. The waste is first consolidated at the Torboy Transfer Station and transported in large trailers that are 40 feet long. The trailers are trucked to an intermodal facility in Spokane Valley, and then transferred to a train for transportation to the landfill. Waste from the eastern part of the County is transported directly in the collection vehicles to the Stevens County landfill. Waste on the Colville Reservation is first consolidated at one of two sites and then transported to landfills in either Stevens County (from the Inchelium district) or to Okanogan County (from the rest of the Reservation).

**Solid waste landfills:** There are no solid waste landfills currently operating in Ferry County.

**Inert waste landfills:** There are no inert waste landfills currently active in Ferry County.

**Closed landfills:** Even though the closed landfills in Ferry County are no longer receiving waste, their effects on the environment must still be monitored. Monitoring costs for the closed Torboy Landfill are about \$16,000 per year, and these costs are paid by the tipping fee for the transfer station now located there.

**Regulatory framework:** State laws regulating landfill design and operation are specified within Chapter 173-351 WAC. Regulations concerning inert and limited purpose landfills are contained in Ch. 173-350 WAC (sections 410 and 400, respectively). The Health District enforces these regulations, which include the siting, design, operation, closure and post-closure activities at the landfills. Ecology assists in enforcement through permit review and technical assistance to the Health District.

### **10.3 Planning Issues**

There are several issues related to disposal in Ferry County:

- The relatively small amount of waste produced in Ferry County is a limiting factor for disposal options.
- The current waste export contract ends in the latter part of 2012.

### **10.4 Alternatives and Evaluation**

#### **10.4.1 Alternatives**

**Alternative A – Deliver All Waste to the Torboy Transfer Station:**

Consolidating all of the County's waste, including waste from the eastern part of the County and waste from the Colville Reservation, at one location would lead to lower costs per ton for waste disposal due to greater economies of scale. In the case of the Reservation's waste, the Confederated Tribes of the Colville Reservation would need to voluntarily agree to this, since the County has no authority to require this. In the case of the waste from the eastern part of the County, Ferry County could require that waste to be delivered to the Torboy Transfer Station, although that could lead to slightly higher prices for the residents of that area. In addition, the waste from that part of the County is only about 7% of the County's total waste stream (see Section 3.2 of this Plan for more details).

**Alternative B – Comprehensive Waste Services Package:** When the contract for waste export is re-bid in 2012 (a process that will actually need to begin in 2011), bids could be requested for a wide variety of services. Packaging a range of services together may create more opportunities to implement these services cost-effectively. In addition to the transportation and disposal of the waste to an out-of-county landfill (the current services included in the waste export contract), other potential services could include the operation of the transfer station,

recycling collections, yard debris collection, additional services at the transfer station (material exchange, MRW collection and recycling/organics collection), and possibly other services. Bids for the additional services could be on an “ala carte” basis, which would allow the County to evaluate the feasibility and desirability of contracting for the additional services.

**Alternative C – Cooperative Arrangements:** The City of Republic, Ferry County, Colville Tribe and private sector could work together on more issues, but at a minimum could cooperate on disposal arrangements (see also Alternative B in the Organization and Administration chapter). The City and County have taken a step forward on this issue recently, with the execution of an inter-local agreement, but the Tribe could also join in looking at future disposal options and how they might participate. This could be done on informal or formal basis, ranging from Tribal representatives assisting with the bidding process for a new waste export contract to an agreement for all parties to pool their waste streams and participate in the same disposal system. The latter option would not necessarily require that the Tribe’s waste be physically mixed with the City and County’s wastes, but could be consolidated at a separate location and then handled under the same contract.

#### **10.4.2 Evaluation of Alternative Strategies**

The alternatives are compared with respect to the evaluation criteria below.

##### **Consistency with Guiding Principles**

All three alternatives are consistent with the guiding principles of this solid waste plan. Alternative A and B address the guiding principles of assuring a basic level of disposal and recycling services. Alternative C is a good example of expanding partnerships by seeking agreement on solid waste services with the Confederated Tribes of the Colville Reservation.

##### **Implementation Costs**

Customers generally prefer low-cost alternatives, and hence may like Alternatives B and C. Both these alternatives could bring a lower cost for increased service. Alternative A could be a slightly lower cost alternative for most of the western part of the County, but could increase costs for residents east of the mountains.

##### **Feasibility**

Alternative A may present the political risk of appearing to create an imbalance or unfair situation for the eastern residents and residents of the Colville Reservation. Alternative B presents an opportunity that is both politically and technically advantageous to County residents. Alternative C involves negotiation, yet is both politically and technically feasible.

### 10.4.3 Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in the following table.

**Table 10.1  
Summary Rating of the Disposal Strategies**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Deliver all Waste to the Torboy Transfer Station	H	M	L	L
B Comprehensive Waste Services Package	H	M	H	H
C Cooperative Arrangements	H	L	H	H

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

### 10.5 Recommendations

The following recommendations are being made for the disposal system:

- D1) Develop an arrangement or agreement between Ferry County, the City of Republic, the Confederated Tribes of the Colville Reservation, and the private sector to cooperatively secure one contractor for waste disposal.
- D2) Issue a Request for Proposals for a Comprehensive Waste Services Package that includes transportation and disposal of the waste from Ferry County, and potential supplemental services such as: residential curbside recycling services, commercial/institutional recycling services, commingled or source-separated recycling, regional approaches for recycling, local or regional storage capabilities for recyclables, processing and marketing of recyclables, and yard debris processing.

## CHAPTER 11: SPECIAL WASTES

### 11.1 Introduction

The purpose of this chapter is to review the generation, handling and disposal methods for several special wastes in Ferry County. These wastes may require special handling and disposal either for regulatory requirements or for one or more other reasons, such as toxicity or other special handling problems.

The following special wastes are discussed in this chapter:

- 11.2 Animal Carcasses
- 11.3 Construction and Demolition (C&D) Wastes
- 11.4 Infectious/Biomedical Wastes
- 11.5 Junk Vehicles

The nature and source(s) for each special waste is described in this chapter, as well as the existing programs, planning issues and alternatives for Ferry County for handling these wastes.

### 11.2 Animal Carcasses

#### 11.2.1 Background for Animal Carcasses

The Washington State Board of Health regulates the disposal of animals not known to be affected with disease. WAC 246-203-121 addresses the disposal of dead animals. The Washington State Department of Agriculture regulates the disposal of livestock that has died because of disease. Chapter 16-25 WAC details the disposal of this livestock.

Under the current regulations, animal carcasses can be buried, composted, incinerated, landfilled, naturally decomposed or taken to a rendering facility in accordance with Health District regulations. Below are some locally preferred methods of handling animal carcasses.

1. Animals that die of natural causes (but not an infectious disease) are frequently buried, composted, landfilled, or taken to a rendering facility in accordance with Health District regulations. In Ferry County, an animal carcass can be taken to or delivered to a rendering facility such as Baker Commodities in Spokane. Animal carcasses can also be taken to a landfill in one of the neighboring counties. Neither of these options are used very often, however, due to the distances and costs involved.
2. Animals killed by collision with motor vehicles (“road kill”) can be landfilled.

3. The carcasses of animals that die from an infectious disease must be treated to destroy the disease-causing agent to prevent it from infecting other animals or humans. For any livestock that has died because of disease, the owner must dispose of the carcass within a time frame and in a manner prescribed in state law, which may include but is not limited to burial, composting, incinerating, landfilling, natural decomposition, or rendering.

### **11.2.2 Current Practices for Animal Carcasses**

The County's policies for animal carcasses allows roadkill to be accepted at the transfer station, but rarely is this option used.

### **11.2.3 Planning Issues for Animal Carcasses**

Potential issues for Ferry County include.

- The special handling of animal carcasses specifically for populations such as deer is a concern of the solid waste staff rather than the health district.
- Mad cow disease, avian flu, other epidemics could create large amounts of animal carcasses that must be handled carefully.

Because they can potentially infect humans, two of the most important animal diseases are Bovine Spongiform Encephalopathy (BSE) and avian flu. BSE, more commonly known as mad cow disease, BSE belongs to a family of incurable and fatal diseases characterized by dementia and caused by prions, which are a type of mutated protein. It is believed that humans can contract a similar disease by eating infected beef.

BSE-infected cattle cannot be buried in an unlined landfill. Because prions are not destroyed when the waste decomposes, they could eventually migrate to sources of drinking water. In addition, BSE-infected cattle cannot be disposed in a landfill whose leachate goes to a sewage treatment plant, because chlorination does not deactivate prions either. In 2004, BSE-infected cattle were disposed of in the Rabanco Regional Landfill near Roosevelt, Washington, which was chosen because it treats its leachate in evaporation ponds. Solids remaining after leachate evaporation are eventually returned to the landfill, thus preventing prions from reaching groundwater or surface water bodies.

Incineration is also an accepted method of BSE-cow disposal, although there are only two potentially suitable incineration facilities in Washington State. The Spokane municipal solid waste incinerator has historically been unwilling to accept BSE-infected cattle. The biomedical/pathological waste incinerator at Washington State University in Pullman has limited capacity, and could not accept large numbers of cattle.

Avian flu is caused by bird influenza viruses. Wild birds carry these viruses without getting sick, but domesticated poultry (chickens, ducks, and turkeys) can be killed. Since 1997, avian influenza H5N1 has infected and killed humans who had close contact with infected poultry. There is concern that the H5N1 virus could mutate and eventually acquire the ability to spread easily from one person to another, without birds as the carrier. Humans have little natural immunity protection against avian flu viruses. It is believed that a highly pathogenic avian influenza virus that jumped from birds to humans was the cause of a pandemic (worldwide outbreak of disease) in 1918. On-site composting has been proven to be an effective disposal method for dead poultry, as the avian influenza virus is deactivated after 10 days of composting at 60° C (140° F).

#### **11.2.4 Alternatives for Animal Carcasses**

Only one alternative is being considered for this waste stream:

**Alternative A – Composting of Animal Carcasses:** Composting is an acceptable method of handling animal carcasses. Aerated static pile, vessel, windrow composting and alternative methods can be used. These methods must follow strict guidelines, which can be found in RCW 70.95 and 173-350 WAC and in Ecology’s “*On Farm Composting of Livestock Mortalities*” (publication number 05-07-03).

#### **11.2.5 Evaluation of Alternatives for Animal Carcasses**

The alternative is compared with respect to the evaluation criteria below.

##### **Consistency with Guiding Principles**

Alternative A is consistent with the guiding principles of this solid waste plan.

##### **Implementation Costs**

Alternative A would require a significant capital expense to construct a composting facility. The current practice of burying dead animals on-site is less expensive.

##### **Feasibility**

The feasibility of Alternative A is high as an alternate practice and it provides another option for handling animal carcasses.

#### **11.2.6 Rating of Alternatives for Animal Carcasses**

Alternative A is compared to the evaluation criteria in the following table.

**Table 11.1  
Summary Rating of the Animal Carcass Alternatives**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Composting Animal Carcasses	H	L	H	M

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

### 11.2.7 Recommendations for Animal Carcasses

No recommendations are being made for animal carcasses.

## 11.3 Construction and Demolition (C&D) Wastes

This section of the Plan also addresses “green building,” which is a topic closely related to construction and demolition wastes.

### 11.3.1 Background for C&D Wastes

Construction and demolition wastes contain those materials used in the construction process or that are present in the structure being demolished. Construction wastes include substantial amounts of wood scraps, drywall scraps, and excess concrete, as well as cardboard boxes and other packaging used to hold materials or products prior to installation. Demolition wastes typically contain substantial amounts of concrete, brick, wood, drywall and other materials. Land clearing debris (tree stumps, brush and soil) is often included with C&D wastes, but little of this is actually sent to disposal facilities.

**Rules and Regulations for C&D Wastes:** Construction, demolition and landclearing waste is a solid waste resulting from the construction, renovation, and demolition of buildings, roads and other man-made structures. Washington State Administrative Code (WAC 173-350-400) allows many types of construction and demolition wastes to be disposed in limited purpose landfills. In addition, State Law prohibits the open or unregulated burning of “treated wood, metal and construction debris.”

The State legislature passed the “Sham Recycling Bill” in 2005, requiring transporters of recyclable materials to register with the state, and requiring certain recycling facilities to notify the state before commencing operation. A new state rule, the Recyclable Materials Transporter and Facility Requirements (Ch. 173-345

WAC), was developed in response to this legislation. Although originally directed at C&D recycling issues, the new rule covers all types of recyclable materials (all materials that are designated as recyclable in this Plan). The new rule prohibits delivery of recyclable materials to transfer stations and landfills. The rule does not apply to several entities, including self-haulers, cities and city contractors, and charities.

**Beyond Waste Plan:** Increasing the amount of green building practices is one of the five key initiatives identified in the State's *Beyond Waste Plan*. Green building is defined by the *Beyond Waste Plan* as "design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five broad areas: sustainable site planning; conservation of materials and resources; energy efficiency and renewable energy; safeguarding water and water efficiency; and indoor air quality." The *Beyond Waste Plan* adopted a short-term goal of "dramatically increasing adoption of environmentally preferable building construction, operation and deconstruction practices throughout the state and the region." A separate long-term goal was also adopted, which is for "green building to be a mainstream and usual practice throughout the state."

### 11.3.2 Existing Practices for C&D Wastes

Construction and demolition wastes are generated by construction companies, homeowners and others. Few opportunities exist in Ferry County for recycling or reusing C&D wastes:

Central Washington Homebuilders has a "Built Green" program that promotes green building to both their members and the general public. The web page for Central Washington Homebuilders ([www.cwhba.org](http://www.cwhba.org)) provides information and online tools (such as checklists and buyers guides for homeowners and participation forms for members).

### 11.3.3 Planning Issues for C&D Wastes

Ferry County planning issues include the following:

- There is some reuse of building materials occurring now, but might be able to do more.

### 11.3.4 Alternatives for C&D Wastes

Four possible alternatives for C&D wastes are described below.

**Alternative A – Install a Collection Area at the Transfer Station:** An area at the transfer station could be set up as a collection and temporary storage point for reusable building materials. Materials could be placed in this area by either the

customers or by transfer station staff (time permitting). The area should be close to the tipping floor but also distinctly separated from it, to avoid confusion about what materials are permissible to take (scavenging directly from the tipping floor should not be allowed due to safety and regulatory concerns). Rules would need to be established as to who can take materials from this area, and in any case solid waste customers should be required to weigh out and complete their garbage transaction before taking materials from this area.

**Alternative B – Allow for Collection of Wood for Energy Recovery or Composting:** Wood waste and wood chips could be collected for “hog fuel.” Avista, a utility located in Stevens County, uses hog fuel to create electricity. In past years, hog fuel was accepted with a tipping fee, but currently Avista pays for the material. The supply and demand for hog fuel can fluctuate, but Avista expects to continue purchasing hog fuel for at least the next few years. A small number of portable grinders deliver hog fuel to Avista, but other companies can also deliver it to them.

Some types of wood could also be composted, contingent on the acceptance practices of available composting facilities.

**Alternative C – Promote Green Building:** As mentioned earlier in this section, Ecology has adopted green building one of the five primary initiatives in the state’s *Beyond Waste Plan*. The *Beyond Waste Plan* adopts the following definition of green building from the United States Green Building Council (USGBC):

“design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five broad areas:

- sustainable site planning
- conservation of materials and resources
- energy efficiency and renewable energy
- safeguarding water and water efficiency
- indoor air quality.”

The scope of green building is very broad and there are only a few of these topics that fit within the context of this Plan. For instance, issues dealing with energy efficiency, water conservation and indoor air quality have little to do with topics such as C&D recycling or even the use of recycled products. The green building activities that are relevant to this Plan are limited to:

- Promoting the use of building products with recycled content, and
- Promoting de-construction activities that allow reuse and recycling.

**Alternative D – Promote a Private Building Material Reuse Center:** The idea of a private retail outlet for reusable C&D materials could be explored. Lumber and other wood products are materials that often could be reused more. Additional efforts could also be made to promote the use of reused and recycled building products by homeowners and builders.

An ideal option could be a facility that combines reuse and recycling as appropriate for the material. The collection site could sell salvaged products (such as doors, windows, and cabinets), as well as crush or grind other materials such as concrete and wood.

### **11.3.5 Evaluation of Alternatives for C&D Wastes**

The alternatives are compared with respect to the evaluation criteria below.

#### **Consistency with Guiding Principles**

All alternatives are consistent with the guiding principles of this solid waste plan, with Alternatives B and C directly in line with the principles. Alternative A is very closely linked to the principles for this chapter. Alternative D is consistent with the principle that encourages private sector activities where appropriate.

#### **Implementation Costs**

Alternative A would require some capital investments at the transfer stations and possibly some operational expenses. Alternative B should pay for itself or even generate some revenue. Alternative C would require a small amount of promotional expense. Alternative D should not lead to any expenditure of public funds.

#### **Feasibility**

The feasibility of Alternatives A and B are high. Alternative C may have a lower feasibility as it may not be popular with all the citizens. The feasibility of Alternative D is the most uncertain.

### **11.3.6 Rating of Alternatives for C&D Wastes**

The alternatives are compared with respect to the evaluation criteria in Table 11-2.

### **11.3.7 Recommendations for C&D Wastes**

The following three recommendations are being made for C&D wastes:

- C&D1) Install a drop-off site at the transfer station for collection, storage and distribution of reusable building materials on a pilot project basis.

**Table 11.2  
Summary Rating of the C&D Alternatives**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Install a Collection Area at the Transfer Station	H	M	H	M
B Collect Wood for Hog Fuel	H	L	H	H
C Promote Green Building	H	M	M	M
D Private Building Material Reuse Center	H	L	L-M	L

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

C&D2) Encourage diversion of wood waste for the purpose of energy recovery.

C&D3) Promote green building practices.

## 11.4 Infectious/Biomedical Waste

### 11.4.1 Background for Infectious/Biomedical Wastes

The State’s definition of biomedical waste (RCW 70.95K.010) preempts that of local health jurisdictions, and includes the following waste types:

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

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

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

**Human blood and blood products:** discarded waste human blood and blood components, and materials containing free flowing blood and blood products.

**Pathological waste:** human source biopsy materials, tissues, and anatomical parts that emanate from surgery, obstetrical procedures and autopsy. Does not include teeth, human corpses, remains and anatomical parts that are intended for internment or cremation.

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

The Washington State Utilities and Transportation Commission (WUTC) regulates transporters of biomedical wastes. Its regulations also allow regular solid waste haulers to refuse to haul wastes that they observe to contain infectious wastes as defined by the WUTC. The WUTC has issued a statewide certificate (franchise) to Stericycle to transport biomedical wastes.

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

#### **11.4.2 Existing Practices for Infectious/Biomedical Wastes**

Stericycle, Inc. directly contracts for collection biomedical/infectious wastes from hospitals and labs in Ferry County. Due to privacy considerations, Stericycle does not provide detailed information about where these wastes are generated. It sends pathological and trace chemotherapy waste to its incineration facility in Salt Lake City, Utah. The other biomedical wastes are sent to its facility in Morton, Washington for autoclave heat treatment.

#### **11.4.3 Planning Issues for Infectious/Biomedical Wastes**

Current biomedical/infectious waste management and disposal practices are generally adequate.

#### **11.4.4 Alternatives for Infectious/Biomedical Wastes**

**Alternative A – Increased Education:** Additional education could be conducted for households, dentists, veterinarians, farmers and ranchers to promote safe handling and disposal of sharps. Educational material could include flyers for posting at farm supply stores and community gathering areas. A mailing could

also be directed to dentists, households and veterinarians on the proper handling and disposal of biomedical wastes. This education could also be made available on the Ferry County website.

**Alternative B – Collection Program:** Syringes and other biomedical wastes generated through home health care and on farms and ranches often “slip through the cracks” as far as proper management is concerned. One approach for addressing this situation would be to develop a collection program, where hospital, drug store or other location would accept syringes for free from the public. This is being done in Chelan County, for instance. For farmers and ranchers, the collection point could a farm supply store or other point of purchase.

**11.4.5 Evaluation of Alternatives for Infectious/Biomedical Wastes**

The alternatives are compared with respect to the evaluation criteria below.

**Consistency with Guiding Principles**

Alternatives A and B are consistent with the guiding principles of this plan.

**Implementation Costs**

Alternatives A and B both have minimal costs, including staff time and promotional materials. Alternative B will also require someone to subsidize the disposal costs for the collected syringes.

**Feasibility**

The feasibility of Alternative A is fairly straightforward, while Alternative B will hinge on one or more private companies being willing to host a disposal system.

**11.4.6 Rating of Alternatives for Infectious/Biomedical Wastes**

The alternatives are compared with respect to the evaluation criteria in Table 11-3.

**Table 11.3  
Summary Rating of the Infectious/Biomedical Waste Alternatives**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Increased Education	H	M	M	M
B Collection Program	H	M	M	M

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

### **11.4.7 Recommendations for Infectious/Biomedical Wastes**

No recommendations are being made for infectious/biomedical wastes.

## **11.5 Junk Vehicles**

### **11.5.1 Background for Junk Vehicles**

**Rules and Regulations for Junk Vehicles:** RCW 70.93.060 prohibits the abandonment of junk vehicles upon any property located in an unincorporated area of a county. Abandoned vehicles are also regulated under RCW 46.55, which establishes rules for removal and disposal of junk vehicles. If a junk vehicle is abandoned in violation of RCW 70.93.060, RCW 46.55.230 governs the vehicle's removal, disposal, and sale, and penalties that may be imposed against the registered owner of the vehicle.

### **11.5.2 Existing Practices for Junk Vehicles**

Cleaning up stockpiles of private vehicles is generally a private effort. Such efforts are only conducted sporadically, and generally only when market prices for scrap steel are high enough to make this effort profitable.

### **11.5.3 Planning Issues for Junk Vehicles**

Current junk vehicle waste management and disposal practices are generally not adequate to avoid accumulations of old cars on several personal properties throughout the county.

### **11.5.4 Alternatives for Junk Vehicles**

A possible alternative for junk vehicles wastes is described below.

**Alternative A – Assess Feasibility of Special Collection Events:** A special collection event for junk vehicles could be conducted every few years. This collection event would require a central location where old cars could be temporarily stored until a mobile crusher or other equipment was brought in to process the cars and take them away. The processing location may require an impermeable surface to facilitate collection and containment of automotive fluids. This collection event could also be used to collect other bulky metal objects, if allowed by the processing company.

### **11.5.5 Evaluation of Alternatives for Junk Vehicles**

The alternative is compared to the evaluation criteria below.

### Consistency with Guiding Principles

This alternative is consistent with the guiding principles of this solid waste plan.

### Implementation Costs

The cost of this alternative would not be that great if it could be conducted at a time when market prices are high for ferrous metals, although a significant amount of staff time would be needed to organize and publicize this event.

### Feasibility

The feasibility of this alternative is high.

### 11.3.6 Rating of Alternatives for Junk Vehicles

The alternative is compared to the evaluation criteria in Table 11-4.

**Table 11.4  
Summary Rating of the Junk Vehicles Alternatives**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Special Collection Event for Junk Vehicles	H	M	H	H

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

### 11.3.7 Recommendations for Junk Vehicles

The following recommendation is being made for junk vehicles:

- JV1) Assess the feasibility of a coordinated / cooperative program to dispose or recycle junk vehicles / auto bodies involving Ferry County, City of Republic, Confederated Tribes of Colville Reservation, other counties, and the private sector.

## **CHAPTER 12: PROMOTION AND EDUCATION**

### **12.1 Introduction**

Public education is defined to include activities that disburse information and/or motivate people to act in a certain manner. The information can be targeted at a particular group (such as the residents of a specific city or area) or sector (residential or commercial), or can be prepared for a broader audience (all of the residents and businesses within the County). Examples of public education activities include informing people and businesses of the open hours for local disposal facilities, or encouraging them to recycle their waste oil instead of disposing of it improperly.

General public education and information programs are described in this section. Public education programs for specific elements of the solid waste system (recycling, composting, garbage collection and disposal) are also described in the chapters dealing with those activities.

### **12.2 Existing Practices**

Public education is critical to realizing recycling and waste reduction goals. It is an important method of achieving the behavioral and attitude changes required for participation in recycling and composting programs. Ferry County has established a number of public education and outreach programs supporting waste reduction and recycling activities. Each of these programs encourage waste reduction and recycling activities by promoting behavioral changes in residents.

Ferry County staff provides information to schools and to the general public on request. Each school is visited twice per year and there are also litter cleanup events that are organized with the schools during Pride Month.

Educating children about waste reduction and recycling at school has proven to be a successful approach to reaching the public, but Ferry County staff has limited resources to make presentations on solid waste. Many teachers incorporate lesson plans on these topics, and materials are available that meet current educational standards.

Ferry County uses handouts that include:

- “Enduring Litter” flyer
- Washington is Recycling! Activity Book
- Keep America Beautiful Go Green Activity Book
- Keep America Beautiful The Earth is in Our Hands Activity Book
- Keep America Beautiful You can Make Recycling Work Activity Coloring Book

- Keep America Beautiful Take Care of America Activity Book
- Keep America Beautiful Don't be a Litterbug Activity Book
- Environmental Activity and Coloring Book
- Recycling Facts, Games and Crafts Activity Book

These flyers were passed out to the general public during Pride Month and at the county fair. When possible, County staff work with other jurisdictions and local groups to provide solid waste information more effectively to the public, such as conducting Arbor Day activities with Kin Ross. County staff also organized an Earth Day event with the Inchelium School District.

## **12.3 Planning Issues**

### **12.3.1 Specific Planning Issues**

Issues related to promotion and education programs include:

- costs of educational materials and staff delivery time.
- measuring the effectiveness of education.
- limited staff time for coordination efforts with haulers, schools, resources and media.
- funding sources and grants with current CPG changes.

### **12.3.2 General Planning Issues**

More needs to be done in the area of public education and information distribution, but funding for these activities is very limited. Education is critical to the success of any waste diversion program. More comprehensive education about waste diversion options for residents and businesses, including the availability and requirements for curbside recycling, is needed.

Several opportunities exist for public education activities (some of these are already in use), including:

- Cooperative arrangements with the haulers, cities and others to distribute information.
- Educational materials on how waste diversion activities fit into broader issues, such as sustainability, global warming and preservation of salmon habitat.
- Educational materials on costs/benefits of various waste reduction activities or methods.

- Information on the fate of recycled materials and the benefits of purchasing recycled products.
- Use of free publicity, such as public access television.
- Targeting special groups, such as businesses or legislators.
- Efforts to address illegal dumping problems, including possible fines.

Garbage haulers are required by state law to distribute public education materials annually (Ch. 480-70-361(7) WAC). At a minimum, these notices must be distributed to current customers (for garbage and/or recycling) in the certificate (franchise) areas and must describe all of the service and options available for waste collection and recycling (including mini-can rates for residential customers). If a brochure is distributed by a local government directly to the public instead, then the hauler does not need to distribute a brochure as long as the minimum information described above is included. If a local government provides a brochure to the hauler, then the hauler must distribute those, and in this case the brochure may also address commercial recycling and waste reduction options offered by other companies and agencies. Brochures developed and distributed by the hauler are not required to present information on recycling and waste reduction programs offered by others.

## **12.4 Alternatives and Evaluation**

### **12.4.1 Alternatives**

Possible alternatives include:

**Alternative A – Continue Existing Education Programs:** Efforts to inform residents and businesses about existing recycling and waste reduction options need to be conducted on an ongoing basis, and more education is generally better in terms of results for existing programs. As new programs are developed or existing programs expanded, increased education will also be needed on at least a temporary basis to ensure that people are aware of the opportunity and participation guidelines.

**Alternative B – Recognize Business Recycling Efforts:** Publicly recognize leadership and innovation in recycling. More could be done in this area to encourage businesses to engage in waste reduction and recycling activities, and also to inform them as to proper disposal practices for MRW and other special wastes.

Awards and public recognition can be used to motivate businesses to reduce waste at the source. Recognition provides an opportunity for local jurisdictions to publicize innovative waste reduction programs, as well as encourage the business sector to participate in waste reduction activities. Leadership, innovation, volunteer activity, or

setting a positive example for others to follow can be recognized by the counties and the municipalities. Local media could be encouraged to report on businesses that practice waste reduction

One of the special needs that can be addressed through public education is a waste diversion program in businesses. For the businesses, a two-pronged approach could be used, by informing them of the options for reducing and recycling wastes, and also motivating them to begin these activities.

**Alternative C – More Promotion of Yard Debris Separation:** In the course of maintaining yards and gardens, Ferry County residents and businesses often produce yard debris and landscaping residue. The County has an interest in conserving existing landfill space and in developing alternative methods of dealing with yard debris. The County can extend education on natural lawn care and composting.

Public education could continue to encourage residents to handle their yard debris separately. Education about yard debris separation could also be broadcast through County media points to include signs at the transfer stations and landfills, mailers, radio spots, County website, signs at the County and at libraries. County residents and businesses could be given information on the options for yard debris (including backyard composting, a future collection system and possibly other options).

#### **12.4.2 Evaluation of Alternative Strategies**

The alternatives are compared with respect to the evaluation criteria below.

##### **Consistency with Guiding Principles**

All three alternatives are consistent with the guiding principles of this solid waste plan.

##### **Implementation Costs**

Alternatives A and C are largely current programs (so no new costs) that are at least partly grant-funded, and Alternative B is a new but low-cost program.

##### **Feasibility**

Alternatives A and C are technically and politically feasible, while Alternative B is politically favorable.

### 12.4.3 Rating of Alternatives

The alternatives are compared with respect to the evaluation criteria in the following table.

**Table 12.1  
Summary Rating of the Promotion and Education Strategies**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Continue Existing Education Programs	H	M	M	M
B Recognize Business Recycling Efforts	H	L	H	M
C Promote Yard Debris Separation	H	L	M	M

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

### 12.5 Recommendations

The following recommendations are being made for promotion and education programs:

- PE1) Continue current promotion and education activities and identify opportunities to expand such activities.
- PE2) Research, develop and implement a program to recognize / publicize existing and future recycling efforts by businesses and institutions.
- PE3) Promote increased recycling by businesses and institutions.
- PE4) Continue and increase promotion of yard debris diversion methods.



## **CHAPTER 13: ORGANIZATION AND ADMINISTRATION**

### **13.1 Introduction**

This section discusses the administrative and regulatory activities related to solid waste management in Ferry County, including financing options for solid waste programs.

#### **13.1.1 Background for Administration and Regulation**

At the federal and state levels, the primary regulatory authorities for solid waste management are the Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology), respectively. At the local level, the responsibility for solid waste administration and enforcement is shared by Ferry County, the City of Republic, and the Northeast Tri-County Health District. The private sector also contributes significantly to the proper management of solid waste, and to the extent possible, public-private partnerships are used to provide the most cost-effective system.

Solid waste regulations for waste collection and disposal have a relatively short history compared to many other municipal activities. Increased recognition of the problems caused by poorly-managed solid waste disposal (such as groundwater pollution and the potential for the spread of pests and diseases) led to the initial federal and state regulations 30 years ago. Other problems have led to additional regulations over the years. The body of solid waste rules and regulations that govern waste management continue to evolve in response to new needs, regulations, changes in economics and other factors. Hence, the solid waste system in Ferry County will need to continue to incorporate and adapt to new regulations and requirements over the life of this Plan.

### **13.2 Existing Practices**

All levels of government and private companies are involved in solid waste management in various ways.

#### **13.2.1 Federal Level**

At the federal level, the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Solid Waste Disposal Act Amendments of 1980 (42 U.S.C. 6901-6987), is the primary body of legislation dealing with solid waste. Subtitle D of RCRA deals with non-hazardous solid waste disposal and requires the development of a state comprehensive solid waste management program that outlines the authorities of local, state and regional agencies. Subtitle D requires

that state programs provide for all solid waste to be disposed in an environmentally sound manner.

A provision of RCRA requires that federal facilities comply with substantive and procedural regulations of state and local governments, and so federal agencies must operate in a manner consistent with local solid waste management plans and policies. The major federal agencies active in Ferry County are the National Park Service and the National Forest Service.

### **13.2.2 State Level**

The Solid Waste Management Act, Chapter 70.95 of the Revised Code of Washington (RCW), provides for a comprehensive, statewide solid waste management program. Ch. 70.95 RCW assigns primary responsibility for solid waste handling to local governments, giving each county, in cooperation with its cities, the task of developing and maintaining a solid waste management plan that places an emphasis on waste reduction and recycling programs. Enforcement and regulatory responsibilities are assigned to cities, counties, or jurisdictional health departments, depending on the specific activity and local preferences.

The Minimum Functional Standards for Solid Waste Handling (Chapter 173-304 of the Washington Administrative Code) were promulgated by Ecology under the authority granted by Ch. 70.95 RCW. This chapter has now been superseded by Ch. 173-351 WAC, Criteria for Municipal Solid Waste Landfills, which contains the current standards for landfills, and Ch. 173-350 WAC, Solid Waste Handling Standards, which addresses the operational and other requirements for recycling and composting facilities as well as inert and special purpose landfills.

Ch. 36.58 RCW, Solid Waste Disposal, delineates the counties' rights and responsibilities regarding solid waste management, including the authority to establish solid waste *disposal* districts (Sections 36.58.100 through 36.58.150) as well as providing special authorization for contracting procedures for solid waste handling facilities (Section 36.58.090). The authority to establish solid waste *collection* districts is provided in Ch. 36.58A.

The Washington Utilities and Transportation Commission (WUTC) is a state agency that provides regulatory oversight for the waste hauling certificate (franchise) areas. Certificates are issued by the WUTC that allow private collection companies to operate in specified areas at approved rates, and in some cases these certificates are only for specific types of waste. The WUTC sets rates for the regulated haulers, and is the enforcement agency for rules and regulations specific to the certificate areas.

Other relevant state legislation includes Washington's Model Litter Control and Recycling Act. The Model Litter Control and Recycling Act (Ch. 70.93 RCW) and associated state regulations (Ch. 173-310 WAC) generally prohibit the deposit of garbage on any property not properly designated as a disposal site. There is also

a “litter fund” that has been created through a tax levied on wholesale and retail businesses, and the monies from this fund are being used for education, increased litter clean-up efforts by the State, and grants to counties for litter and illegal dump clean-up activities. The State conducts litter cleanups on interstate and state highways, while County efforts are focused on local roads.

The State has also been conducting an aggressive anti-litter campaign over the past few years. This campaign is being used in conjunction the promotion of a toll-free phone number (1-866-LITTER-1) that can be used to report people that litter and related problems.

Additional state rules that impact solid waste management in Ferry County include revisions to Ch. 70.93.060 RCW that provide stiffer penalties for littering and illegal dumping in rural areas. Recent amendments to state law (Ch. 46.61.655 RCW) also provide for stiffer penalties for not properly securing loads of waste and other materials.

### **13.2.3 Regional Level**

The Northeast Tri-County Health District (Health District) provides much of the regulatory oversight and enforcement in Ferry County. The Health District is the responsible local authority (per RCW 70.95.160) for issuing permits for solid waste facilities. The Health District also conducts inspections, addresses illegal dumping, and conducts related activities.

The permit process for solid waste facilities requires an application and approval for new sites, and an annual review and renewal for existing permits. The application form requires information about the types of waste to be processed or disposed, environmental conditions of the area and an operations plan that must be approved by the Health District.

### **13.2.4 Local Level**

In Washington State, the primary responsibility for managing solid waste is assigned to local governments (Ch. 70.95.020 RCW). Under state law, counties must prepare comprehensive solid waste management plans and have a broad range of authority to design, construct, and operate facilities and provide services, contract for such facilities or services, and generate revenue. County authority to operate solid waste collection services is very limited, however, and instead cities have significant powers in providing collection services.

In Ferry County, the local agencies involved in solid waste management include the Ferry County Public Works Department and various departments of the cities and towns. Each entity has a particular area of operations, providing specific services to the residents within that area and enforcing specific rules and regulations. In addition, the Ferry County Solid Waste Advisory Committee (SWAC) serves an important advisory role for the solid waste management system

(see Section 1.8 for more details). Local rules that affect solid waste management include ordinances, land use plans and zoning codes.

**Ferry County Public Works Department:** The Public Works Department is the agency primarily responsible for solid waste management activities for Ferry County. The Public Works Department operates the solid waste transfer station. The Public Works Department also conducts an annual Household Hazardous Waste Collection event. Staffing consists of a Solid Waste Coordinator (1.0 full-time equivalent), Solid Waste Assistant (0.75 FTE), two part-time (32 hours per week) transfer station attendants (1.6 FTE), and assistance as needed from the Public Works Director, Assistant Director, Treasurer, Prosecuting Attorney, and Auditor.

Ferry County utilizes an enterprise fund for the solid waste management system. The premise of an enterprise fund is that expenditures must be matched by revenues from service fees and other appropriate funding mechanisms. The Solid Waste Fund is used primarily for solid waste operations and funds are derived primarily from service fees at the transfer station. Additional details on the budget can be found in Table 13.1.

**Table 13.1**  
**Ferry County Solid Waste Budget**

<b>Solid Waste Fund</b>	<u>2009</u> <sup>1</sup>	<u>2010</u> <sup>1</sup>
<u>Revenues</u>		
Tipping Fees, Torboy Transfer Station	185,320	273,494
Grants	179,601	100,448
Other Revenues	100,297	32,500
<u>Expenses</u>		
Disposal Fees	107,772	145,136
Salaries and Benefits	70,798	111,680
Insurance and Utilities	4,100	6,700
Taxes	8,200	9,000
CPG Grant Activities	135,842	104,592
Litter Contract	20,187	20,567
Post Closure	13,650	15,432
Other Expenses	59,957	21,335
Beginning Fund Balance	27,000	20,316
Total Revenues	465,218	406,442
Total Expenses	420,506	434,442
Ending Fund Balance	71,713	0

Notes:

All figures are in dollars.

1. Figures for 2009 and 2010 are budgeted amounts, not actual revenues and expenditures.

**County Planning Departments:** The Ferry County Planning Department prepares the comprehensive land use plan. This plan establishes policies that affect solid waste management programs and facilities. They are also involved with conditional use permits that sometimes affect the location and/or operation of solid waste handling and disposal facilities.

**City of Republic:** There is one incorporated area in the County; the City of Republic. According to state law, cities may provide or contract for the collection, processing, recycling and disposal of all solid waste generated within the city limits (Ch. 35.21 RCW). Cities also have the authority to require that their residents have collection service (which the City of Republic does, although self-hauling garbage to the transfer station is also allowed). In addition, cities may set collection rates. The City of Republic contracts with Couse's Sanitation for garbage collection services and collects the fee for this service through their utility billings. The City also has a junk property ordinance.

Through the interlocal agreement, Ferry County and the City of Republic are responsible for the development, administration and implementation of the solid waste management programs within the County.

### **13.2.5 Private Sector**

The private sector is an essential part of the solid waste management system. The two waste hauling services, Couse's Sanitation and the Colville Nation, are critical to ensuring waste is collected and transported to proper disposal facilities. Other private companies operate waste disposal sites outside of the county or process recyclables. Other private businesses within Ferry County are generators of waste and as such are responsible for making sure their waste is collected and disposed of properly.

## **13.3 Planning Issues**

Ferry County is facing several important issues in the area of administering and organizing the solid waste system:

- Coordination between County, City, private companies, tribes and local groups is an ongoing need. As more programs are developed (both public and private), the Ferry County Solid Waste Program needs to continue to coordinate the solid waste system and maintain an organizational structure to implement programs efficiently and effectively throughout the County. Maintaining communication among the participating jurisdictions and private service providers is essential to ensure that programs are reasonably consistent with one another and do not leave gaps in programs or services.
- Funding is a large issue for Ferry County, both for maintaining current activities as well as potential new programs. Additional funding may be needed for new

waste reduction, recycling, composting and disposal programs. New solid waste programs could require funds for initial capital investments, as well as staff, supplies, equipment and associated implementation costs.

- The possible loss of CPG funds is an ongoing concern. This grant program provides an important source of funds for specific activities in the County, but recent changes to this grant program call into question its long-term stability. At a minimum, new reporting requirements are more onerous and now require more staff time to fulfill, thus reducing staff time available for conducting actual programs. The loss of CPG funds may reduce recycling activities in the future.

Additional issues related to administration and enforcement include:

- There are several areas of potential opportunities with neighboring counties.
- Illegal dumping and junk properties are a problem in the County.
- Only 19% of the County is taxable land, hence revenue-raising opportunities are severely limited.
- A flow control ordinance was adopted in 2008 (Ordinance No. 2008-05).

## **13.4 Alternatives and Evaluation**

### **13.4.1 Alternatives**

Possible administrative alternatives for Ferry County include:

**Alternative A – Regular Adjustment to Transfer Station Tipping Fee:** Ferry County does not have a program or policy for regular tipping fee increases based on the Consumer Price Index (CPI) or other cost increases, but this approach is used by other counties to keep charges current with their costs. Island County, for instance, uses a three-year cycle of conducting rate studies and adopting rate increases as needed to adjust for changing disposal costs. Thurston County uses a similar approach, as do several other counties.

Ferry County could use a similar approach to review and adjust rates as necessary periodically, such as every three years (or more often if necessitated by cost increases or decreases). If implemented, this approach should be based on a mechanism and methodology agreed to by the City, County and Colville Nation (if they are participating in the disposal system). Such an approach could be implemented beginning with the new waste export contract.

**Alternative B – Local Cooperation and Coordination:** Low waste volumes and severe funding constraints are good reasons for the City, County and Confederated Tribes of the Colville Reservation to work together (see also the Disposal Chapter). Various activities can be conducted more cost-effectively by

pooling resources and working jointly on common problems. Possible areas of cooperation include recycling and yard debris diversion programs, clean up of illegal dumping and junk properties, waste collection and disposal programs, special collection events (such as junk vehicles), and other programs.

**Alternative C – Investigate Alternative Funding Sources:** Solid waste programs in Ferry County are funded through a mixture of tipping fees, grants and other sources. This approach is barely covering the expenses of the solid waste system currently, and additional funds may be needed in the future to implement the recommendations in this Plan. If necessary, expenses for capital improvements can be funded through internal financing, general obligation bonds, revenue bonds, industrial development bonds, grant funding, and/or private financing. Administration and enforcement expenses could be funded by assessments to collection systems, general funds, and private funding for private operations.

Possible funding options are discussed below:

- **Grants:** The County receives grant monies currently for various projects, and more grants from various sources could be sought in the future.
- **Service fees and tipping fee surcharges:** Service fees and tipping fee surcharges are currently used in other counties for many programs. More could be done in Ferry County for existing programs and any new programs implemented in the future. Service fees would be an appropriate funding mechanism for capital improvements at existing facilities. In other cases, fees and services charges should be periodically evaluated to determine if the amount should be raised or lowered.
- **Collection service fees:** A county can impose a fee on waste collection services operating in the unincorporated areas to fund the administration and planning expenses associated with the implementation of this Plan (RCW 36.58.045). This fee only requires 90 days notice to the hauler and the WUTC. In the case of Ferry County, however, subscription rates for garbage collection services are fairly low in the unincorporated areas and so the amount of funding derived from this approach would be relatively small. In addition, any increase in collection fees would probably lead to less people subscribing to garbage collection services, thus compounding other problems such as junk properties.
- **Disposal or other special district:** Another alternative for funding could be taxes levied by a special district, such as a disposal district as provided by RCW 36.58. If a disposal district is created in the County, charges for solid waste handling and disposal could be collected separately through the tipping fee or as part of any district taxes. Other program costs (landfill closure and monitoring, recycling, etc.) could also be collected as dedicated funds through district taxes. In an economically-depressed area such as Ferry County, however, any increase in taxes would not be very feasible.

**Alternative D – Adopt Junk Property Ordinance:** The accumulation of refuse and junk on private and public property could be addressed through increased enforcement activities, universal (mandatory) garbage collection, and education. Increased enforcement may require additional funding for personnel and expenses. If needed, additional funding for enforcement activities could be derived from general funds, surcharges on tipping fees, special assessments, increased permit fees, and/or increased fines for solid waste violators. Implementation of universal garbage collection services could be achieved in several ways, but usually this is accomplished through some form of mandatory collection requirement. One of the more effective means of implementing mandatory garbage collection would be the formation of a collection district.

Additional education efforts could emphasize to residents their responsibilities for proper solid waste management and the options that exist for properly handling garbage. One aspect of this might be to clarify the costs of garbage collection, to dispel the idea that it is significantly more expensive than self-hauling waste to disposal sites. To the extent that people are encouraged to sign up for garbage collection services, this approach could help prevent the accumulation of large amounts of waste in the unincorporated areas of the County.

Perhaps the most feasible approach for this alternative would be the adoption of an ordinance that clearly states the situations that require remedial actions, the process for addressing these areas, and enabling the County to step in if necessary. This ordinance could be used together with increased education as to the problems and disposal alternatives.

### **13.4.2 Evaluation of Alternative Strategies**

The alternatives are compared with respect to the evaluation criteria below.

#### **Consistency with Guiding Principles**

All four alternatives are consistent with the guiding principles of this solid waste plan. Alternatives A, B and C support the guiding principle of conducting solid waste management practices in the most efficient, cost-effective manner possible. Alternative B is consistent with the guiding principle for expansion of partnerships. Alternative C supports the idea of keeping the solid waste system economically sustainable. Alternative D is consistent with the idea of providing basic services to all.

#### **Implementation Costs**

Alternative A may require some expense for a rate study or rate adjustment but will help keep rates in line with the true costs of operating the system, and Alternative C is similar in this respect. Alternative B may help keep costs lower by making activities more cost-effective. The cost of Alternative D should be

relatively low, consisting primarily of staff time for ordinance writing and education, after which any property cleanup activities should be self-funding.

**Feasibility**

Alternative A could lead to increased costs for residents and may not be politically popular. Alternative B should be financially and politically feasible, or any joint activities would probably not be pursued. Similarly with Alternative C, any new funding sources would need to be feasible to be pursued. Alternative D is technically feasible but may not be politically feasible.

**13.4.3 Rating of Alternatives**

The alternatives are compared with respect to the evaluation criteria in the following table.

**Table 13.2  
Summary Rating of the Organization and Administration Strategies**

Alternative	Consistency with Guiding Principles	Implementation Costs	Feasibility	Overall Rating
A Regular Adjustment to Tipping Fee	H	L	M	H
B Local Cooperation and Coordination	H	L	H	H
C Investigate Alternative Funding Sources	H	L	H	H
D Adopt Junk Property Ordinance	H	M	M	M

Note: A High (H) rating is a positive factor for the consistency and feasibility criteria, but for implementation costs a Low (L) rating is best. A Medium (M) rating has about the same value for all three evaluation criteria.

**13.5 Recommendations**

The following recommendations are being made for promotion and education programs:

- OA1) Assure that regular adjustments to tipping fee(s) at Torboy Transfer Station can and should be made with involvement of the participating entities – Ferry County, City of Republic, private sector, and possibly the Confederated Tribes of Colville Reservation.

- OA2) Investigate and prepare a report on alternative solid waste system funding strategies and sources.
- OA3) Emphasize that planning and implementation for current and future management of solid waste will be accomplished through communication, cooperation, and coordination among the participating entities noted above.

## CHAPTER 14: IMPLEMENTATION STRATEGY

### 14.1 Introduction

This chapter of the Ferry County Solid Waste Management Plan (the “Plan”) provides a summary of the details for each recommendation, such as cost, priority, schedule and lead agency. These recommendations are generally intended to be conducted over the next six years, while also providing some guidance for as much as the next 20 years. Note that the many of the recommendations are shown in an abbreviated form in this chapter due to space constraints.

### 14.2 Implementation Details for Recommended Activities

Table 14.1 shows the recommendations from each of the previous chapters of the Plan, along with information on:

- **Lead agency (or company):** each recommendation requires an agency or company to take charge of seeing that it is implemented in a timely fashion. Rarely is a single agency or company completely responsible for implementing a specific recommendation, however, and often this responsibility is shared between two or more parties. Furthermore, as mentioned in other parts of this Plan, opportunities should always be sought to create public-private partnerships to accomplish the recommended activities.
- **Priority:** the level of priority is shown for each in case limited resources should prevent the implementation of all of the recommendations in the future.
- **Cost:** cost information is shown where available. For many of the recommendations, the primary expense is staff time (either existing or new staff).
- **Funding source(s):** the source for the funds to pay for recommended activities is shown in the last column. The funding sources shown are critical in many cases, in that funding from other sources is not possible or likely.

Table 14.2 provides additional information as to the schedule for implementation of the recommendations. Typically the schedule is only approximate or tentative, and the actual schedule will vary depending on the availability of staff time, financial resources and other factors. The schedule shown here is intended to serve only as a guide.

Additional details for most of the recommendations can also be found in the appropriate chapter of this Plan. The recommendations are numbered according to the chapter where they are discussed for easier cross-reference to other parts of the Plan. Recommendation #WR1, for instance, is the first recommendation shown in the Waste Reduction chapter (Chapter 5).

**Table 14.1  
Implementation Summary for Recommendations**

<b>Recommended Activity</b>	<b>Lead Agency</b>	<b>Priority</b>	<b>Cost</b>	<b>Funding Source</b>
<b>Chapter 5, Waste Reduction (see page 5-5):</b>				
WR1) Continue and expand promotion of reuse by charitable organizations.	County	High	Staff time only	NA
WR2) Assess feasibility of establishing a reuse and exchange area at the transfer station or other location.	County	Medium	\$0-10,000	Tipping fees, grants
WR3) Organize and support periodic “swap events.”	County	Medium	\$500	Tipping fees
<b>Chapter 6, Recycling (see pages 6-15 and 6-16):</b>				
R1) Encourage recycling by businesses and institutions.	County	Medium	Staff time	NA
R2) Utilize citizen volunteers for promotion and education when available and feasible.	County	Low	Staff time	NA
R3) Attempt to inventory undocumented recycling.	County	Low	Staff time	NA
R4) Periodically assess recycling program.	SWAC	Medium	0	NA
R5) Suspend or reinstate collection of specific recyclable materials if warranted by markets or other factors.	County	Medium	Staff time	NA
<b>Chapter 7, Organics (see page 7-10):</b>				
O1) Continue and increase subsidized sales of home composting units.	County	High	\$1,000 - \$2,500	CPG funds
O2) Assess feasibility of establishing a drop-off site for collection and storage of yard debris and wood waste.	County	Medium	Staff time	NA
O3) Assess feasibility of techniques for diversion and beneficial use of food waste.	County	Low	Staff time	NA
<b>Chapter 8, Collection (see page 8-5):</b>				
C1) Assess mandatory countywide refuse collection.	County	Low	Staff time	NA
C2) Periodically examine waste collection methods to monitor and improve efficiency and effectiveness.	SWAC	Medium	Staff time	NA
<b>Chapter 9, Handling and Transfer (see page 9-4):</b>				
T1) Review and prepare report on additional services or facilities for waste transfer, recycling, and reuse.	County / SWAC	Medium	Staff time	NA

Notes: 1. NA = Not Applicable.

<b>Table 14-1, Implementation Summary for Recommendations, continued</b>				
<b>Recommended Activity</b>	<b>Lead Agency</b>	<b>Priority</b>	<b>Cost</b>	<b>Funding Source</b>
<b>Chapter 10, Disposal (see page 10-4):</b>				
D1) Develop an agreement between the County, City, Confederated Tribes, and private sector to secure one contractor for waste disposal.	County	High	Staff time	NA
D2) Issue an RFP for a Waste Services Package.	County	High	Staff time	NA
<b>Chapter 11, Special Wastes (see pages 11-7, 11-8, and 11-12):</b>				
C&D1) Install a drop-off site at the transfer station for a pilot project reusable building materials.	County	High	Up to \$2,500	County
C&D2) Encourage diversion of wood waste for energy recovery.	County	Medium	Staff time	NA
C&D3) Promote green building practices.	County	Medium	Staff time	NA
JV1) Assess coordinated program for junk vehicles.	County	Medium	Staff time	NA
<b>Chapter 12, Promotion and Education (see page 12-5):</b>				
PE1) Continue promotion and education activities and identify opportunities to expand such activities.	County	High	Up to \$5,000	CPG
PE2) Research and implement a program to recognize recycling efforts by businesses and institutions.	County	Medium	Staff time	NA
PE3) Promote recycling by businesses and institutions.	County	Medium	Staff time	NA
PE4) Continue promotion of yard debris diversion.	County	Medium	\$1,500	CPG
<b>Chapter 13, Organization and Administration (see pages 13-9 and 13-10):</b>				
OA1) Assure that regular adjustments to tipping fee(s) are made with involvement of the participating entities.	County	High	Staff time	NA
OA2) Investigate and prepare a report on alternative solid waste system funding strategies and sources.	County / SWAC	Medium	Staff time	NA
OA3) Emphasize that planning and implementation for solid waste will be accomplished through cooperation and coordination among the participating entities.	County	High	Staff time	NA

Notes: 1. NA = Not Applicable.

**Table 14.2  
Implementation Timeline for Recommendations**

<b>Recommended Activity</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
<b>Chapter 5, Waste Reduction (see page 5-5):</b>									
WR1) Continue and expand promotion of reuse by charitable organizations.		X	X	X	X	X	X	X	X
WR2) Assess feasibility of establishing a reuse and exchange area at the transfer station or other location.	X	X							
WR3) Organize and support periodic “swap events.”		X	X	X	X	X	X	X	X
<b>Chapter 6, Recycling (see pages 6-15 and 6-16):</b>									
R1) Encourage recycling by businesses and institutions.									
R2) Utilize citizen volunteers for promotion and education when available and feasible.		X	X	X	X	X	X	X	X
R3) Attempt to inventory undocumented recycling.		X	X	X	X	X	X	X	X
R4) Periodically assess recycling program.		X	X	X	X	X	X	X	X
R5) Suspend or reinstate collection of specific recyclable materials if warranted by markets or other factors.									
<b>Chapter 7, Organics (see page 7-10):</b>									
O1) Continue and increase subsidized sales of home composting units.									
O2) Assess feasibility of establishing a drop-off site for collection and storage of yard debris and wood waste.	X	X							
O3) Assess feasibility of techniques for diversion and beneficial use of food waste.	X	X							
<b>Chapter 8, Collection (see page 8-5):</b>									
C1) Assess mandatory countywide refuse collection.	X	X							
C2) Periodically examine waste collection methods to monitor and improve efficiency and effectiveness.		X		X		X	X	X	X
<b>Chapter 9, Handling and Transfer (see page 9-4):</b>									
T1) Review and prepare report on additional services or facilities for waste transfer, recycling, and reuse.	X	X							

<b>Table 14-2, Implementation Timeline for Recommendations, continued</b>									
<b>Recommended Activity</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
<b>Chapter 10, Disposal (see page 10-4):</b>									
D1) Develop an agreement between the County, City, Confederated Tribes, and private sector to secure one contractor for waste disposal.	X								
D2) Issue an RFP for a Waste Services Package.		X							
<b>Chapter 11, Special Wastes (see pages 11-7, 11-8, and 11-12):</b>									
C&D1) Install a drop-off site at the transfer station for a pilot project reusable building materials.		X							
C&D2) Encourage diversion of wood waste for energy recovery.	Ongoing								
C&D3) Promote green building practices.	Ongoing								
JV1) Assess coordinated program for junk vehicles.		X							
<b>Chapter 12, Promotion and Education (see page 12-5):</b>									
PE1) Continue promotion and education activities and identify opportunities to expand such activities.	Ongoing								
PE2) Research and implement a program to recognize recycling efforts by businesses and institutions.		X							
PE3) Promote recycling by businesses and institutions.	Ongoing								
PE4) Continue promotion of yard debris diversion.	Ongoing								
<b>Chapter 13, Organization and Administration (see pages 13-9 and 13-10):</b>									
OA1) Assure that regular adjustments to tipping fee(s) are made with involvement of the participating entities.		X	X	X	X	X	X	X	X
OA2) Investigate and prepare a report on alternative solid waste system funding strategies and sources.		X							
OA3) Emphasize that planning and implementation for solid waste will be accomplished through cooperation and coordination among the participating entities.	Ongoing								

Table 14.3 combines the information shown in Tables 14.1 and 14.2 to provide a six-year budget for those recommendations that will incur additional costs above and beyond current programs.

**Table 14-3  
Six-Year Implementation Budget for Additional Costs (in \$1,000's)**

<b>Chapter and Recommendation</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>5. Waste Reduction</b>						
WR2) Reuse and exchange area	0-10					
WR3) Swap events	0.5	0.5	0.5	0.5	0.5	0.5
<b>7. Organics</b>						
O1) Subsidized sales of home composting units	1-2.5	1-2.5	1-2.5	1-2.5	1-2.5	1-2.5
<b>11. Special Wastes</b>						
C&D1) Drop-off for reusable building materials	0-2.5					
<b>12. Promotion and Education</b>						
PE1) Continue and expand public education	0-5	0-5	0-5	0-5	0-5	0-5
<b>Total Additional Costs</b>	<b>1-20.5</b>	<b>1-8</b>	<b>1-8</b>	<b>1-8</b>	<b>1-8</b>	<b>1-8</b>

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**GLOSSARY**

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*Ferry County Solid Waste Management Plan*

## GLOSSARY

The following definitions are provided for various terms used in the *Ferry County Solid Waste Management Plan*:

Biomedical waste: infectious and injurious waste originating from a medical, veterinary, or intermediate care facility, or from home use.

Biosolids: includes sludge from the treatment of sewage at a wastewater treatment plant and semisolid waste pumped from a septic system, which have been treated to meet standards for beneficial use.

Commercial solid waste: solid waste generated by non-industrial businesses, including waste from business activities such as construction; transportation, communications and utilities; wholesale trades; retail trades; finance, insurance and real estate; other services; and government. This term is also used to refer to all waste except residential, or all waste that is collected using dumpsters.

Composting: the controlled biological decomposition of organic wastes to produce a humus-like final product that can be used as a soil amendment. In this plan, backyard composting means a small-scale activity performed by homeowners on their own property, using yard debris that they generate. Centralized composting refers to either drop-off or processing locations operated by a municipality or a business.

Corrugated cardboard (OCC): recyclable kraft liner cartons with corrugated inner liners, as typically used to ship materials. This generally does not include waxed cardboard or paperboard (cereal boxes, microwave and similar food boxes, etc.), but kraft grocery bags are included.

CPG: Coordinated Prevention Grants, a grant program administered by the Washington State Department of Ecology.

CPI: Consumer Price Index.

Curbside recycling: the act of collecting recyclable materials directly from residential generators, usually after the recyclable materials have been placed at the curb (or at the side of the street if no curb exists in the area) by the residents.

Ecology: Washington State Department of Ecology.

EPA: the United States Environmental Protection Agency is the federal agency responsible for promulgating and enforcing federal environmental regulations.

Ferrous metals: materials that are predominantly (over 75% by weight) made of iron.

Groundwater: water present in subsurface geological deposits (aquifers).

HDPE: high-density polyethylene, a type of plastic commonly used in milk, detergent, and bleach bottles and other containers.

Household hazardous waste: wastes that would be classified as hazardous due to their nature or characteristics, except that the amount is too small to be regulated. Includes aerosol cans, solvents, some paints, cleaners, pesticides, herbicides, compressed gases, oil, other petroleum products, car batteries and other materials.

Incentive rates: a rate structure for certificated (franchise) areas that incorporates the cost of recycling into the cost of garbage collection, such that customers who recycle can then be charged a lower monthly fee as an incentive.

Industrial waste: solid waste generated by various manufacturing companies. Includes waste generated by businesses that manufacture the following products; food, textile mill products, apparel, lumber, paper, printing, chemicals, stone, clay, glass, fabricated metals, equipment, and miscellaneous other products. Does not include hazardous wastes generated by these industries.

Inert wastes: includes wastes that are inert in nature, such as glass, concrete, rocks, gravel, and bricks.

Mixed paper: all other types of recyclable paper not included in newspaper, cardboard or high-grade papers. Includes materials such as “junk mail,” magazines, books, paperboard (non-corrugated cardboard), and colored printing and writing papers.

Moderate risk wastes (MRW): household hazardous waste (see definition, above) and wastes produced by businesses that potentially meet the definition of a hazardous wastes except the amount of waste produced falls below regulatory limits.

MSW: municipal solid waste (see also “solid waste”).

Mulching: 1) leaving grass clippings on the lawn when mowing; 2) placing yard debris, compost, wood chips or other materials on the ground in gardens or around trees and shrubs to discourage weeds and retain moisture.

Multi-family: a residential building containing four or more housing units.

Non-ferrous metals: materials predominantly made of copper, lead, brass, tin, aluminum, and other metals except iron.

PET: polyethylene terephthalate, a type of plastic. Commonly used to refer to two-liter beverage bottles, although other containers are also increasingly being

made from this material, such as cooking oil, liquor, peanut butter, and many other food and household products.

Public education: a broad effort to present and distribute public information materials.

Public information: the development of educational materials for the public, including brochures, videos, and public service announcements.

RCW: Revised Code of Washington.

Recycling: the act of collecting and/or processing source-separated materials in order to return them to a usage similar in nature to their previous use. The official definition of recycling per state rules is “recycling means transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration. Recycling does not include collection, compacting, repackaging, and sorting for the purpose of transport” (Ch. 173-350 WAC).

Recycling bins: the small household containers used to set out materials for curbside collection.

Reusable items: items that may be reused (or easily repaired), including things such as small electronic goods, household items such as dishes, and furniture.

Self-haul waste: waste that is brought to a landfill or transfer station by the person (residential self-haul) or company (non-residential or commercial self-haul) that created the waste.

SEPA: State Environmental Policy Act.

Septage: a semisolid waste consisting of settled sewage solids combined with varying amounts of water and dissolved materials. This waste is pumped from septic tanks.

Sewage sludge: the concentrated solids derived from the treatment of sewage at a municipal wastewater treatment plant (see also “biosolids”).

Single stream: refers to the practice of placing all recyclable materials together in one container for curbside collection.

Solid waste: solid and semisolid wastes, including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes, abandoned vehicles and parts thereof, discarded commodities, wood waste, and various special wastes.

Solid Waste Advisory Committee (SWAC): a group assisting Ferry County with this solid waste management plan and other activities, composed of representatives from the general public, private industry, and the City of Republic.

Source-separated: recyclable materials that have been removed from garbage or other forms of solid waste by the waste generator. This may or may not include keeping different types of recyclable materials separate from each other (see also “single stream”).

Special wastes: wastes that have particular characteristics such that they present special handling and/or disposal problems.

SWAC: see Solid Waste Advisory Committee.

Transfer station: an intermediate solid waste disposal facility at which solid waste is temporarily deposited to await transportation to a final disposal site.

UGA: Urban Growth Area.

WAC: Washington Administrative Code.

Waste reduction or waste prevention: reducing the amount or type of solid waste that is generated. Also defined by state rules to include reducing the toxicity of wastes.

WUTC: Washington Utilities and Transportation Commission.

Yard debris: includes leaves, grass clippings, brush and branches.

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**APPENDIX A**

**INTERLOCAL AGREEMENT**

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*Ferry County Solid Waste Management Plan*

# INTERLOCAL SOLID WASTE PLAN IMPLEMENTATION AGREEMENT

## **BETWEEN FERRY COUNTY AND THE CITY OF REPUBLIC REGARDING IMPLEMENTATION, PLANNING, ADMINISTRATION AND DISPOSAL OF SOLID WASTE FROM WITHIN THE CITY OF REPUBLIC BOUNDARIES AT THE FERRY COUNTY TORBOY TRANSFER STATION**

THIS AGREEMENT is between Ferry County ("The County"), a political subdivision of the State of Washington and the City of Republic ("The City"), a municipal corporation organized and existing under the laws of the State of Washington. This agreement is entered into pursuant to Chapter 39.34 RCW and Chapter 36.32 RCW in an effort to establish a cooperative system for the management and disposal of solid waste in Ferry County and the City of Republic.

THE PURPOSE OF THE AGREEMENT is to establish the respective responsibilities of the parties in a solid waste management system which includes, but is not limited to planning, waste reduction, recycling, disposal of municipal solid waste and all other waste as fined as Solid Waste in RCW 70.95.030 and as Moderate Risk Waste in RCW 70.105.010.

### I.

**TERM.** The City and The County do mutually agree to honor and abide by the commitments and agreements contained herein for a period of Five (5) years, commencing on the 18<sup>th</sup> day of April, 2009 and terminating on the 17<sup>th</sup> day of April, 2014. Upon expiration of this Agreement, the Agreement shall automatically renew for additional five (5) year periods, upon the same terms, conditions and provisions existing at the time of renewal, unless terminated by either party upon sixty (60) days written notice prior to the expiration date of the original or extended Agreement.

### II.

**PRICE/TIPPING FEES.** The County agrees, promises and covenants that it will charge The City and its contractor, the lowest rate being charged to any customer at the Torboy Transfer Station for City solid waste delivered under this agreement.

### III.

**WASTE ACCEPTED.** The City warrants that the waste delivered to the Ferry County Torboy Transfer Station will not contain a regulated quantity of any hazardous, radioactive or toxic waste substance as defined by applicable federal, state or local laws or regulations. In

addition, Ferry County will not accept, and the City warrants it will not deliver any of the following specific items:

1. asbestos,
2. dead animals or birds,
3. automobiles, automobile parts, pickup trucks or truck bodies,
4. pesticides,
5. any load containing items which may be in violation of state or federal law, rule or regulation.

The items specified above may be accepted when specified by the County, at specific household and hazardous waste collection events or at facilities designated by the County for collection of such waste.

#### IV.

**REJECTION OF WASTE.** The County may refuse or reject, either before or after acceptance, any load of waste delivered to the Torboy Transfer Station if it believes the City has breached or is breaching its warranties or agreements regarding the composition of waste. The County may at its sole discretion either remove and dispose of the noncomplying waste and charge the City for the costs or require the City to promptly remove the noncomplying waste.

#### V.

**OPERATING HOURS AND ACCESS.** Waste from the City will accepted by the county at the Transfer Station or other designated place during regular business hours and at times recommended by the Solid Waste Advisory Committee (SWAC).

#### VI.

**COMPLAINTS AND DISPUTE RESOLUTION.** If either party feels that a breach of this agreement has occurred, that party shall give the other party ninety (90) days written notice to cure said breach. In the event that no action to cure is taken, such matter shall be submitted to binding arbitration by a panel composed of three (3) arbitrators. Each party shall within fifteen (15) days of receipt of written notice requesting arbitration select one arbitrator, and the two arbitrators shall, within five (5) days, select the third arbitrator. The decision of the arbitrators shall be final and binding on the parties. The cost of such arbitration shall be borne equally between the parties.

Any and all notices relating to an assertion of a breach, requests to cure, Arbitration, or intent to terminate this agreement shall be sent by first class mail to the Board of Ferry County Commissioners or to the Mayor and Council for the City of Republic at their regular place of business. Any and all cost incurred by the terminating party shall be borne by the party.

## VII.

**REVIEW, REVISION AMENDMENT OR TERMINATION.** This Agreement shall be reviewed by the parties in conjunction with any review of the Comprehensive Solid Waste Management Plan. The terms of this agreement may be revised, amended or supplemented, or the Agreement as a whole may be terminated only upon written agreement of the Parties with the same formalities as the original. No revision, amendment, supplementation or termination shall be adopted or put into effect if it impairs any other contractual obligation or either party. Either party may terminate this agreement upon six (6) months written notice.

## VIII.

**ASSIGNMENT.** Neither party may assign, transfer or otherwise vest in any other company, entity or person, the rights or obligations conferred under this agreement, without the specific written consent of the other party.

## IX.

### **GENERAL OBLIGATION OF THE PARTIES.**

#### **FERRY COUNTY.**

**A. MANAGEMENT.** Ferry County Shall: (1) provide a county-wide solid waste management system for waste generated and collected within jurisdictions which are parties to this Agreement and (2) designate disposal facilities for all Solid Waste and Moderate Risk Waste generated and/or collected within the corporate limits of the City.

**B. PLANNING.** Ferry County shall serve as the management and planning authority within Ferry County for Solid Waste and Moderate Risk Waste, but shall not be responsible for planning for hazardous or dangerous waste or other planning responsibility that is specifically delegated by State or Federal statute.

**C. OPERATION.** Ferry County, directly or by it's designee, shall be the operating authority for county transfer, processing and disposal facilities (including public landfills, waste reduction or recycling facilities and energy resource recovery facilities) and shall have closure and post-closure responsibilities for landfills which are or were operated in and by Ferry County.

**D. COLLECTION SERVICES.** Ferry County shall not provide solid waste collection services within the corporate limits of the City of Republic, unless provided by law or agreed to in writing by both parties.

**E. SUPPORT AND ASSISTANCE.** Ferry County shall provide limited support and technical assistance to the City if the City seeks to establish a waste reduction and recycling program compatible with the county waste reduction and recycling plan. The County may develop educational materials related to waste reduction and recycling, Moderate Risk Waste and strategies for maximizing the usefulness of the materials and will make any such materials available to the City for its use. The County will track the amount of Solid Waste disposed of by the City as well as the amount disposed of by the County to assist in tracking the effectiveness of any waste reduction and recycling programs.

**F. FACILITIES AND SERVICES.** All real or personal property and equipment acquired by Ferry County for solid waste management system purposes shall be the property of Ferry County.

**G. TIPPING FEES AND RATES.** The setting of tipping fees and rates shall be the sole responsibility of the County. In establishing or amending disposal rates for system users, the County may adopt and amend by resolution rates necessary to recover all costs of operating the system, including without limitation the costs of waste planning, handling, processing, disposal, defense and payment of claims, capital and operational improvements. Any such rates, changes or modification shall be based upon the comments or recommendations received in writing from the SWAC.

### **CITY OF REPUBLIC**

**A. COLLECTION.** The City shall be responsible for solid waste collection within the City's corporate limits.

**B. DISPOSAL.** The City shall: (1) designate the County's system for the disposal of all solid waste generated or collected within the City and (2) authorize the County to designate the disposal facilities for the disposal of all solid waste generated or collected within the corporate limits of the City, except for solid waste which is eliminated through Waste Reduction or Waste Recycling activities consistent with the Solid Waste Management Plan. No solid waste generated or collected within the City may be diverted from the system without County approval or as a result of any arbitration ruling.

**C. COMPLIANCE.** All waste generated or collected from within the corporate limits of the City of Republic which is delivered to the system for disposal shall be in compliance with Section III, above.

X.

**SOLID WASTE ADVISORY COMMITTEE.** Pursuant to RCW 70.95.165(3) and 39.34.030(4), a Solid Waste Advisory Committee (SWAC) has been established and shall operate for the purpose of providing written advice and recommendation to the County Commissioners regarding Solid and Moderate Risk Waste related issues generally, service levels, disposal rates, hours of operation, short and long term planning and especially the administration and implementation of the Comprehensive Solid Waste Management Plan. Before making any decision affecting the System, the county shall obtain and then consider the written advice or recommendations from the SWAC. Should the County decide not to follow the advice or recommendations of the SWAC, it shall state in writing, its reason for rejecting such advice or recommendation.

The SWAC shall consist of the local interests and representatives described in RCW 70.95.165(3). The City shall have two (2) voting members on the SWAC, only one of which may be an elected official of the City government.

XI.

**WAIVER OF DEFAULT, SEVERABILITY.** Waiver of any default or breach of any term of this agreement shall not be deemed to be a waiver of any subsequent default or breach and shall not be construed to be a modification of any of the terms of this agreement unless specifically stated to be such in writing. In the event any term or condition of his agreement or application thereof to any person or circumstances is held to be invalid, such invalidity shall not affect other terms, conditions, or applications which can be given effect without the invalid term, condition or application. To this extent and end the terms and conditions of this agreement are declared severable.

XII.

**COMPLIANCE WITH LAWS, ENTIRE AGREEMENT.** The parties to this agreement shall comply with all applicable federal, state and local laws, rules and regulations in carrying out the terms and conditions of this agreement. The parties shall obtain and comply with any and all necessary permits and approvals from all applicable jurisdictions prior to commencing any work related to this agreement. This agreement contains all the terms conditions and obligations agreed upon by the parties. All items incorporated herein by reference are attached. No other understandings, oral or otherwise, regarding the subject matter of this agreement shall be deemed to exist or to bind any of the parties hereto.

THIS AGREEMENT has been entered into by each party on the date set forth below and is effective on the date set forth in paragraph I. of this agreement.

Ferry County Board of Commissioners

Brad L. Miller  
Brad L. Miller, Chairman

Ronald "Joe" Bond  
Ronald "Joe" Bond, Vice Chairman

Robert L. "Bob" Heath  
Robert L. "Bob" Heath, Member

10/19/09  
Date signed

City of Republic

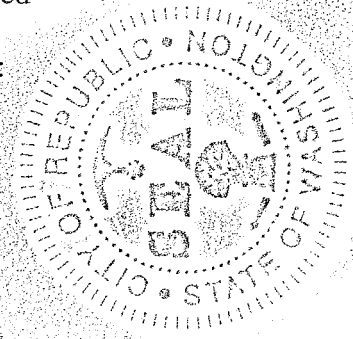
Alexander W. Wirf  
Authorized signature

ALEXANDER W. Wirf  
Printed name of Authorized Official

Mayor Pro Tempore  
Title

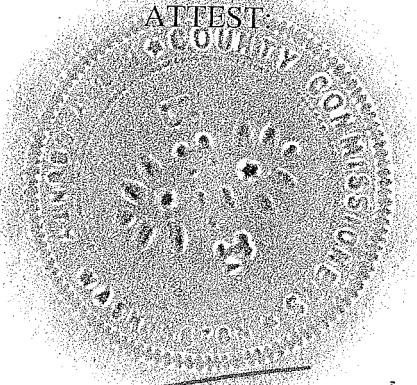
10/19/09  
Date signed

ATTEST:



Margo Sattler  
Margo Sattler  
City Clerk/Treasurer

ATTEST



Debbie Bechtol  
Debbie Bechtol  
Clerk of the Board

APPROVED AS TO FORM:

Mike Sandona  
Mike Sandona  
Ferry County Prosecuting Attorney

APPROVED AS TO FORM:

W. Scott Detrow  
W. Scott Detrow  
City Attorney

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**APPENDIX B**  
**SWAC BY-LAWS**

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*Ferry County Solid Waste Management Plan*

# Ferry County Solid Waste Advisory Committee By-Laws

## 1. Creation, Legal Basis, Purpose

The Ferry County Solid Waste Advisory Committee, hereafter SWAC, has been established by Ferry County Ordinance No. 91-02 pursuant to RCW 70.95. The scope and charge of the Ferry County Solid Waste Advisory Committee shall be to:

- A. Advise Ferry County on all aspects of solid waste management planning including formulation of the Solid Waste Management Plan, and amendments and addenda to the plan.
- B. Assist Ferry County in the development of programs and policies concerning solid waste management.
- C. Review and comment on proposed legislative solid waste management rules, policies or ordinances prior to their adoption.

## II. Composition

**Members** –The SWAC shall be composed of eleven (11) members (three) of which are non-expiring terms, the City of Republic's Representative(s) and the Solid Waste Facility Operator. The SWAC members shall represent a balance of interests among the following groups: citizens, public interest groups, business, the waste management industry and local elected public officials. Members shall provide on-going public input, coordination and information exchange between the groups. Members must be Ferry County registered voters and a landowner or a resident of Ferry County for at least six (6) months of the year.

A. **Ex-Officio Members** – the Ferry County Commissioners may appoint non-voting ex-officio members to the SWAC, who will serve at their discretion.

B. **Appointment** – Members (excluding the City Representatives, who are appointed by the City,) shall be appointed by the County Commissioners. (All appointees, including the City's, shall be confirmed by the County Commissioners.)

**C. Terms** – Members shall serve a term of three (3) years or until their successor is appointed and confirmed as provided in the SWAC by-laws. The term of office shall be staggered. Members may be reappointed to serve consecutive terms. Reappointment shall be subject to confirmation by County Commissioner motion.

**D. Chair** – A majority of the committee shall elect one of its members as Chair. The term of the Chair shall be for one (1) year. The Chair shall be elected at the first meeting in January and shall serve a term of one year. The election year and term of the Chair will begin at the first meeting in January each year. The Chair shall represent, or elect from the SWAC a designate to represent the SWAC at County Commission meetings and other official functions as required.

**E. Vice Chair** – A majority of the committee shall elect one of its members as Vice Chair. The term of the Vice Chair shall be for one (1) year. The Vice Chair shall be elected at the first meeting in January and shall serve a term of one year. The Vice Chair shall carry out duties of chair in his absence.

**F. Vacancies** – Vacancies shall be filled for the remainder of the term of the vacant position in the manner described in the initial appointment. Chair and Vice Chair vacancies shall be filled by the election process. Term will continue to be renewed every January.

**G. Attendance** – A member of the SWAC who misses two (2) meetings within a year may be removed from office by recommendation of the SWAC, approved by the Ferry County Commissioners or at the discretion of the Ferry County Commissioners.

**H. Alternate Member** – An alternate member, representing the same affiliation as an appointed member, may be designated to exercise the same rights as the regular member, must be appointed (and confirmed in the manner designated in subparagraph “B” above.) The alternate member’s attendance shall satisfy the conditions of the member’s term in the event of the member’s absence. The Alternate member retains all rights and responsibilities of an appointed member when attending a meeting on behalf of the member when attending a meeting in the place of the member.

### **III. Meetings**

A. **Regular Meetings** – Meetings of the SWAC shall be called when necessary, by the Chair, but not less than quarterly. Such regular meetings shall be held on the second Monday of the first month of each quarter of any other day hereafter designated and approved by a majority vote of members present. At least six days prior notice shall be given; and

B. **Rules of Order** - The parliamentary rules known as Roberts Rules of Order shall apply to and govern the procedures of all meetings of the Committee.

C. **Official Action** – the SWAC shall adopt no recommendations, except in a meeting open to the public, the date of which public notice has been given by notifying the press.

D. **Quorum** – A regular meeting shall be called to order only when a majority of voting members of the SWAC are in attendance by the announced time for the meeting shall be called. The agenda shall be placed at the head of the agenda for the next regular meeting.

If a meeting is opened with a quorum, action can be taken if a quorum is lacking as a result of members excusing themselves under the appearance of Fairness Doctrine. This allows action to be taken and prevents a minority vote group's control by excusing themselves so that a vote cannot be taken.

E. **Minutes/Agenda** – Minutes of all meetings shall be kept by staff. Agendas shall be prepared jointly by staff and Chair, one week prior to regularly scheduled meeting and distributed to the members at least six days in advance of any regularly scheduled meeting. Approved meeting minutes shall be available to the public on request. Meeting minutes shall be approved by a majority vote of members present.

F. **Public Access** - All meetings shall be open to the public. Provision shall be made for public comment at each meeting.

### **IV. Staff**

The SWAC shall be staffed by the Ferry County Solid Waste Administrator as necessary, to provide support to the SWAC. Duties will consist of:

- A. Publication of meeting notices.
- B. Coordinating with Chair on agenda contents.
- C. Providing the SWAC with pertinent materials related to the agenda upon request of the Chair.
- D. Recording and keeping the minutes of all official action of the SWAC.
- E. Acting as Staff Advisor to the Committee.
- F. Preparing special reports, or other information requested by the Chair.

**V. Recommendations**

The SWAC shall advise and make recommendations to the County Commissioners on matters within their scope and charge as provided for in SWAC By-laws.

(All recommendations shall be in writing and signed by the Chair to enable the County Commissioners to respond to all such recommendations in writing.)

**VI. Amendments**

To the extent that such an amendment would not conflict with the ordinance, any of these by-laws may be amended or repealed, and new by-laws may be adopted, by majority vote of the entire SWAC.

**VIII. Saving Clause**

Should any portion of these by-laws be declared unconstitutional or otherwise contrary to law. Such decision shall not affect the validity of the remaining portion of these by-laws.

Amended and adopted by the Ferry County Solid Waste Advisory Committee at a meeting of its members this 11<sup>th</sup> day of February, 2010.

  
\_\_\_\_\_  
Chair

  
\_\_\_\_\_  
Vice Chair

Kristy Cromwell  
Ferry County Solid Waste Coordinator

*Ferry County Solid Waste Management Plan*

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**APPENDIX C**  
**SEPA CHECKLIST**

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*Ferry County Solid Waste Management Plan*

## **APPENDIX C SEPA CHECKLIST**

### **INTRODUCTION**

Ecology guidelines (Ecology 1999) require that the potential impacts of this *Solid Waste Management Plan* (Plan) be evaluated according to the State Environmental Policy Act (SEPA) process. The following checklist has been prepared to fulfill that requirement.

The SEPA checklist prepared for this Plan is a “non-project proposal” that is intended to address the new programs recommended by the Plan. As a non-project SEPA checklist, it is unable to fully address the potential impacts of facilities mentioned in this Plan. Any new facilities may need to undergo their own SEPA review process.

## ENVIRONMENTAL CHECKLIST

### A. BACKGROUND INFORMATION

1. Name of proposed project, if applicable:

**Ferry County Solid Waste Management Plan**

2. Name of applicant:

**Ferry County Department of Public Works**

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

**Kristy Cromwell  
Ferry County Waste Management  
350 E. Delaware Ave, Republic, WA 99166  
Phone: (509) 775-5217, Fax: (509) 775-5226**

4. Date checklist prepared:

**January 20, 2010**

5. Agency requesting checklist:

**Ferry County and Washington State Department of Ecology**

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

**This checklist is for a non-project proposal intended to update Ferry County's long-range plans for solid wastes. The proposed Solid Waste Management Plan is required to undergo public review and comment, which is anticipated to begin in February 2010. A final copy of the Solid Waste Management Plan is expected to be adopted by July 2010.**

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

**Ecology's guidelines require solid waste management plans to be reviewed every 5 years and, if necessary, updated.**

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

**Does not apply**

9. Do you know of pending applications for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

**NA**

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

**State Law (RCW 70.95.094) and guidelines issued by the Department of Ecology (Guidelines for the Development of Local Solid Waste Management Plans and Plan Revisions, December 1999) require cities to adopt this plan (or they must develop their own plans), require a public review period (for a minimum of 30 days), require that the plan and a Cost Assessment Questionnaire be reviewed and approved by the Washington Utilities and Transportation Commission, and require Ecology to examine and comment on the preliminary draft and also approve the final plan. The Ferry County Commissioners and the City of Republic must adopt the final draft of the plan.**

11. Give a complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist which ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

**Ferry County is required by state law to maintain a “coordinated, comprehensive solid waste management plan” in a “current and applicable condition.” The existing plan, adopted in 1993, needs to be updated. The proposed new plan addresses changes that have occurred in the past several years. In addition to updating the discussion of current facilities and programs, the proposed solid waste management plan contains a number of recommendations. Most of these recommendations represent refinements to existing policies and programs, based on the goal of decreasing reliance on landfills (by increasing waste reduction, recycling and composting) and reducing environmental impacts caused by existing activities. The recommendations proposed in the solid waste management plan can be viewed in the plan (see the Executive Summary or Chapter 14 for a concise listing of the recommendations).**

12. Location of the proposal. Please give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any. If a proposal should occur over a range of area, please provide the range or boundaries of the site(s). Please provide a legal description, site plan, vicinity map, and topographic map if possible. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(Indicate if maps or plans have been submitted as part of a permit application.)*

**The Solid Waste Management Plan addresses activities and programs that occur throughout Ferry County. A few facilities or activities outside of the county are also involved (such as recycling markets in other areas).**

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

- a. General description of the site (*circle one*): flat, rolling, hilly, steep, slopes, mountainous, other (*describe*): **Not applicable (NA) – non-project proposal.**
- b. What is the steepest slope on the site (*approximate % slope*)? **NA.**
- c. What general types of soils are found on the site (*i.e. clay, sand, gravel, peat, muck*)? If you know the classification of agricultural soils, please specify and note any prime farmland. **NA.**
- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe: **NA.**
- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill: **Not applicable – non-project proposal.**
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. **NA.**
- g. About what percent of the site will be covered with impervious surfaces after project construction (*for example, asphalt or buildings*)? **NA.**
- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: **NA.**

### 2. Air

- a. What types of emissions to the air would result from the proposal (*i.e. dust, automobile, odors, industrial wood smoke*) during construction, and when the project is completed? If any, generally describe and give approximate quantities if known. **NA.**
- b. Are there any off-site sources of emissions or odor which may affect your proposal? If so, generally describe. **NA.**
- c. What are the proposed measures to reduce or control emissions or other impacts, if any: **NA.**

### 3. Water

- a. Surface:
  - 1) Is there any surface water on or in the immediate vicinity of the site (*including year-round and seasonal stream, saltwater, lakes, ponds, associated wetlands*)? If yes, describe type, provide names, and, if known, state what stream or river it flows into. **NA.**

- 2) Will the project require any work over or adjacent to (*within 200 feet*) the described waters? If yes, please describe and attach available plans. **NA.**
- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the are of the site that would be affected. Indicate the source of fill material. **NA.**
- 4) Will surface water withdrawals or diversions be required by the proposal? Give general description, purpose, and approximate quantities if known. **NA.**
- 5) Does the proposal lie with a 100-year flood plain? Note location on the site plan, if any. **NA.**
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. **NA.**

b. Ground:

- 1) Will ground water be withdrawn or recharged? Give general description, purpose, and approximate quantities if known. **NA.**
- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (*for example: domestic sewage; industrial, containing the following chemicals; agricultural; etc.*). Describe the general size of the system, the number of such systems, the number of houses to be served (*if applicable*), or the number of animals or humans the system(s) are expected to serve. **NA.**

c. Water runoff (*including storm water*):

- 1) Describe the source of runoff and storm water and method of collection and disposal, if any (*including quantities, if known*). Where will this water flow? Will this water flow into other waters? If so, please describe. **NA.**

- 2) Could waste materials enter ground or surface waters? If so, generally describe. **NA.**

- d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any: **NA.**

#### 4. Plants

- a. Check "X" or circle "O" types of vegetation found on the site: **NA.**
- b. What kind and amount of vegetation will be removed or altered? **NA.**
- c. List threatened or endangered species known to be on or near the site. **NA.**

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

#### **5. Animals**

a. Circle "O" any birds and animals which have been observed on or known to be on or near the site: **NA.**

b. List any threatened or endangered species known to be on or near the site: **NA.**

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

d. Proposed measures to preserve or enhance wildlife, if any: **N/A.**

#### **6. Energy and Natural Resources**

a. What kinds of energy (*electric, natural gas, oil, wood stove, solar*) will be used to meet the completed project's needs? Describe whether it will be used for heating, manufacturing, etc. **N/A.**

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

c. What kinds of energy conservation features are included in the plans of this proposal? **N/A.**

d. What are the proposed measures to reduce or control energy impacts, if any? **N/A.**

#### **7. Environmental Health**

a. Are there any environmental health hazards, exposure to toxic chemicals, including risk of fire and explosion, spill, or hazardous waste, that occur as a result of this proposal? If so, describe. **N/A.**

b. Describe special emergency services that might be required. **N/A.**

c. What are the proposed measures to reduce or control environmental health hazards, if any? **N/A.**

#### **8. Land and Shoreline Use**

a. What is the current use of the site and adjacent properties? **N/A.**

b. Has the site been used for agricultural purposes? If so, describe. **N/A.**

c. Describe any structures on the site. **N/A.**

- d. Will any structures be demolished? If so, what. **N/A.**
- e. What is the current zoning classification of the site? **N/A.**
- f. What is the current comprehensive plan designation of the site? **N/A.**
- g. If applicable, what is the current shoreline master program environment designation of the site? **N/A.**
- h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify. **N/A.**
- i. What are proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any? **N/A.**
- j. Approximately how many people would reside or work in the completed project? **N/A.**
- k. Approximately how many people would the completed project displace? **N/A.**
- l. What are proposed measures to avoid or reduce displacement or other impacts, if any? **N/A.**

## **9. Housing**

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. **N/A.**
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. **N/A.**
- c. What are proposed measures to reduce or control housing impacts, if any? **N/A.**

## **10. Noise**

- a. What types of noise exist in the area which may affect your project (*for example: traffic, equipment, operation, other*)? **N/A.**
- b. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (*for example: traffic, construction, operation, other*)? **N/A.**
- c. What are the proposed measures to reduce or control noise impacts, if any? **N/A.**

**11. Aesthetics**

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? **N/A.**
- b. What views in the immediate vicinity would be altered or obstructed? **N/A.**
- c. What are the proposed measures to reduce or control aesthetic impacts, if any? **N/A.**

**12. Light and Glare**

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? **N/A.**
- b. Could light or glare from the finished project be a safety hazard or interfere with views? **N/A.**
- c. What existing off-site sources of light or glare may affect your proposal? **N/A.**
- d. What are the proposed measures to reduce or control light and glare impacts, if any? **N/A.**

**13. Recreation**

- a. What designated and informal recreational opportunities are in the immediate vicinity? **N/A.**
- b. Would the proposed project displace any existing recreational uses? If so, describe. **N/A.**
- c. What are the proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any? **N/A.**

**14. Historic and Cultural Preservation**

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe. **N/A.**
- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on the site. **N/A.**
- c. What are the proposed measures to reduce or control impacts, if any? **N/A.**

## 15. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. **N/A.**
- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop? **N/A.**
- c. How many parking spaces would the completed project have? How many would the project eliminate? **N/A.**
- d. Will the proposal require any new roads or streets, or improvements to any existing roads or streets, not including driveways? If so, generally describe (*indicate whether public or private*): **N/A.**
- e. Will the project use or occur in the immediate vicinity of water, rail, or air transportation? If so, generally describe. **N/A.**
- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur. **N/A.**
- g. What are proposed measures to reduce or control transportation impacts, if any? **N/A.**

## 16. Public Services

- a. Would the project result in an increased need for public services (*for example: fire protection, police protection, health care, schools, other*)? If so, generally describe. **N/A.**
- b. What are proposed measures to reduce or control direct impacts on public services, if any? **N/A.**

## 17. Utilities

- a. Circle "O" utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other (*describe*). **N/A.**
- b. Describe the utilities which are proposed for the project, the utility providing the service, and the general construction activities of the site or in the immediate vicinity which might be needed. **N/A.**

**C. SIGNATURE**

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

Signature: \_\_\_\_\_

Date Submitted: \_\_\_\_\_

**D. SUPPLEMENT SHEET FOR NONPROJECT ACTIONS**  
(DO NOT USE THIS SHEET FOR PROJECT ACTIONS)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would effect the item at a greater intensity or at a rate then if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production or noise?

**Implementation of the proposed recommendations should help reduce the amount of water and air discharges, while increasing the proper handling of any solid or toxic wastes that are generated in the county. There should not be a significant increase or reduction in noise as a result of the recommendations.**

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

**Any impacts to plants, animals, fish and marine life will only be incidental and should be beneficial. Activities such as reducing illegal dumping should help reduce impacts to plant and animal life. Encouraging composting of yard wastes should also be beneficial to plant life (assuming proper application of the compost).**

Proposed measures to protect or conserve plants, animals, fish or marine life?

**Not applicable.**

3. How would the proposal be likely to deplete energy or natural resources?

**The proposed recommendations should help reduce energy demands and help to conserve natural resources, by increasing waste reduction and other activities. Increased recycling not only leads to conservation of natural resources but also reduces energy demands. In general, using recycled materials in place of virgin materials requires significantly less energy in the manufacturing process.**

Proposed measures to protect or conserve energy and natural resources are:

**Not applicable.**

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (*or eligible or under study*) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farm lands?

**These areas should be unaffected by the recommendations in the solid waste management plan.**

Proposed measures to protect such resources or to avoid or reduce impacts are:

**Not applicable.**

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

**No direct impacts to land use or shoreline use are anticipated to result from the proposed recommendations.**

Proposed measures to avoid or reduce shoreline and land use impacts are:

**Not applicable.**

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

**The proposed recommendations should not have significant effects on transportation requirements, but public services will potentially be increased through new recycling and composting programs.**

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

**Not applicable.**

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

**No such conflicts are likely. The intent of updating the solid waste management plan is to comply with various laws and requirements (especially on the state level) regarding environmental protection and other factors.**

pending - insert DNS or other results of the SEPA process later



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**APPENDIX D**

**WUTC COST ASSESSMENT QUESTIONNAIRE**

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*Ferry County Solid Waste Management Plan*

## **APPENDIX D WUTC COST ASSESSMENT QUESTIONNAIRE**

### **INTRODUCTION**

By state law (RCW 70.95.090), solid waste management plans are required to include:

“an assessment of the plan’s impact on the costs of solid waste collection. The assessment shall be prepared in conformance with guidelines established by the Utilities and Transportation Commission (WUTC or Commission). The Commission shall cooperate with the Washington state association of counties and the association of Washington cities in establishing such guidelines.”

The following cost assessment has been prepared in accordance with the guidelines prepared by the WUTC (WUTC 1997). The purpose of this cost assessment is not only to allow an assessment of the impact of proposed activities on current garbage collection and disposal rates, but to allow projections of future rate impacts as well. The WUTC needs this information to review the plan’s impacts to the franchised waste haulers that it regulates. For these haulers, WUTC is responsible for setting collection rates and approving proposed rate changes. Hence, WUTC will review the following cost assessment to determine if it provides adequate information for rate-setting purposes, and will advise Ferry County as to the probable collection rate impacts of proposed programs. Consistent with this purpose, the cost assessment focuses primarily on those programs (implemented or recommended) with potential rate impacts.

## COST ASSESSMENT QUESTIONNAIRE

Please provide the information requested below:

PLAN PREPARED FOR THE COUNTY OF: Ferry

PLAN PREPARED FOR THE CITY OF: \_\_\_\_\_

PREPARED BY: Rick Hlavka, Green Solutions

CONTACT TELEPHONE: 360-897-9533 DATE: March 3, 2010

### DEFINITIONS

Please provide these definitions as used in the Solid Waste Management Plan and the Cost Assessment Questionnaire.

Throughout this document:

YR.1 shall refer to **2011**.

YR.3 shall refer to **2013**.

YR.6 shall refer to **2017**.

Year refers to (circle one) **calendar** (Jan 01 - Dec 31)

**fiscal** (Jul 01 - Jun 30)

1. **DEMOGRAPHICS:** To assess the generation, recycling and disposal rates of an area, it is necessary to have population data. This information is available from many sources (e.g., the State Data Book, County Business Patterns, or the State Office of Finance and Management).

### 1.1 Population

- 1.1.1 What is the **total** population of your County/City?

YR.1 8,192 YR.3 8,373 YR.6 8,682

- 1.1.2 For counties, what is the population of the area **under your jurisdiction?** (Exclude cities choosing to develop their own solid waste management system.)

YR.1 6,308 YR.3 6,447 YR.6 6,685

### 1.2 References and Assumptions

Population estimates are interpolated from figures shown in Table 2.2 of the Plan using a straight-line method. Population figures shown in section 1.1.2 exclude the residents of the Colville Nation.

2. **WASTE STREAM GENERATION:** The following questions ask for total tons recycled and total tons disposed. Total tons disposed are those tons disposed of at a landfill, incinerator, transfer station or any other form of disposal you may be using. If other please identify.

### 2.1 Tonnage Recycled

- 2.1.1 Please provide the total tonnage **recycled** in the base year, and projections for years three and six.

YR.1 576 YR.3 589 YR.6 611

### 2.2 Tonnage Disposed

- 2.2.1 Please provide the total tonnage **disposed** in the base year, and projections for years three and six.

YR.1 2,306 YR.3 2,357 YR.6 2,444

### 2.3 References and Assumptions

Figures shown above assume that the total amount of waste generated, recycled and disposed will increase in proportion to population growth (see also Table 3.4).

**3. SYSTEM COMPONENT COSTS:** This section asks questions specifically related to the types of programs currently in use and those recommended to be started. For each component (i.e., waste reduction, landfill, composting, etc.) please describe the anticipated costs of the program(s), the assumptions used in estimating the costs and the funding mechanisms to be used to pay for it. The heart of deriving a rate impact is to know what programs will be passed through to the collection rates, as opposed to being paid for through grants, bonds, taxes and the like.

**3.1 Waste Reduction Programs**

3.1.1 Please list the solid waste programs which have been implemented and those programs which are proposed. If these programs are defined in the SWM plan please provide the page number.

<u>IMPLEMENTED</u>	<u>PROPOSED</u>
<u>Paper reduction practices</u>	<u>Promote reuse by charities</u>
<u>Private reuse activities</u>	<u>Assess reuse exchange area</u>
<u>_____</u>	<u>Organize swap events</u>

See pages 5-1 and 5-2 for existing programs and pages 5-5, 14-2, 14-4 and 14-6 for proposed programs.

3.1.2 What are the costs, capital costs and operating costs for waste reduction programs implemented and proposed?

<u>IMPLEMENTED</u>		
YR.1 <u>NA</u>	YR.3 <u>NA</u>	YR.6 <u>NA</u>
<u>PROPOSED</u>		
YR.1 <u>up to \$10,000</u>	YR.3 <u>\$500</u>	YR.6 <u>\$500</u>

3.1.3 Please describe the funding mechanism(s) that will pay the cost of the programs in 3.1.2.

<u>IMPLEMENTED</u>		
YR.1 <u>NA</u>	YR.3 <u>NA</u>	YR.6 <u>NA</u>
<u>PROPOSED</u>		
YR.1 <u>Tipping fees and grants</u>	YR.3 <u>Grants</u>	YR.6 <u>Grants</u>

### 3.2 Recycling Programs

3.2.1 Please list the proposed or implemented recycling program(s) and, their costs, and proposed funding mechanism or provide the page number in the draft plan on which it is discussed.

IMPLEMENTED

<u>PROGRAM</u>	<u>COST</u>	<u>FUNDING</u>
Various public and private recycling programs are currently implemented, see Chapter 6 for further details.	NA	CPG and private funds

PROPOSED

<u>PROGRAM</u>	<u>COST</u>	<u>FUNDING</u>
Encourage recycling by businesses	NA	NA
Utilize volunteers where feasible	NA	NA
Inventory undocumented recycling	NA	NA
Periodically assess recycling program	NA	NA
Suspend collection of specific materials if warranted	NA	NA
Subsidized sales of home composting units	Up to \$2,500	CPG
Assess feasibility of organics drop-off site	NA	NA
Assess feasibility of food waste diversion	NA	NA

### 3.3 Solid Waste Collection Programs

3.3.1 Regulated Solid Waste Collection Programs

Fill in the table below for each **WUTC regulated** solid waste collection entity in your jurisdiction.

<b>WUTC Regulated Hauler Name</b> <b>#169</b>	<b><u>Couse's Sanitation, G-permit</u></b>		
	<u>YR. 1</u>	<u>YR. 3</u>	<u>YR. 6</u>
<b>RESIDENTIAL</b>			
- # of Customers	447	457	473
- Tonnage Collected	440	450	465
<b>COMMERCIAL</b>			
- # of Customers	45	45	45
- Tonnage Collected	280	280	280

3.3.2 Other (non-regulated) Solid Waste Collection Programs

Fill in the table below for other solid waste collection entities in your jurisdiction.

Hauler Name	<u>City of Republic (contract with Couse's Sanitation)</u>		
	<u>YR. 1</u>	<u>YR. 3</u>	<u>YR. 6</u>
<b>RESIDENTIAL</b>			
- # of Customers	335	342	354
- Tonnage Collected	386	395	408
<b>COMMERCIAL</b>			
- # of Customers	94	94	94
- Tonnage Collected	148	148	148

3.4 **Energy Recovery & Incineration (ER&I) Programs**

NA, no such facilities

3.5 **Land Disposal Program**

NA, no such facilities

3.6 **Administration Program**

3.6.1 What is the budgeted cost for administering the solid waste and recycling programs and what are the major funding sources.

Budgeted Cost

YR.1 \$112,000 YR.3 \$112,000 YR.6 \$112,000

Funding Source

Grants and tipping fees.

3.6.2 Which cost components are included in these estimates?

Salaries and benefits (see Table 13.1).

3.6.3 Please describe the funding mechanism(s) that will recover the cost of each component.

Existing funding sources will continue to be used.

### 3.7 Other Programs

NA, no such programs

### 3.8 References and Assumptions

For Section 3.3, the number of residential accounts for both the regulated and non-regulated collection programs has been projected using the anticipated population growth rate for that period (1.1%). Residential tonnages have been projected using the projected number of accounts and the same waste generation rate as in 2008 (0.98 and 1.15 tons per customer per year in the regulated and non-regulated areas, respectively). The number of commercial accounts and tonnages collected have been assumed to stay the same as in the initial reporting period for the baseline data (February 2008 through February 2009).

For Section 3.6.1, the budgets for 2011 and future years have not been established yet and so administrative costs are assumed to be the same as in 2010.

**4. FUNDING MECHANISMS:** This section relates specifically to the funding mechanisms currently in use and the ones which will be implemented to incorporate the recommended programs in the draft plan. Because the way a program is funded directly relates to the costs a resident or commercial customer will have to pay, this section is crucial to the cost assessment process. Please fill in each of the following tables as completely as possible.

#### 4.1 Funding Mechanisms (Summary by Facility)

The following tables provide information on funding sources for programs and activities.

Table 4.1.1 Facility Inventory							
Facility Name	Type of Facility	Tip Fee per Yard	Transfer Cost	Transfer Station Location	Final Disposal Location	Total Tons Disposed (2008)	Total Revenue Generated (Tip Fee x Tons)
Torboy Transfer Station	Transfer Station	See Table 9.1	\$123,000 (transfer and disposal)	Republic	Roosevelt, WA	1,529	\$263,938

Table 4.1.2 Tip Fee Components							
Tip Fee by Facility	Surcharge	City Tax	County Tax	Trans. and Disposal Cost	Operational Cost	Admn. Cost	Closure Costs
Torboy Transfer Station	0	0	0	\$123,000	\$50,000	\$77,000	\$14,000

Table 4.1.3 Funding Mechanism										
Name of Program	Bond Name	Total Bond Debt	Bond Rate	Bond Due Date	Grant Name	Grant Amount	Tip Fee	Taxes	Other	Surcharge
Torboy Transfer Station	NA	0	NA	NA	NA	NA	100%	0	0	0

Table 4.1.4 Tip Fee Forecast						
Tip Fee per Ton	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Torboy Transfer Station Garbage, per ton	\$11.53	\$11.53	Unknown	Unknown	Unknown	Unknown
Minimum charge	\$17.23	\$17.23				

**4.2 Funding Mechanisms** summary by percentage: In the following tables, please summarize the way programs will be funded in the key years. For each component, provide the expected percentage of the total cost met by each funding mechanism. (e.g. Waste Reduction may rely on tip fees, grants, and collection rates for funding). You would provide the estimated responsibility in the table as follows: Tip fees=10%; Grants=50%; Collection Rates=40%. The mechanisms must total 100%. If components can be classified as “other,” please note the programs and their appropriate mechanisms. Provide attachments as necessary.

Table 4.2.1 Funding Mechanism by Percentage – Year One							
Component	Tip Fee %	Grant %	Bond %	Coll. Tax, %	Rates, Service Fees	Other %	Total
Waste Reduction		100					100%
Recycling	90	10					100%
Collection					100		100%
ER&I							NA
Transfer					100		100%
Land Disposal					100		100%
Administration	78	22					100%
Other							NA

Table 4.2.2 Funding Mechanism by Percentage – Year Three							
Component	Tip Fee %	Grant %	Bond %	Coll. Tax, %	Rates, Service Fees	Other %	Total
Waste Reduction		100					100%
Recycling	90	10					100%
Collection					100		100%
ER&I							NA
Transfer					100		100%
Land Disposal					100		100%
Administration	78	22					100%
Other							NA

Table 4.2.3 Funding Mechanism by Percentage – Year Six							
Component	Tip Fee %	Grant %	Bond %	Coll. Tax, %	Rates, Service Fees	Other %	Total
Waste Reduction		100					100%
Recycling	90	10					100%
Collection					100		100%
ER&I							NA
Transfer					100		100%
Land Disposal					100		100%
Administration	78	22					100%
Other							NA

#### **4.2 References and Assumptions**

Please provide any support for the information you have provided. An annual budget or similar document would be helpful.

See Table 13.1 (page 13-4) of the Plan for information on the County's budget.

For Tables 4.1.1 and 4.1.2, figures are based on 2008 data.

For Table 4.1.4, there are no plans currently to increase the tipping fee, but the tipping fee will likely change as the result of a new waste export contract.

#### **4.3 Surplus Funds**

Please provide information about any surplus or saved funds that may support your operations.

Only a small amount of fund balance (approximately \$20,000) is maintained from year to year.

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**APPENDIX E**  
**RESOLUTIONS OF ADOPTION**

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*Ferry County Solid Waste Management Plan*

## **APPENDIX E RESOLUTIONS OF ADOPTION**

### **NOTICE:**

After the Final Draft of this Plan has been adopted by Republic and Ferry County, this appendix will document the adoption process by showing resolutions of adoption.

